DOES READING NATURALLY EQUAL READING FLUENCY?

WHAT EFFECT DOES *READ NATURALLY* HAVE ON THE READING RATE AND PROSODY OF FIRST GRADE READERS?

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ABSTRACT

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Fluency has been a neglected part of the reading curriculum in the past. However, more recently, fluency has been shown to play a part in comprehension. It is believed that the more fluent a reader is, the more he/she will comprehend. This is believed to be due to the increased attention that can be allotted to comprehending as opposed to sounding out the words.

The emphasis on fluency has led to a variety of instructional methods being researched and implemented. This study explored the method of repeated reading in the form of the Read Naturally program and its effect on fluency. Along with repeated reading, the effects of proper modeling and feedback on prosody were also studied.

The Read Naturally program was tested with two treatment groups and a control group of first grade students. The program’s prescribed procedures were followed for the two treatment groups. However, for one treatment group, prosody was introduced to the class and feedback was given.

Results suggested Read Naturally had an effect on fluency and prosody. Although there was not a significant change among scores between the three classes, there was visible improvement shown by many of the students.
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CHAPTER 1: INTRODUCTION

Fluency is the ability to read orally with speed, accuracy, and proper expression (National Institute of Child Health and Human Development [NICHD], 2000). Another word used for reading with expression is prosody (Dowhower, 1991). Being fluent has also been described as the clear, easy written or spoken expression of ideas, freedom from word-identification problems, and automaticity (McLaughlin & Fisher, 2005). These two descriptions are different but similar in that fluency is not just about reading quickly. Reading fluently is necessary because fluent readers are able to minimize word-by-word reading, which can aid in comprehension (McLaughlin & Fisher). Comprehension, which will be described in more detail in chapter two, is the process by which meaning is constructed from words. Due to the amount of effort reading takes, a lack of fluency will usually have a negative effect on comprehension.

In the past, fluency has been a neglected part of the reading curriculum (Ruetzel & Hollingsworth, 1993). However, in the past few years, fluency has been viewed as more essential in reading instruction (NICHD, 2000). It is important to think of fluency as a goal in reading that should be mastered as early as possible in one’s reading development (Samuels, 2002). A concern is that students often have learned to decode individual words but still have difficulty reading words fluently (Rasinski, 2003). The goal of fluency should, therefore, be helping to turn word reading into fluent reading. Rasinski (1994) suggests that turning word reading into fluent reading can also be seen as a bridge to comprehension and the ability to create meaning from words.

Samuels (2002) states that the three most basic processes that all readers use are decoding, comprehension, and attention. When discussing fluency, it is important to understand
these processes because educators need to know what elements are connected with this important reading component.

The first basic process is decoding. Decoding is the ability to pronounce the words in print. An example would be using knowledge of letter-sound relationships to sound out a word. Phonics is an example of an instructional method that uses decoding (McGlaughlin & Fisher, 2002). In this process, word meaning is not yet an essential element. One can sound out words or passages without knowing the meaning.

The next process is comprehension. Comprehension is the process by which meaning is constructed. Unlike decoding, comprehension is reading for meaning. The reader constructs meaning of a written or spoken message.

Process number three is attention. Attention is the cognitive energy used in mental processing tasks such as decoding and comprehension. If too much energy is used in decoding, then little attention will be available for comprehending. Fluency allows for less attention to be devoted to decoding and more for comprehending (Samuels, 2002). The question then becomes what can be done to improve all these areas.

Since comprehension is an essential part of the reading process, it is important to know there is a definite link between fluency and comprehension. There is only a limited amount of attention available for decoding and comprehension (Samuels, 2002). The more readers spend time trying to sound out words, the more difficult it is for them to understand or comprehend what they are reading. More attention is given to decoding and less attention is available for comprehending. The National Reading Panel (NICHD, 2000) articulated this in their findings when they said: “If text is read in a laborious and inefficient manner, it will be difficult for the child to remember what has been read and to relate the ideas expressed in the text to his or her
background knowledge” (p.11). The more automatic the readers are in recognizing the words they come across, the more mental energy they have to use for comprehension. This is supported in a study by Dowhower (1987) that involved students using repeated reading on a series of five practice stories. After completing the series with improved fluency, student’s comprehension increased from 66% to 88% on pre-test and post-test unpracticed passages.

The National Reading Panel (NRP) made fluency one of their necessary components for effective reading instruction (NICHD, 2000). These five components are phonemic awareness, phonics, fluency, comprehension, and vocabulary. Two distinct instructional methods in the area of fluency that were mentioned by the NRP are guided oral repeated reading and independent silent reading. Both of these may allow for the necessary time spent reading to improve fluency (Samuels, 2002). Samuels adds, “Benefits of increasing time spent reading allows for words to be encountered more, which allow for improvements in word recognition, speed, ease of reading, and comprehension” (p. 174).

The two methods mentioned by the NRP were guided oral repeated reading and independent silent reading. Guided oral repeated reading can be implemented in a variety of ways. At the heart of guided oral repeated reading is repeated reading. Repeated reading is simply reading a text over and over again until a certain level of fluency is met. However, guided oral repeated reading instruction must allow for feedback from the teacher (NICHD, 2000). Guided oral repeated reading can be done with audio support from a recording device or with support from a teacher or a fellow student (Samuels, 2002). Independent silent reading, however, involves simply reading continuously and silently with no guidance. Although both were mentioned by the NRP, guided oral repeated reading is the recommended method, while
independent silent reading was not recommended to the same degree. This is due to the lack of experimental studies on independent silent reading available for the NRP.

Statement of the Problem

Fluency is a vital part of reading instruction (NICHD, 2000). Its connection with comprehension provides a reason for fluency to be included in the reading curriculum. Fluency had often been overlooked in the classroom, but that has changed and now that there are different instructional methods available (Ruetzel & Hollingsworth, 1993). It could be very time consuming and difficult for teachers to provide adequate attention to each of the aforementioned basics of fluency instruction. Given this, along with all the other instruction implemented throughout the day, it is necessary to find proper instruction that is effective, simple to incorporate, easy to track and maintain, and that requires minimal time. Along with the time issue, the relationship between fluency and comprehension makes it important to find proper methods of instruction (NICHD, 2000). A recent study by Duke, Pressley, and Hilden (2004) estimated that 75-90% of students with comprehension problems also lacked fluency, suggesting a strong relationship between the two. Therefore, fluency should be addressed at the early grade levels.

The researcher, a Title I reading teacher, uses the Read Naturally program. This program will be discussed in more detail in chapter two. According to the Read Naturally website (2009), Read Naturally incorporates many of the National Reading Panel’s recommendations to improve fluency. These include repeated reading, feedback, and audio support. This program has been used by the researcher for the past three years.

The researcher has also faced challenges through the use of the Read Naturally program. Time allowed for Title I reading instruction is often limited. Many times it is also hard to be
consistent in using *Read Naturally*. The researcher has also made slight variations in the program’s instructions in an attempt to better adapt it to the available time. Despite challenges in the past, results of using *Read Naturally* have generally been positive.

**Research Question**

The question guiding this study was: What effect does *Read Naturally* have on the reading rate and prosody of first grade readers? By definition, fluency includes prosody. Therefore, it would be beneficial to discover if the *Read Naturally* program alone would affect prosody or if *Read Naturally* plus additional prosody instruction would have more of an effect. Most of the students with whom the researcher worked in this study are in need of quality fluency instruction as determined by assessments and teacher observation. The answer to this question provided valuable information.

**Rationale**

The link between fluency and comprehension makes it important to find proper methods of instruction, especially with the time issue (NICHD, 2000). Samuels (1997) suggests the ability to read correctly, at a suitable speed, with meaningful expression and phrasing supports improved reading comprehension. With the important link between fluency and comprehension, fluency is an area that has been proven to be essential and deserves to be included in instruction. A number of strategies were identified by Kuhn and Stahl (2003) that involved practicing and support through repetition and modeling. Repeated reading and listening while reading are examples of these kinds of activities. The *Read Naturally* program includes both of these methods. The National Reading Panel states that guided repeated oral reading procedures that included guidance from teachers, peers, or parents had a significant and positive impact on word recognition, fluency, and comprehension across a range of grade levels (NICHD, 2000). Another
possible benefit is that the *Read Naturally* program uses student graphing as motivation. Fuchs and Fuchs (1986) emphasize that if performance data are tracked and graphed, then students’ progress towards their goals can be monitored. The purpose of this research was to determine if using *Read Naturally* had positive results. If so, then the program could be a valuable part of the classroom reading program.

**Definition of Terms**

*Assisted Repeated Reading*: The repeated reading of a passage that includes modeling. This can be in the form of a teacher reading to students or students listening to a recording of a passage. The modeling provides examples of proper speed and intonation. Often, the student reads along until a certain measure of fluency is reached (Chomsky, 1978). Unlike unassisted repeated reading, assisted repeated reading provides a model of fluent reading.

*Automaticity*: The ability to automatically decode words. Words that are automatically decoded are recognized holistically (Samuels, 2002). It refers to the reader’s ability to identify words in text automatically or without the employment of the reader’s attentional resources (Laberge & Samuels, 1974).

*Cold score*: The initial word-per-minute count of a repeated reading session that is done without practice (Christ & Davie, 2009).

*Fluency*: The ability to read orally with speed, accuracy, and proper expression (NICHD, 2000). It is composed of (a) accuracy in decoding, (b) automaticity in word recognition, and (c) the appropriate use of prosodic features such as stress (Kuhn & Stahl, 2000).

*Grapho-phonemic*: The relationship between the sound and the letter (Ehri, Gaskins, & Satlow, 2009).
Guided oral repeated readings: Repeated readings using the assistance of a teacher, peer, or audio recording (Samuels, 2002).

Hot score: The final words-per-minute score of a repeated reading session after many independent readings (Christ & Davie, 2009).

Instructional Reading Level: The reading level at which the reader recognizes 93-97% of the words encountered (Treptow, Burns, & McComas, 2007).

NAEP Scale of Fluency: A scale issued in 2002 by the NAEP (National Assessment of Educational Progress) which ranks fluency. The score (1-4) focuses on meaning and expression. Four is the most fluent ranking (Rasinski, 2003).

Orthographic: The standard usage of letters according to sound (Dowhower, 1991).

Progress Monitoring: The use of assessment data to evaluate the effectiveness of educational systems, to monitor the successes of instructional programs, and to determine the strengths and weakness of students in particular areas.

Prosody: Term used to describe rhythmic and tonal features of speech (Dowhower, 1991). Dowhower (1991) states “prosodic features involve variation in pitch (intonation), stress (loudness), and duration (timing)” (p. 166). Prosodic reading is reading with expression.

Read Naturally: The Read Naturally Website (2009) states that their program is an intervention program combining teacher modeling, repeated reading, and progress monitoring used to increase fluency.

Reading Rate: The amount of words read per minute. (Samuels, 2002).

Repeated Reading: Reading a passage of 50-100 words repeatedly until a certain benchmark is met (Samuels, 2002).
Response to Intervention Process (RTI): Integrates assessment and intervention. RTI used in the United States is designed to provide early, effective assistance to children who are having difficulty learning (Stecker, Lembke, & Foegen, 2008).

Unassisted Repeated Reading: The repeated reading of a passage that does not use a model of fluent reading. This is done independently without assistance (Samuels, 2002). Often, the passage is read until a certain number of words are read correctly.

Limitations

The total number of students enrolled in this study was 21. Ideally, a larger sample would give a better representation of actual progress. The class size was limited to the number of students who have qualified for Title I services. To stay with the intended purpose of the research question, it was important that the students had difficulty in oral reading fluency, as determined by a low reading recorded using Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and teacher observations of oral reading. The students were recommended by their classroom teachers. Two students were eliminated from the study because they no longer were eligible for Title I services.

Because of scheduling, two classes were combined to make one class. This created a larger class than the other two. This could have created a discrepancy in the results due to unequal class size. Some students had absences throughout the study, which put them behind the other students.
CHAPTER II: REVIEW OF THE LITERATURE

The purpose of this chapter is to review previous research in the instruction of fluent reading methods and the theories behind those practices. The chapter as a whole lays out the main purposes and reasoning behind the research study. This chapter is divided into two main sections. Several subheadings are included within these main headings. The two main sections are Theoretical Orientation and Significant Historic Research. Three main theories that provide the basis for the use of the program will be reviewed in the first section. The three theories mentioned are the theory of automaticity, Ehri’s phases of sight word development, and the theory of prosody.

Section two discusses significant historical research related to the study of fluency. Repeated reading is the main focus of the historical research. The reasoning behind this is that over the years, more and more research has been done and is continuing to be done regarding the link between repeated reading and fluency. The history of research is then divided into nine sections. The sections are the Importance of Fluency; Recommended Practices; Assisted Repeated Reading; Unassisted Repeated Reading; Results of Studies; Comparisons between the Assisted and Unassisted Methods; The Link between Fluency and Comprehension; Progress Monitoring; and the Read Naturally Program.

Theoretical Orientation for the Study

One must have a basic understanding of the stages that readers undergo to understand the role fluency plays in reading comprehension. Three basic processes that all readers use are decoding, comprehension, and attention (Samuels, 2002). Decoding is the ability to pronounce the words on the page. The only requirement in this process is the ability to say the word. Decoding also is the ability to understand that a printed word represents the spoken word, and
that this printed word is composed of a sequence of phonemes (Center for the Improvement of Early Reading Achievement [CIERA], 2001). Phonemic awareness is part of decoding in that one should be aware of different sounds in words, and phonics is important in that students must be able to associate sounds with letters (NICHD, 2000). Comprehension is the process by which meaning is constructed from the words. Attention is the cognitive energy used in mental processing tasks.

Theory of Automaticity

Samuels (2002) lists the three stages in word recognition as the non-accurate stage, the accurate but not automatic stage, and the accurate and automatic stage. During the non-accurate stage, readers have difficulty reading a beginning text. In the accurate but not automatic stage, readers are able to sound out words accurately, but it takes time and effort. During the accurate and automatic stage, students can read orally with accuracy, speed, and normal expression. It is during this stage that readers are fluent. The importance of being a stage three reader is explained by the theory of automaticity, which states that fluent readers are able to decode text automatically (Laberge & Samuels, 1974). The theory of automaticity takes into account the problems that can arise from a reader’s difficulty in decoding. This theory suggests that limited attention is available for comprehension if readers spend too much attention on decoding. According to this theory, readers who are automatic readers decode text automatically or with minimal attention. With little attention given to decoding, more attention can be given to comprehending. This assists the reader in reaching comprehension or understanding of the text. This theory suggests that quick and effortless word recognition allows readers to focus their attention on a text’s meaning as opposed to just the words.
Samuels (1988) recommends the following tasks as a way to monitor a student’s level of automaticity: (a) Have a child read an unrehearsed passage, check for expression, and see how many hesitations or pauses are made, and (b) Give the student a passage to read orally at or below grade level. After reading, have the student recall as much as possible. If the student is able to combine the indicators mentioned previously and is able to remember, then the decoding is automatic. This is not always accurate with all types of learners, but generally gives a good indication of the student’s level of automaticity.

*Ehri’s Phases of Sight Word Development*

The process of reaching automatic recognition of sight words was examined by Ehri (1995). Along the way to the automatic recognition that is necessary for fluent reading, readers must develop an automatic recognition of sight words. Ehri describes sight words as all words that have been recognized on several occasions. This is different than some definitions that define sight words as words having irregular spelling patterns. Instead, the view Ehri takes is that sight words can be any words that are recognized instantly or automatically by sight. With this, Ehri suggests that words become sight words through an analysis of their orthographic, or letter structure. Ehri suggests that there are four stages through which sight words become automatic for readers: the pre-alphabetic stage, the partial alphabetic stage, the full alphabetic stage, and the consolidated alphabetic stage.

*Pre-alphabetic Stage*

During the pre-alphabetic stage, beginners remember how to read sight words by making connections between certain visual attributes of words and their meanings or how they are pronounced. This has been called *visual cue learning* by Ehri and Wilce (1985), and has also been called a process of paired associate learning by Gough and Hillinger (1980). An example of
this would be a salient clue to a word, such as a thumbprint next to the word *thumbprint* (Ehri, 1995). When the visual thumbprint accompanies the word, the students can identify the print version. However, without the visual cue, students are not able to read the word. Another example of using a salient visual would be recognizing the word *look* by connecting the “oo” in the middle of the word *look* as two eyes, therefore only recognizing the word with that clue. In this stage, there is no understanding of letter-sound relationships, therefore leading to the term pre-alphabetic. When pre-alphabetic phase readers are observed to read print in their environment, such as stop signs and fast food restaurant signs, they do this by remembering visual cues accompanying the print, rather than the written words themselves (Ehri).

**Partial Alphabetic Stage**

During this stage, beginners remember how to read sight words by forming partial alphabetic connections between only a few of the letters in written words and the sounds detected in their pronunciations (Ehri, 1995). Often the first and last letters of a word are selected as the cues to be remembered because those particular letters are especially prominent. The main difference between the pre- and partial alphabetic phases are that beginners in the pre-alphabetic stage can more easily remember words that have picture or visual clues, but readers in the partial alphabetic phase have an easier time reading words containing cues linking letters to sounds such as ‘LFT’ for ‘elephant’.

**Full Alphabetic Phase**

During this stage, beginning readers remember how to read sight words by making connections between letters in the written form and phonemes, or the sounds the letters make, detected in their pronunciations (Ehri, 1995). Readers now understand that graphemes (letters) symbolize phonemes (sounds) (Venezky, 1970).
Consolidated Alphabetic Phase

During the final phase, learners come to recognize letter patterns that appear regularly in different words as units (Ehri, 1995). Ehri states, “These letter patterns become part of a reader’s generalized knowledge of the spelling system” (p. 121). The larger chunks are important for sight word reading because they reduce the memory load involved in storing sight words.

Prosody

Another theory is one that relates to prosody. Dowhower (1991) suggests that “Prosody is a general linguistic term to describe rhythmic and tonal features of speech” (p. 166). Prosody includes pitch or intonation, stress or emphasis, tempo or rate, and the rhythmic or regularly reoccurring patterns of language. Prosody is like a link from the written word to the spoken word. Even though the automaticity theory does not include prosody, Dowhower suggests the more a person’s reading sounds like language, the more it makes sense. Prosody has been shown to be important as studies have indicated that poor readers at all age levels improve their comprehension when text is read orally in a manner comparable to speech (Kuhn, 2000).

Evidence suggests that fluent readers organize text into meaningful units. Chafe (1988) suggests that to read a sentence with intonation, one must assign syntactic roles to the words in the sentence so that the reading sounds correct. According to Kintsch (1998), this is a key component of micro-processing, which, in turn, is a key component in comprehension.

Dowhower (1991) identifies six indicators related to expressive reading. These indicators are pausal intrusions, length of phrases, appropriateness of phrases, phrase-final lengthening, terminal intonation contours, and stress.

Pausal Intrusions

Pausal intrusions are inappropriate hesitations within words or within syntactic units. Studies
by Eagan (1975) indicate that low scoring children in silent reading comprehension use more pausal intrusions than high scoring children. Fluent readers have fewer pausal intrusions.

Length of Phrases

The length of words read between phrases or the length of phrases can affect fluency. Clay and Imlach (1971) worked with 103 children, ages seven to eight. The number of words between pauses for the highest reading group was 7.4, and the number among the lowest reading group was 1.2. This indicates that more fluent readers use fewer pauses. Schreiber and Read (1980) state that a major task in reading is learning to read texts in phrasal units. The fluent reader learns to compensate for the lack of prosodic marking, and he/she reads in phrases. Therefore, it is necessary for beginning readers to learn to read in phrases.

Appropriateness of Phrases

Appropriateness of phrases is related to length of phrases, but is more significant as an indicator of prosody (Dowhower, 1991). Dowhower believes “An appropriate phrase is a group of words that is syntactically/phonologically acceptable” (p. 167). Examples of inappropriate phrases are those for which readers do not stop for punctuation marks, phrases in which readers split prepositional phrases, or phrases in which readers separate determiner and noun. These are phrases that just do not sound right.

Phrase-Final Lengthening

Dowhower (1991) states, “In phrase-final lengthening, the last stressed syllable of a phrase is longer than the same syllable in a non-phrase-final position” (p. 167). This means the last syllable of a phrase is longer than the same word syllable that is not at the end. Proper final phrase lengthening suggests that students are learning to “chunk” or group words together more appropriately.
Terminal Intonation Contours

According to Dowhower (1991), terminal intonation contours are variations in fundamental frequency or the rate of vibration of a speaker’s vocal folds. These are also known as pitch change. Therefore, intonation contour is the pitch changes that come with fluent reading. The pitch of fluent readers sounds very similar to the pitch of normal speech.

Stress

According to Dowhower (1991), “Stress is the intensity with which a phoneme, syllable, or word is uttered” (p.168). Readers use stress to indicate parts of sentences they feel are important. Stress can also be used to differentiate between two sentences that have the same words but different meanings.

Significant Historic Research

Importance of Fluency

It appears the most important effect of proper fluency is its link to comprehension. Evidence exists that links improvement of fluency to improvements in comprehension. Samuels (1997) suggests the ability to read correctly, at a suitable speed, with meaningful expression and phrasing supports improved reading comprehension. Fluent readers do not deal with the decoding problems that can hinder comprehension. O’Shea, Sindelar, and O’Shea found that when students are encouraged to attend to the meaning, their comprehension increases.

Approaches to teaching fluency were studied as early as the 1950s but the topic was not considered as important as it is now (Durrell, 1956). The National Reading Panel (NRP) (NICHD, 2000), for example, identified five components essential to reading instruction. Along with fluency, these components were phonemic awareness, phonics, vocabulary, and comprehension. In the area of fluency, two instructional approaches were researched by the
NRP: independent silent reading and guided oral repeated reading. The panel was unable to find a positive connection between fluency and independent silent reading. This may have been due to the lack of quality research on the subject (NICHD, 2000). However, guided oral repeated reading was shown to have a significant and positive effect on the fluency of students. These students had a variety of reading problems from elementary to high school.

The recommendations from the NRP borrow heavily from two methods developed in the 1970s. These were repeated reading from Samuels (1979) and assisted reading from Chomsky (1978). Even though the repeated reading for instruction had been used earlier, it wasn’t until this era that studies were done to study its effectiveness.

*Repeated Reading*

Repeated reading is one of the main practices for increasing fluency and was created by S. Jay Samuels (1979). While repeated readings were used as early as the 17\(^{th}\) century (Samuels, 2002), it wasn’t until Samuels’ work that it was studied and refined as an instructional technique. This method was developed as an extension of the theory of automaticity. Samuels (1979) explained that repeated reading helps students develop word recognition skills to a point of automaticity. While developing the theory of automaticity, Samuels recognized that the way an individual becomes better at something is by practicing as much as possible. In this case, what needed to be practiced was the ability to automatically recognize words. Samuels (1979) also suggested three things that a teacher must do to provide quality instruction in fluency: (1) instructing students so they become more accurate; (2), providing time to practice; and (3) motivating the students. From this, he further developed and studied the repeated reading method, which has been shown to be successful.
A study by Dowhower (1987) found that repeated reading had a positive effect on the reading rate and accuracy of a group of second grade transitional readers. A similar study by Rasinski (2001) showed comparable benefits in reading rate and accuracy among second graders. The form of reading Rasinski used was a fluency development lesson (FDL). An FDL is an instructional activity that involves predicting, teacher modeling, text discussion, assisted reading, paired reading, oral reading, and additional practice. In this study, students in the experimental group improved their reading from 42 to 62 words-per-minute in less than a year of instruction. Students in the control group improved their reading from 26 to 36 words-per-minute. In a six-week study by Kuhn (2005), the repeated reading instruction group was compared to a control group and a listening-only instruction group. The repeated reading group showed a mean increase of 19 words per minute (WPMs). The control group increased 14 WPM, and the listening-only increased 15 WPM.

Samuels (1979) also worked with a group of students identified with cognitive disabilities. Each student repeatedly read passages of 50-100 words. Samuels found that with each reading of the passage, reading rate increased. The increase carried over to new passages as well.

The method of repeated reading involves the teacher locating short passages of text. Rashotte and Torgesen (1985) recommend 50-250 words. The student then reads a passage until a satisfactory level of fluency is reached. Dowhower (1989) states that an 85% accuracy rate should be reached on the first reading before the student begins to practice. If the percentage is lower, the child should be moved to an easier passage. When stories are read repeatedly, reading speed increases on new stories that have high word overlap with the repeated story (Rashoote & Torgeson, 1985). Samuels found that with each rereading of the passage, the number of word
recognition errors decreased and reading speed increased. There was also increased oral reading expression. After the initial attempt, the child then goes on to another passage and sees the same results. These are seen as transfer effects from one story to another.

Repeated reading practice generally falls into the categories of unassisted and assisted (Dowhower 1985). In the unassisted category, there is no modeling of the passage. Conversely, during the assisted instruction there is modeling of the passage throughout. The unassisted repeated reading technique is a rather simple concept. Passages are chosen at the student’s instructional level. The student then reads the passage until a pre-established level of proficiency is met. This is usually in the form of words-per-minute and varies by grade level. Rasinski (2003) states that these methods can benefit average and above average students, as well as students with learning disabilities. Assisted reading involves repeated reading with the use of a model of fluent reading.

Unassisted Repeated Reading

The earlier methods of repeated reading involved the unassisted method. The key to unassisted repeated readings is that this strategy relies upon the independent practice of text. There usually is no real modeling of the passage using proper phrasing, expression, and speed (Samuels, 2002). There may be modeling during the first reading, but often the students are on their own to practice. This style was the earliest type of repeated reading practice. Often, the measure of fluency for this method is to compare a pre-and-post-test one-minute-long reading of the same passage and note improvement after the student has repeatedly read the same text to him or herself.
Assisted Repeated Reading

Another type of repeated reading is assisted repeated reading. Assisted repeated reading could include reading along with a teacher who offers feedback, or listening and reading along with a tape. The key to assisted reading is the feedback. In unassisted repeated reading, feedback is not given. In assisted repeated reading, the feedback is supplied by the teacher or immediately given by a recording of the story that models the correct reading of the passage. Inclusion of a fluent oral model in the repeated reading method may be more effective than repeated reading alone (Schriber, 1980). This method may be a more versatile classroom teaching technique because it can be implemented with groups, one-on-one, or with students working independently (Rasinski 2001). This allows teachers to work with several students at one time.

Studies have also shown that assisted repeated reading is also an effective method of instruction (Chomsky, 1976). For example, Pluck (1995) conducted a 27-week study investigating assisted reading with a tape recorder with 48 students. The study was comprised of 15-25 minute instructional interventions. During this time, the teacher gave an introduction to a taped reading story. Students wrote predictions in their student handbooks. They practiced reading until they were able to read fluently without assistance. Then they read without assistance to the teacher. The teacher checked accuracy, rate of reading, fluency strategies, and comprehension. After this, the teacher wrote comments in the handbooks and recommended whether the students practice more or move on to a more difficult level. This cycle continued throughout the program. The average gain the students made in their reading level was 2.2 years. Pluck also noted a positive change in attitude throughout the length of this program.

Improvement in Fluency

Repeated reading used in either one of the two methods previously described has been
Repeated reading has been shown to be effective when used as core supplemental instruction and can result in improvement in students’ generalized reading fluency and comprehension (Samuels, 2002). Dahl (1979) states, “Repeated reading training provides the missing practice necessary for early development of fluent reading. Using repeated practices in meaningful contexts give the child the opportunity to integrate the subskills” (p. 62). It is important to mention that training in single word identification did not have the same effect, suggesting that repeated reading of passages does more than just practicing word lists (Dahl).

This suggests the importance of using texts, as opposed to word lists, in repeated reading practice. In a study conducted by Dowhower (1987), results of the investigation revealed that transitional readers’ rate, accuracy, comprehension, and prosodic reading with practiced and unpracticed passages were significantly improved by repeated reading regardless of the training procedure employed. Moyer (1982) concluded that increased gains in reading fluency occur because the repetition gives the reader the needed extra practice in using higher linguistic structure as well as in extracting grapho-phonemic word structure. He states these improved skills are applied to the new passages, thus explaining the carry-over effect. Dowhower states that reading similar stories as part of repeated reading practice has been shown to be especially beneficial. This involves stories that have a great overlap in word usage.

**Comparison between Assisted and Unassisted Repeated Reading**

In studies by Dowhower (1987) and Rasinski (1990), very few differences were found in accuracy or reading rates whether the repeated reading was assisted or unassisted. Studies have also shown rereading the same passage using either repeated reading or unassisted repeated reading significantly increases reading rate (number of words per minute) and accuracy (number
of words read correctly) (Chomsky, 1976; Dowhower, 1987). Though reading rate differences were insignificant, differences were seen in prosody. The assisted repeated reading method showed that prosody increased. Both methods have shown similar effects of transfer to new, unpracticed texts (Carver & Hoffman, 1981). Rashotte and Torgesen (1985) found that speed advantages were transferred, but only when at least half of the words were shared between texts.

Rasinski (1990) points out drawbacks with the unassisted method while stating that assisted techniques could help improve or alleviate these problems. One drawback is that over the long term, students may tire from its use or lose interest and motivation because of the repetition of previously read material. Also, repeated reading may be more labor intensive for teachers as they have to assist students who are having difficulties with the initial reading. Rasinski (1990) states that tape recorded stories help maintain student interest and they take on the role of teacher in correcting mistakes and modeling fluency in addition to saving time and effort by the teacher.

**Improvement in Comprehension Using Repeated Reading**

As stated earlier, increased fluency is believed to lead to increased comprehension. Therefore, increased fluency by using repeated reading is believed to lead to improved comprehension. Rasinski (1990) studied the effect of fluency on the comprehension of third and fifth graders. After students repeatedly read passages, their scores were tracked. The study showed a correlation between fluency and comprehension. This led Rasinski to suggest that fluency measures were reasonable predictors of comprehension. Additionally, repeated reading has been found to be more effective in assisting in comprehension than other strategies such as outlining, note-taking, and summarization (Dowhower, 1989).
While the benefits of repeated reading have been shown to improve comprehension, some researchers remained concerned. Repeated reading, with the focus strictly on achieving high number of words per minute, causes some to worry that a number of students will not be concerned with what they are reading as much as they are with how fast they are reading (Marcell, 2007). Kuhn (2005) conducted research that compared comprehension scores of passages that were at an instructional level for a repeated reading instruction group, a non-repetitive reading group, a listening-only group, and a control group. The comprehension post-test scores for the repeated reading, listening-only, and control groups were lower, while post-test scores in the non-repetitive reading group increased. Kuhn suggests that the repeated reading group placed more emphasis on increasing their reading rate while neglecting the meaning of the passage. This could obviously affect comprehension. Marcell also notes that the teacher must be consistent in routinely including reading comprehension strategies into their repeated readings. Setting a purpose, questioning afterwards, and checking to see if predictions are correct are all strategies that could be incorporated. Samuels (1997) suggests that adding questions for each rereading of the passage will help increase comprehension. Different passages are suggested to be used for comprehension. These passages should use overlapping words.

*Move towards Progress-Monitoring*

Assessment plays an important part in the teaching of reading. In the increasing use of the Response-to-Intervention (RTI) model, teachers need to use this assessment or progress-monitoring to track a student’s progress or to guide instruction (Stecker, Lembke, & Foegen, 2008). Progress monitoring means regularly using assessments to check the progress of a student who is using a specific intervention. Stecker, Lembke, and Foegen (2008) offer five steps toward implementing progress monitoring: selecting appropriate measurement material, evaluating
technical features, administrating scoring measures, using data for goal setting, and judging instructional effectiveness. Progress monitoring is a kind of intervention that is becoming more and more a part of other interventions as a way to see if progress is being made. Monitoring for fluency typically involves one-minute timed readings and keeping track of the results (Johns, 2007). This type of monitoring typically involves asking students to read aloud a grade level passage while marking the miscues.

*Read Naturally*

*Read Naturally* is a research-based fluency intervention program that combines unassisted and assisted reading practice, along with progress monitoring. The main part of the program is repeated reading. The assisted part is the modeling of the passage by a CD, and the unassisted part occurs with independent reading practice of the passage modeled. Progress monitoring occurs with the graphing of the students’ scores pre-test and post-test scores. Vocabulary and reading for meaning or comprehension are also included in the program. Part of the program also focuses on motivation, which includes goal setting and performance feedback.

A 2003-2004 case study by Christ and Davie studied the effects of this program. This study showed that students who used *Read Naturally* had greater reading gains than comparable students who did not use this program. The assessments used were the Northwest Achievement Levels Test (NALT), the Minnesota Comprehension Assessment, and the *Read Naturally* Reading Fluency Monitor. Combining the NALT pre-test scores with their final scores, *Read Naturally* students had gains of 13.9 words, compared to gains of only 9.2 by students who were not in a *Read Naturally* program. These results were consistent with results gathered by earlier researchers such as Samuels (1979) and Dowhower (1987), who found positive gains in fluency through the use of repeated readings.
Summary

The theory of automaticity, Ehri’s phases of sight word development, and the theory of prosody are important theories in the instruction of fluency. The theory of automaticity allows for effortless recognition of words. Ehri’s phases of sight word development allow the reader to follow a steady progression from just learning to read to the automatic recognition of sight words. Prosody serves as a link from the written word to the spoken word and allows the written word to be more like the spoken word.

Repeated reading is a method of instruction in which the focus is on improving the fluency of readers. Two types of repeated reading are the assisted and unassisted methods. Both include the idea of reading the same passage repeatedly. Both have advantages and disadvantages. Using repeated reading in both forms has been shown to improve the fluency of students. Studies have also shown a link between increased fluency and increased comprehension. Any repeated reading method should involve the use of progress monitoring to track improvement and provide information about the effectiveness of the instruction. Read Naturally is a program that focuses on both assisted and unassisted repeated reading, prosody, and progress monitoring.
CHAPTER III. METHODS AND PROCEDURES

This study was designed to answer the question: What effect does Read Naturally have on the reading rate and prosody of first grade readers? Reading rate refers to words per minute (WPM). A high, accurate reading rate combined with expression equals fluency (NICHD, 2000). Prosody, in simple terms, refers to reading with expression. Different factors led to this question being asked. First and foremost is the importance of fluency. Although fluency was neglected in earlier reading instruction, it has recently been considered one of several important factors for reading comprehension (NICHD, 2000). A lack of fluency makes it much harder for struggling readers to comprehend what they are reading. Ideally, fluent word recognition should be fast, effortless, autonomous, and unconscious (Logan, 1997). This allows the reader to build a coherent mental representation of what is being read, especially if the text is faulty or inadequate (Samuels 2002). Prosody is added to the research question as it is viewed by some to be integral in fluent reading (Dowhower, 1991). Experts have acknowledged that reading with expression, or prosody, is important to reading fluently. Dowhower states that readers are more likely to understand what they read when reading sounds like language.

The effort to bridge the gap between decoding and fluent reading has led to various instructional programs being developed that are said to increase fluency. Selecting an effective fluency instruction program is necessary because of its importance. Therefore, a widely used program call Read Naturally was selected to be used for this investigation. According to the Read Naturally Website (2009), Read Naturally is a program that uses repeated reading, teacher monitoring, and progress monitoring to improve fluency.
Methods

Research Design

This study was designed as a three group pretest-posttest control group design. This is a mixed method research design because there are elements of both quantitative and qualitative methods. It primarily incorporated a quantitative design because the use of data (correct words per minute) was quantified and analyzed. It incorporated a qualitative method because the researcher listened to and rated recordings of students’ oral reading. Professional judgment was used to rate the prosody of the oral readings in the six indicators of prosody identified by Dowhower (1991).

The three groups were created from four first grade classes. One group contained two second grade English language learners (ELLs) who were reading below grade level. Two groups were treatment groups and one group served as a control group. The treatment was the implementation of the Read Naturally program. There was a variation in the two treatment groups. Both treatment groups followed all the steps of Read Naturally. However, one treatment group (Class A) received teacher feedback on prosody during the Read Naturally intervention while the other treatment group (Class B) followed the script of Read Naturally exactly without teacher feedback on prosody. The teacher feedback consisted of complimenting students if they read with proper prosody and pointing out what they needed to work on if problems arose. It also included reading parts of the passage to model prosody. The purpose was to observe whether prosody would improve with proper modeling but no real prosody instruction or feedback (Class B), or if it took prosody instruction and feedback to improve prosody (Class A). The control group (Class C) continued with the instruction they would normally receive. This consisted of using decodable readers that are part of the Saxon Phonics program. The intervention for the
treatment groups (implementation of the Read Naturally program) took place every day for six weeks.

Participants

Nineteen students from four first grade classes were chosen for this study. Six boys and 15 girls made up the participants. In addition to the first grade students, two second grade English Language Learners (ELLs) were included, for a total of 21 students. These two students were on the same reading levels as the others. The first grade students were chosen because they were already identified for the Title I reading program and were already receiving services. First grade is also the first grade in which oral reading fluency is measured by DIBELS. DIBELS are short fluency screeners that the school district uses to check fluency three times a year. The students who took part in this study had exhibited problems with fluency in the past. DIBELS scores, reading grades, and teacher observations were used to identify the students with reading problems who were then recommended for Title I reading services. The teacher observations focused around listening to oral readings of the students with grade-level materials. Two of the four classes were combined so that there were three classes total. These two classes had to be combined due to scheduling and lack of available time in the school day. As opposed to having a normal full 40-minute period as the two other classes do, these two classes shared a class period (20 minutes each). Class A had seven students, class B had five students, and class C had nine students. None of these classes had any explicit fluency training up to this point.

Instrumentation

Instructional materials were needed to assure proper administration of the study. The selected instructional program was the Read Naturally ME (Master’s Edition) program (2006). The Read Naturally program is a fluency-based intervention program. Fluency probes from the
Read Naturally program were given every one-to-two days and were used to chart the students’ weekly progress. The fluency probes are short stories of approximately 150 words each that were read and reread by the students. There are 24 stories for each grade level. Levels start at 1.0 and are in .5 increments up to 8.0. Levels 1.0 and 1.5 were used in this study. Progress monitoring passages from DIBELS were given as a pre-test and a post-test to all participants in the control and treatment groups.

A prosody rating scale was used to evaluate oral reading prosody (see Appendix A). This scale included the six indicators of prosody (Dowhower, 1991). Those six indicators are pausal intrusions, length of phrases, appropriateness of phrases, phrase-final lengthening, terminal intonation contours (pitch), and stress. Those six indicators were then divided into three separate categories. The first four indicators were combined into “phrasing.” The last two were “pitch” and “stress.” A scale of 1 - 4 was used for each category, with one indicating the least fluent to four representing the most fluent. The researcher was the evaluator.

Seven laptop computers were used to play the compact discs that come with Read Naturally and also record some of the student’s oral readings. The students were also required to use small timers that could count down. Binders were provided for each student to help with organizing the Read Naturally materials. These materials were the stories and the chart that were used to graph their scores.

School Context

The researcher’s role in the school is that of the Title I reading instructor. Grades taught by the researcher are first and second grades, although primarily first graders were used for this study. The Title I instruction time generally takes place in a combination pull out/inclusion method. For this research, the two treatment groups had approximately 35 minutes of pull-out
instruction time in the resource room. The control group met with the Title I instructor in their home classroom.

The Read Naturally program was chosen because it is a program that has been used for the Title I program by the researcher. The researcher first noticed Read Naturally while reading I’ve Dibelled, Now What? by Hall (2005). After researching the information available on the program, a proposal was made to the school district to adopt and purchase the program for second grade. The program was adopted, purchased, and then piloted for a semester with second grade students. After some perceived success, a request was made to purchase the first grade levels. Levels 1.0 and 1.5 have since been purchased by the school district.

Procedures

Class A (treatment)

Initially, each student was given the three DIBELS progress checks before the Read Naturally program was implemented. The same three DIBELS progress monitoring checks were administered to each student. Each student was audio recorded while completing all three passages. The recordings of these checks were done using a digital recorder. The researcher listened to each reading of the story and scored it using the prosody scale.

Class A followed the directions of the Read Naturally program. Eleven steps took place over one-to-two days depending on the amount of time each student required to finish a story. The daily procedures for the Read Naturally ME edition were as follows:

1. Select a Story: Day one started with the students getting the opportunity to choose which story they wanted to read. There were 24 stories from which to choose. The reason for the opportunity to choose their own story was to increase their interest in what they were reading.
2. **Key Words:** Each student then received the CD for the story that he/she had chosen. Afterward, the student used the laptop computers to listen to the key words. The key words were provided for each story, and the student listened to these keywords and read along quietly.

3. **Prediction:** After listening to the key words, the students made a prediction for that story and wrote it down on their copy of the story.

4. **Cold Timing:** While the students were working on their predictions, the researcher administered a cold timing to record words read per minute (WPMs). A cold timing is the first unrehearsed reading of a passage. The researcher then marked the errors as the student read. Total words were counted with the errors being subtracted from the total number to determine the cold score. It should be noted that the Read Naturally program offers the option of the instructor administering the cold timing or having the students do it themselves. The administration by the instructor was chosen because this was a research study and the researcher believed the results would be more accurate.

5. **Graph Cold Timing Score:** The students then graphed their cold score in blue on their own graph.

6. **Read Along Step:** The students then played and listened to the CD while reading along. The oral readings on the CD provided modeling of fluent reading of the passage. The story was modeled three times.

7. **Practice Step:** The students then practiced reading independently until the predetermined fluency benchmark goal was met. Read Naturally suggests a score of 25-30 words higher per minute than the cold score. Each student had a timer
that counted down and beeped when the one minute was up. The students marked where they ended for each minute reading. This continued until the students reached a predetermined goal.

8. **Answer the Questions:** The students answered questions on the story while waiting to pass the story or after passing the story. The students passed the story by reaching their correct words per minute (CWPM) goal in step nine. The five comprehension questions followed a specific format: main idea, literal, vocabulary, inferential, and short answer.

9. **Pass:** A hot reading is the final reading. The student passed the story by reaching their goal.

10. **Graph Hot Timing Score:** Next, students graphed their passing score in red on the graph. If the student did not reach his/her goal, more practice was assigned.

11. **Retell:** Students orally retold what they read immediately after graphing the hot score and recorded it on the graph.

Each step was performed directly as instructed in the manual. However, prosody feedback was given to all students in Class A throughout the research. First, the researcher conducted a lesson on prosody. The researcher instructed the class on what prosody means. Also, the researcher gave several examples of good and poor prosody. The students were given opportunities to pick the best examples of good prosody when given several choices. Phrasing, pitch, and stress were all discussed with examples of each of those indicators given. After instructing the students on what prosody means, the researcher would provide feedback to the students while they were orally reading. This oral reading took place during the pre-and-post assessments and the hot and cold reads of *Read Naturally* passages. Pointing out what needed to
be improved and praise for what was read with proper prosody were examples of feedback. Modeling took place in two forms. One type was the reading of the story included on the CD. The student listened to this recording at least three times. Researcher modeling of the parts of the passage that the student had trouble reading with proper prosody was another type. For example, a student did not take proper pauses at the end of sentences and the researcher read the sentences in the correct way so the student could hear what it was supposed to sound like.

In addition to the previous steps, the students recorded themselves while they were reading. The recording was either done on a digital recorder or laptop. The researcher guided the recording. The reason for recording was to check for prosody and to check for proper and correct reading. Listening to keep students on task took place in the read along step.

At the end of the six weeks, three more DIBELS progress-monitoring stories were administered. The researcher recorded and scored the passages based on the six levels of prosody using the prosody scale described in the instrumentation section.

*Class B* (*treatment*)

Class B followed the instructions as described in the *Read Naturally* Program. The same steps completed with Class A were followed with Class B. However, unlike in Class A, no feedback instruction was given about prosody during the cold reading step, read along step, and pass step.

*Class C* (*control*)

The students in Class C remained in their homeroom classroom. The researcher went to the rooms of the two classes that made up Class C. First, the researcher visited the first class of the two combined classes. After 20 minutes, the researcher went on to the other classroom. Class C used the small readers provided with the *Saxon Phonics* Program. This procedure was chosen
because time in the Title I Reading classes would be used to read the phonics readers if the student did not come to the resource room. The phonics readers are a series of sequential decodable books with which students practice the skills learned in the *Saxon Phonics* scripted lessons.

There were several steps that occurred when the students used the *Saxon* Readers. Each student was given a book. The books were based on the targeted phonics lesson the class was currently studying. Next, students practiced the book until they were ready to read it to the teacher. If they read it well enough, the teacher signed the book and gave them the next book in the series. There were some similarities between *Read Naturally* and the *Saxon Phonics* books. One similarity was that there was repeated reading with the *Saxon Phonics*. This took place when students practiced the books. However, no measure of fluency and prosody was recorded and no modeling was done by the researcher. Also, the students were required to take the books home and practice. However, there was really no way to document if this additional practice occurred. By contrast, the researcher was better able monitor the students when they were reading in the *Read Naturally* program.

**Data Collection**

The researcher administered the first set of progress-monitoring passages from DIBELS. The middle or median score for correct words per minute (CWPM) for each student was recorded as their initial score. A recording for all three of the oral readings of the DIBELS progress-monitoring passages were completed. With these recordings, the passages were rated using a prosody scale using stress, pitch, and phrasing. Professional judgment by the researcher was used while rating the passages. The middle score for each student was recorded on a chart. A final administration of the DIBELS progress-monitoring passages was also given at the end of
the six-week research project. The middle scores for both the CWPMs was again recorded. Also, the rating of prosody took place with the median score recorded.

**Data Analysis**

The median CWPM score from the initial administration of the DIBELS progress-monitoring passages was compared with the final median CWPM scores from the final DIBELS progress-monitoring administration. The difference in CWPMs was calculated and recorded. After the difference was recorded, the total percentage difference from the pre-test to post-test was calculated. This percentage gain represented each student’s score. This score represented the effect the *Read Naturally* program had on each student. This was done for all the students in the treatment and control groups.

The first method for analyzing each whole class was calculating the mean, median, mode, and range among the test scores. The mean was the average score attained in each classroom; the median was the score that fell directly in the middle of the range of scores, and the mode was the score that appeared most often. After the mean, median, mode, and range were calculated, an analysis of variance or ANOVA was conducted by the researcher. An ANOVA is a statistic that measures the significance of differences in the scores among two or more treatments or groups. This statistic was used to determine whether there was a significant difference among the scores of the treatment groups and the control group.

The researcher then analyzed prosody. The reading of the first DIBELS progress-monitoring passages was recorded. The researcher rated the oral reading (see Appendix A). The oral reading was rated on Dowhower’s (1991) six indicators of prosody. The indicators are pausal intrusions, length of phrases, appropriateness of phrases, phrase-final lengthening, terminal intonation contours (pitch), and stress. The first four were combined into one category
called “phrasing,” while the other two were “pitch” and “stress.” A scale of 1 - 4 was used to rate all three categories. The researcher used professional judgment to evaluate the oral readings. A score of one indicated “not prosodic” and four represented the “very prosodic.” This scale was adapted from the National Assessment of Educational Progress (NAEP) (2002) fluency scale (see Appendix B). The researcher created a prosody chart using this scale for Class A, Class B, and Class C. The chart for each class included all students in that class. There were three columns: one for the initial fluency score, one for the final score, and one for the difference. The differences in prosody between Class A, B, and C were then compared. Class A was the treatment group that was given prosody feedback, Class B was the treatment group that was not given prosody feedback, and Class C was the control group that was not taking part in the Read Naturally program.

Summary

This research study focused on the impact of the Read Naturally program on the fluency and prosody of 21 first graders and two second-grade English Language Learners. Nine first graders were used in a control group. This research project consisted of three groups of students from four classes receiving Title I services. Two classes of students were combined into one due to scheduling conflicts. Two treatment groups were compared to a control group. Class A and Class B participated in the Read Naturally program and were identified as the two treatment groups. Class A was given additional feedback on their oral reading. The feedback focused on prosody. Class B did not receive feedback on their prosody. Class C did not participate in the Read Naturally program and served as a control group. Each student’s reading rate was determined with a pre-test at the beginning of the study and also with a post-test at the end of the study as measured by the DIBELS oral reading fluency passages. Each student’s progress was
determined by calculating the percentage difference in reading rate from pre-test to post-test. Prosody was measured by taping the oral reading of the DIBELS passages and rating it according to the six indicators of prosody on a scale of 1 - 4. Prosody ratings at the end of the program were compared to ratings at the beginning of the program.
CHAPTER IV. DATA ANALYSIS AND DISCUSSION OF RESULTS

Fluency has been viewed with more importance over the last few years. A lack of fluency could affect comprehension. Therefore, a lack of proper fluency instruction or ignoring the problem could create comprehension problems in the future. The purpose of this study was to determine whether implementing the Read Naturally program would improve the fluency of first grade Title I reading students. In addition to looking at fluency, prosody was also included in the study. Prosody was included because it is a component of fluency. By definition, fluency is reading with expression. Because of this, it would be beneficial to discover if the Read Naturally program alone would affect prosody, or if Read Naturally plus additional prosody instruction would have more of an effect.

This chapter examines the data collected to determine the effect of the Read Naturally program on fluency and prosody. The data were analyzed in two parts: fluency and prosody. For fluency, reading rate, or more specifically correct words per minute, was analyzed. To analyze fluency, three different progress-monitoring passages were administered as a pre-test. These passages were taken from the DIBELS first grade oral reading fluency progress-monitoring booklets. Three passages were administered before the Read Naturally intervention started. The median score for each student was taken and recorded. This was repeated as a post-test at the end of the study. Three different passages were administered after the intervention was completed, and the median score was again recorded. After recording both scores, the difference between the pre-and-post-test was calculated. From there, the researcher calculated the total percentage of increase or decrease in correct words per minute (CWPMs) that each student achieved. The differences in overall means of each class were then compared. In addition to comparing the
means class-by-class, an Analysis of Variance (ANOVA) was conducted to determine whether there was a significant difference between the three classes.

The second part of the study related to prosody. This part of the study involved the researcher rating each student’s prosody. The prosody was rated on an oral reading of the same pre-and-post DIBELS passages. To analyze prosody, the components of fluency were broken down in three categories: phrasing, pitch, and stress. The ratings were made using a scale of 1 - 4. A score of one indicated “not prosodic,” and four indicated “very prosodic.” A transcription of an oral reading is included in Appendix A. This is an example of a rating of “2.” The asterisk (*) represents a proper pause. Two asterisks (**) represent an improper pause. The correct word is included in parenthesis next to a mispronounced word. A word that was sounded out is underlined. The mean score (rating) of each class was taken separately for phrasing, pitch, and stress and then compared with each other. An ANOVA was then conducted on each class mean to see if there was a significant difference among the three classes. The analysis was done at the .05 level.

Six weeks of data were collected. Two classes served as treatment groups, and one class served as a control group. Class A consisted of seven students, Class B consisted of five students, and Class C consisted of nine students. Class A was a treatment group that received Read Naturally as an intervention as well as additional feedback on prosody. First, the researcher introduced and modeled prosody to students in Class A. Students then read a Read Naturally story. The researcher pointed out strong and weak parts of their prosody. Class B was a treatment group that received the Read Naturally intervention also. It should be noted that while Class B did not receive additional prosody instruction, prosody is modeled in the “reading along” step.
The control group was Class C. The control group did not participate in Read Naturally intervention.

Data Analysis- Reading Rate

*Individual Data*

The percentage of increase for reading rate of each student was calculated from the pre-test to post-test (see Table 1). The individual data was then used to calculate the mean of each class. Some observations can be made from looking at the individual data. Class A had four students who had over a 100% gain, while Class B and Class C had one each. The lowest gains were 38% for Class A, 0% for Class B and 2% for Class C.

*M ean, Median, Mode, and Range of Reading Rate Gains*

The results of the data collected were then analyzed based on the mean gain of each class (see Table 2). The median, mode, and range of gains were also determined to compare each individual classroom of students across the time frame of the study.

Class A had the highest mean gain (85%) during the course of the study. The highest gain of an individual student for Class A was 122%. The lowest gain was 38%. Compared to the means of Class B and Class C, the mean of Class A was 28 percentage points higher than Class B, and 43 percentage points higher than Class C.

Treatment Class B had a lower class mean gain than Class A. However, Class B had a higher class mean gain than Class C. The lowest percentage individual gain for Class B was 0% and the highest percentage gain was 133%. The mean gain of Class B was 28 percentage points lower than Class A but was 15 percentage points higher than Class C.

Class C was the control group with no Read Naturally instruction and no prosody
Table 1

Percentage Gains in Correct Words Per Minute Read

<table>
<thead>
<tr>
<th>Name</th>
<th>Class</th>
<th>Pre</th>
<th>Post</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raye</td>
<td>A</td>
<td>18</td>
<td>40</td>
<td>122%</td>
</tr>
<tr>
<td>Summer</td>
<td>A</td>
<td>24</td>
<td>53</td>
<td>120%</td>
</tr>
<tr>
<td>Kay</td>
<td>A</td>
<td>27</td>
<td>55</td>
<td>104%</td>
</tr>
<tr>
<td>Chris</td>
<td>A</td>
<td>16</td>
<td>26</td>
<td>63%</td>
</tr>
<tr>
<td>Annie</td>
<td>A</td>
<td>15</td>
<td>23</td>
<td>38%</td>
</tr>
<tr>
<td>Shelly</td>
<td>A</td>
<td>30</td>
<td>64</td>
<td>113%</td>
</tr>
<tr>
<td>Colton</td>
<td>A</td>
<td>40</td>
<td>55</td>
<td>38%</td>
</tr>
<tr>
<td>Lynne</td>
<td>B</td>
<td>28</td>
<td>28</td>
<td>0%</td>
</tr>
<tr>
<td>Dallas</td>
<td>B</td>
<td>12</td>
<td>28</td>
<td>133%</td>
</tr>
<tr>
<td>Joe</td>
<td>B</td>
<td>45</td>
<td>62</td>
<td>38%</td>
</tr>
<tr>
<td>Jerry</td>
<td>B</td>
<td>34</td>
<td>50</td>
<td>47%</td>
</tr>
<tr>
<td>Ally</td>
<td>B</td>
<td>12</td>
<td>20</td>
<td>67%</td>
</tr>
<tr>
<td>Maddy</td>
<td>C</td>
<td>11</td>
<td>17</td>
<td>55%</td>
</tr>
<tr>
<td>Xavier</td>
<td>C</td>
<td>54</td>
<td>58</td>
<td>7%</td>
</tr>
<tr>
<td>Liz</td>
<td>C</td>
<td>42</td>
<td>43</td>
<td>2%</td>
</tr>
<tr>
<td>Erica</td>
<td>C</td>
<td>19</td>
<td>42</td>
<td>121%</td>
</tr>
<tr>
<td>Jarod</td>
<td>C</td>
<td>71</td>
<td>94</td>
<td>32%</td>
</tr>
<tr>
<td>Emmy</td>
<td>C</td>
<td>43</td>
<td>61</td>
<td>42%</td>
</tr>
<tr>
<td>Haley</td>
<td>C</td>
<td>54</td>
<td>83</td>
<td>54%</td>
</tr>
<tr>
<td>Clara</td>
<td>C</td>
<td>50</td>
<td>61</td>
<td>22%</td>
</tr>
<tr>
<td>Cassy</td>
<td>C</td>
<td>47</td>
<td>67</td>
<td>43%</td>
</tr>
</tbody>
</table>

Note: Student names are pseudonyms.
Table 2
Mean, Median, Mode, and of Percentage Gains

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>85</td>
<td>57</td>
<td>42</td>
</tr>
<tr>
<td>Median</td>
<td>104</td>
<td>47</td>
<td>42</td>
</tr>
<tr>
<td>Mode</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>84</td>
<td>133</td>
<td>119</td>
</tr>
</tbody>
</table>

feedback. Class C had the lowest average mean of all three classes. The lowest percentage increase was 2% and the highest percentage increase was 121%. Compared to the means of Class A and Class B, Class C was 43 percentage points lower than class A and 15 percentage points lower than class B.

Overall, the highest mean score at the end of the study was achieved by Class A. The mean for Class A was also close to a 100% increase. The range or variability of Class A was also smaller than Class B and Class C.

Analysis of Variance

To determine the level of significance, an ANOVA was performed (see Table 3). This analysis compared the mean from each class. The data were tested at the .05 level. Class (control) C was compared to the two treatment classes (A and B). For a statistically significant difference, the p-value would need to be less than .05. The p-value was .1194; therefore, there was not a significant difference among the three classes’ mean scores.
Table 3

Analysis of Variance for Reading Rate

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatments</td>
<td>2</td>
<td>7487.24</td>
<td>3743.62</td>
<td>2.40</td>
<td>0.12</td>
</tr>
<tr>
<td>Error</td>
<td>18</td>
<td>28105.72</td>
<td>1561.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>35592.95</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significance tested at the .05 level.

Data Analysis—Prosody

*Mean, Median, Mode, and Range of Prosody Treatment*

The results of the data collection for phrasing, pitch, and stress were analyzed based on the mean, or average, score within each class (see Tables 4 - 6). The difference was calculated from the pre and post rating.

The same classes that were used for the fluency treatment were used for the prosody treatment. The median, mode, and range of score gains were also determined to compare each individual classroom of students across the time frame of the study.

Table 4

Mean, Median, Mode, and Range of Phrasing Rating Gain

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1</td>
<td>.6</td>
<td>.444</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Range</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 5
Mean, Median, Mode, and Range of Pitch Rating Differences

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.857</td>
<td>.2</td>
<td>.444</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Range</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6
Mean, Median, Mode, and Range of Stress Rating Differences

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.714</td>
<td>.6</td>
<td>.667</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Range</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Class A had the highest mean of the pre and post-test differences for all three of the indicators (phrasing, pitch, and stress). The class mean of the difference in “phrasing” was a rating of 1. The mean for difference in “pitch” was at rating of .857. For “stress,” the mean of the pre-test and post-test differences was .714. As stated, these scores were higher than those of Class B and Class C.

Class B had the second highest mean score in the area of “phrasing.” The mean pre-test and post-test mean difference for “phrasing” was .6. However, Class B had the lowest difference...
mean in “pitch” and “phrasing.” The average mean for “pitch” was .2. For “stress,” the average mean was .6.

Class C had the lowest difference mean in the area of “phrasing,” with a mean score of .44. Class C had the second highest difference mean in the other two areas of prosody. For “pitch,” Class C had a difference mean of .444 and for the area of “stress,” the difference mean was .67.

Overall, Class A showed the most improvement of all three classes. The biggest change in mean for Class A occurred in phrasing.

Analysis of Variance

The researcher conducted an ANOVA at the end of the study to determine the level of significance among the three classes’ prosody ratings. This analysis compared the mean scores from each class. The data were tested at the .05 level. Class C (control) was compared to the two treatment classes (A and B).

For a statistically significant difference during the duration of the study, the p-value would need to be less than .05. The p-value for “phrasing” was .0613, so there was not a significant difference among the three classes’ mean scores (see Table 7). In the area of “pitch,” the p-value was .067 (see Table 8). Again, this is larger than .05, so there was not a significant difference among the three classes’ mean scores. In the area of “stress,” the p-value was .929, so there was not a significant difference among the three classes’ mean scores (see Table 9). In a larger study, “phrasing” and “pitch” would more likely be significant, but “stress” would not because “phrasing” and “pitch” are much closer to .05.
Discussion of Results

The specific question that was investigated during this study was “What effect does Read Naturally have on the reading rate and prosody of first grade readers?” This study had two foci.
The first was fluency. Comparing means suggested an improvement in fluency. Conducting an ANOVA demonstrated that the differences were not significant.

Gains in reading rate from beginning to end varied greatly from class-to-class. The increase for Class A was 85 percentage points, for Class B it was 57 percentage points, and Class C was 42 percentage points. The difference in gains between treatment Class A and control group Class C was a difference of 43 percentage points. The difference between treatment Class B and control group Class C was 15 percentage points. The difference between the two treatment groups was 27 percentage points. This would suggest that using the Read Naturally program made a difference in the students’ fluency. The biggest increase with Class A would suggest that Read Naturally plus prosody feedback produced the largest improvement in fluency. Also, four students from Class A had at least a 100% increase in their WPM count. One student had at least a 100% in class B and one student in Class C had a 100% increase. On the other end, no students in Class A had under a 10% increase, while one in Class B had under a 10% increase and two in class C had under a 10% increase.

The ANOVA suggested there was not a significant difference among the groups. The alpha value for significant change is .05. However, the $p$-value was .12. This was even with the large difference in the mean scores.

The second component studied was prosody. Three aspects of prosody were analyzed for differences from the beginning of the study to the end of the study. These were “phrasing,” “pitch,” and “stress.” Examining the means shows some differences for each aspect of prosody. However, conducting an ANOVA suggested there was not a significant difference in any of the indicators.
Class A, the class with prosody instruction and modeling, had the greatest increase in all three aspects of fluency. This would suggest that the prosody instruction did have an effect on prosody. For “phrasing,” every student in Class A improved by one rating point, six of seven students improved in “pitch,” and five of seven students improved in “stress.” In Class B, three of five students improved in “phrasing,” one of five improved in “pitch,” and three of five improved in “stress.” In Class C, four of nine students improved in “phrasing,” four of nine improved in “pitch,” and six of nine improved in “stress.”

The analysis of variance suggested there was not a significant difference among the three classes in either “phrasing,” “pitch,” or “stress.” The alpha value for significant change is .05. However, the $p$-value for phrasing was .061, pitch was .067, and stress was .93. Therefore, since all those numbers were larger than .05, there was no significant difference according to the test.

In addition to the data collected, observations were made of student motivation. The students reacted positively to *Read Naturally*. All the students seemed interested and eager from the first day of the program. When they walked into the class for instruction time, they would go immediately to their binders and get started. Many of them were very aware of what their goals were and tried to reach them. Therefore, proper motivation was provided from the program. The graph the students filled out was very useful in aiding motivation.

**Summary**

Data were collected to study both the impact of the *Read Naturally* program has on fluency and the effect additional prosody instruction has on the students’ fluency. The data collected from Class A, Class B, and Class C were analyzed at the end of the study. The mean,
median, mode, and range of the difference in percentage points from the pre-test to the post-test were calculated for fluency. Scores were given on prosody on the pre-test and the post-test, and the difference was calculated. The mean, median, mode, and range were then calculated. An ANOVA was also conducted to compare the level of significance among the mean scores in both fluency and prosody.

The mean scores for fluency suggested that the Read Naturally program had a positive impact on student fluency. Both treatment groups had increases in fluency. The mean scores for prosody suggested the prosody instruction did have an effect on prosody. Class A, which received prosody instruction, had a higher level of improvement than Class B or C. The ANOVA, however, suggested there was no significant difference in either the fluency or prosody studies. The results lead to a discussion on the importance of these findings, conclusions to be drawn, and the possibility of future studies.
CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Fluency is a very important part of reading that had been neglected in the past (Samuels, 2002). However, recently fluency has been brought to the forefront and is seen as an important part of a reading program. If students are not fluent, comprehension could become a problem since so much energy is spent on sounding out words and not enough energy is reserved for comprehending. This research study was designed to determine “What effect does Read Naturally have on the reading rate and prosody of first grade readers?” In this chapter, a summary of the study, conclusions based on the data, and the future recommendations for research will be discussed.

Summary of the Study

This study was designed to determine whether using the Read Naturally Program would affect the reading rate and prosody of first grade Title I reading students. The study was designed using a three group pretest-posttest control group framework so the treatment groups could be compared with a control group to see the effect the program had on the students’ reading. For the reading rate, the percentage gain in words per minute from the pre-test to post-test were collected and analyzed. For prosody, the difference in the prosody score from the pre-test to the post-test was collected and analyzed. The mean, median, mode, and range were calculated at the end of the study, along with calculating an ANOVA for both the reading rate and prosody results.

After collecting the data and examining the mean for reading rate, there appeared to be a significant difference in reading rate. Also, looking at the individual gains suggest some students reacted well to the program, while others did not. However, an ANOVA did not indicate a significant difference.
After collecting the data and examining the mean for prosody, there appeared to be a minor difference in fluency for the group receiving extra instruction and feedback on prosody. However, the ANOVA did not indicate a significant difference.

Conclusions

The major conclusion that can be drawn from the results of this study is that the *Read Naturally* intervention in the Title I classroom did have an effect on reading rate of first graders. This would be in line with repeated reading research by Samuels (1979) and Rasinski (1990), among others. Since the ANOVA did not indicate a significant difference, however, one may question the effectiveness of the program in the classroom. However, in examining the mean difference in percentage points from the pre-test to the post-test, the results are encouraging. The percentage increase was much larger for the Class A treatment group compared to the control group, and the Class B control group also had a larger increase than control group C. The lack of difference according to the ANOVA may be due to the lack of sample size, especially for Class B. The bigger gain in Class A than Class B corresponds with Schriber’s findings (1980), suggesting that the inclusion of a fluent oral model along with repeated reading may be more effective. While Class B had modeling also, there was an intentional focus on it in Class A, perhaps leading to the larger gain.

Another conclusion that can be drawn is related to the portion of the research question regarding prosody. The conclusion is that extra prosody modeling and instruction had a positive effect. The mean of Class A was higher than that of Class B or Class C. Class A received instruction and feedback on prosody. It should be noted that while Class B did not receive extra prosody instruction, there is modeling in *Read Naturally* in the form of reading along to the stories on CD. A conclusion from this is that the *Read Naturally* with extra emphasis on prosody
has an effect on prosody. However, Read Naturally alone without emphasis on prosody did not have a significant effect on prosody. This is consistent with Dowhower’s (1987) finding that extra modeling increased prosody in assisted repeated reading. This would suggest that students would be more likely to improve their prosody with an awareness of what prosody is and constant reminders of what it sounds like.

The success of the program over the six-week study would suggest that results could have continued to be successful with a longer amount of time. This would especially be true in the area of reading rate. The more time the students spent using the program, the more independent they became with each step. The more independent they became, the more time was spent on the repeated reading portion of the program. Towards the end of the study, observation suggested that students were becoming more engaged. Also, even though improvement was seen in many students, there appears to be room for improvement.

Overall, additional instruction in fluency and prosody appears to be beneficial. One constant that was present in both the reading rate and prosody portion of the study was proper instruction on what needed to be done, along with reminders to follow the instructions. In regard to the administration of Read Naturally, the researcher ensured that the students stayed on track, followed the rules, and that they knew what they were trying to improve. Within the prosody portion of the study, giving feedback and helping students be aware of prosody was clearly more successful than no feedback and not being aware of prosody.

Recommendations

Recommendations for Teachers

One recommendation would be to implement this program on the entire grade level. Although the program could be administered to the entire first grade, this would take the
cooperation of the grade-level teachers. Time would also be a factor to consider, because individual class schedules would need to accommodate the time necessary for program implementation. However, this is recommended because it appeared to be successful with gains in CWPM and increased motivation that was shown by the children that used the program every day.

Further research on the software version of the Read Naturally program should be conducted. This program is called Read Naturally SE (software edition). The basic structure and components of the program are the same. The main difference is that everything except the final hot reading is done by the student alone on the computer. This could help with both the time issue and the amount of teacher assistance needed.

A more concentrated focus is needed to study the benefits of this program. This particular study lasted only six weeks. The materials provided by Read Naturally would allow the intervention to be lengthened. More time could give a more accurate view of what the program can do. Extending the program from six weeks to a semester could be a possibility.

Repeated reading in general would be recommended. One of the main components of the Read Naturally program that improves fluency is repeated reading. Repeated reading can be done with any reading passages. The researcher strongly recommends including repeated reading sessions with all reading stories from whatever reading series is being used. Repeated reading can be within the various subject areas in the form of rereading important sections of the textbook.

Prosody instruction is also recommended. This instruction can be done with the program, or proper feedback can be given during any oral reading. Reader’s theatre is an instructional method that can improve fluency. Reader’s theatre is a method in which a story is divided into
different parts or roles. The parts are then assigned to students, practiced, and performed in front of the class. During this, there is a focus on prosody.

**Recommendations for Principals**

The researcher has recommendations for administrators. One of these would include purchasing the *Read Naturally* program if school funding allows this. This could be either the *Masters Edition* or the *Software Edition*. It is recommended that all teachers using the program be properly trained. A workshop or in-service session could accomplish this. Other fluency methods could still be encouraged if the *Read Naturally* program cannot be purchased. The principal could organize a general fluency workshop. These workshops could include proper instruction on using repeated reading and how to incorporate prosody instruction.

**Recommendations for Parents**

The researcher also has recommendations for parents. The child’s teacher could send used and unused *Read Naturally* stories home with them. Training in *Read Naturally* and other fluency methods for the parents is also recommended. There is also a home version of *Read Naturally* available called *One Minute Readers*. This is basically a smaller version of *Read Naturally* made for home use. The *Read Naturally* program does not necessarily have to be used by the parents for results. As stated earlier, a main theory behind *Read Naturally* is repeated reading. Another part of the program is that the students can choose their own stories. This may be motivating for the child. With these two things in mind, the parent could take their child to the local library. The child would be allowed to choose a story of their choice. The parent would read to and read with the child using proper prosody. Then, the child can repeatedly read the story until mastery of the story has occurred. Audio books are also recommended. These are available at the library. These provided a method of assisted repeated reading.


Recommendations for Future Research

Based upon the results of the test, especially the ANOVA, further research is recommended. The number of students participating in the study is a concern. In the planning stages of the research, Class B had more students, but the number decreased as the study progressed. Some students were removed from the study due to recommendations from the homeroom teacher and Title teacher. A recommendation would be to have more students involved. Suggestions could include using students who are not part of Title I, but did not reach benchmark on the DIBELS testing. Another suggestion would be to include those students who may have reached benchmark, but for whom teacher observation and classwork suggest that additional assistance is needed. The researcher suggests a further study to explore in more detail the program’s effect on ELLs, as well as comparing results based on gender. The Read Naturally program contains a comprehension component that may help those students also. It would be interesting to see if the Read Naturally program might help those students in comprehension also.

Studying the effects of Read Naturally on motivation and attitude would be interesting. Throughout the study, students’ motivation appeared to improve along with their attitudes, which could be an added benefit of the Read Naturally program. Scales could be used that enable students to rate their attitude towards reading on a weekly basis. A survey could also be administered before and after the use of the program.

Summary

Fluency is an important part of reading instruction. The Read Naturally program uses the repeated reading method to increase fluency. The program was carefully implemented over a course of six weeks and provided the participants an opportunity to improve their fluency. The
study provided the researcher the opportunity to observe the particular aspects of the program and generated data that could be analyzed. The increased emphasis on prosody gave the researcher the opportunity to see if a slight addition to the Read Naturally script had an effect on prosody.

Although the study showed positive results with the difference in means, the ANOVA failed to find a significant difference in reading rate and prosody. Despite this, the Read Naturally program had a positive effect on reading rate, and additional instruction had an effect on prosody. Individual results suggest that Read Naturally had more of an effect on some students than others, signifying that repeated reading is an appropriate intervention for them. It is hopeful there will be additional research on Read Naturally and fluency in general.
References


APPENDIX A

Prosody Chart
Appendix A

Prosody Rating Table

<table>
<thead>
<tr>
<th></th>
<th><em>Phrasing</em></th>
<th><em>terminal intonation contours</em></th>
<th><em>stress</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>pausal intrusions, length, appropriateness, phrase final lengthening</em> (1-4)</td>
<td></td>
<td>(1-4)</td>
<td>(1-4)</td>
</tr>
<tr>
<td><strong>Beginning</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ending</strong></td>
<td></td>
<td></td>
<td></td>
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</table>
APPENDIX B

NAEP Fluency Scale
### Appendix B

**NAEP Fluency Scale**

<table>
<thead>
<tr>
<th>Fluent</th>
<th>Level 4</th>
<th>Reads primarily in larger, meaningful phrase groups. Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the story. Preservation of the author’s syntax is consistent. Some or most of the story is read with expressive interpretation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td>Reads primarily in three- or four-word phrase groups. Some small groupings may be present. However, the majority of phrasing seems appropriate and preserves the syntax of the author. Little or no expressive interpretation is present.</td>
<td></td>
</tr>
<tr>
<td>Nonfluent</td>
<td>Level 2</td>
<td>Reads primarily in two-word phrases with some three- or four-word groupings. Some word-by-word reading may be present. Word groupings may seem awkward and unrelated to larger context of sentence or passage.</td>
</tr>
<tr>
<td>Level 1</td>
<td>Reads primarily word-by-word. Occasional two-word or three-word phrases may occur—but these are infrequent and/or they do not preserve meaningful syntax.</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C

Prosody Transcription
Prosody Transcription

**My Rock Collection**

*(one minute)*

I*started**a*rock***collection***. It*began**when **|*visit (visited)**the**coast.***
*There*were*so**many**rocks*on*the**beach.**They*were**wet*and**shiny*from**the**water.*They**came*in*many**different(beautiful)**colors.**They*were*pink**green,**black* and*white. Some*rocks**had*been**worn

*appropriate pause

**inappropriate pause

Misprounounced word in parentheses