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The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension

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The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Curriculum and Instruction

by

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Abstract

Research has established a strong relationship between silent reading comprehension and prosodic reading fluency among young readers, but much remains unknown about this relationship among older readers (Breen, Kaswer, Van Dyke, Krivokapic, & Landi, 2016; Cypert & Petro, 2019). The goal of this study was to determine the impact of prosodic reading instruction on adolescents' silent reading comprehension. Conducted in a classroom setting in two different school districts, this study included three certified English teachers and a total of 52 students in grades 8, 9, and 10 for a period of nine to twelve weeks with a total of 810 instructional minutes. The Fluency Development Lesson (FDL) (Kuhn, Rasinski, & Zimmerman, 2014; Morrison & Wilcox, 2020) structure provided the format of instruction for the treatment variable, prosodic reading instruction. District-selected digital standardized assessments provided pre- and post-treatment silent reading comprehension scores to assess the impact of the treatment on silent reading. Using SAS software, the researcher used a repeated measure analysis of variance (RMANOVA) to test the impact of the treatment. Regarding silent reading comprehension, analysis revealed an effect size of 2.3%, indicating that the treatment produced no significant impact. To assess students' prosodic reading, the EARS rubric (Rasinski & Cheesman-Smith, 2018), a multidimensional fluency scale, provided pre- and post-scores for which analysis showed an effect size of 36%, a significant impact. The results of this study are inconsistent with recent research which shows that as prosodic reading scores increase, silent reading scores increase (Wolters, Kim, & Szura, 2020). This inconsistency may be attributed to the lack of clarity involved in measuring specific aspects of prosody (Morrison & Wilcox, 2020; Wolters, Kim, & Szura, 2020).

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Dedication

I dedicate this dissertation to my husband, David Mos, whose gentle strength and soft words carried me through the most difficult days of this academic journey. Through the missed meals, the late nights, and the early mornings, he sustained us both. Not one time did he ever say one negative word to me, and I will never be able to sufficiently explain the depth of my gratitude toward him.

I must also dedicate this dissertation to my four children: Patrick, Myla, Alex, and Marsha. Their capacity for love, patience, and forgiveness astounds me. From each other, we have learned what it means to live a life.

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Before I thank anyone in particular, I first want to acknowledge the providence that allowed me to be born in a place and during a time that allowed this incredible journey to be possible. I have learned, without reservation, that self-determinism is not the only factor in one's success.

To begin, I must express my deep appreciation for Dr. Vicki Collet, my advisor and dissertation chair, for her inexhaustible patience, feedback, and guidance. She is a model educator, and it is my great honor to have learned under her guidance. As my more knowledgeable other, she has always known when I was ready for new learning, and she has guided me well. I caught my love of theory from her.

Because I have struggled in mathematics throughout my education, it comes as a great surprise to me that I found the courage or perhaps audacity to believe that I could complete a quantitative study. Dr. Allison A. Boykin, quantitative advisor and dissertation committee member, is the professor who created a learning environment in a statistics class that allowed me to gain confidence with numbers and procedures. Her tolerance of my mistakes and inconsistencies is incomprehensible to me, but I am beyond grateful for her kind correction and support. Without her guidance, I cannot fathom how I would have come this far.

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Chapter I: Introduction

Introduction

Prosody is typically regarded as an element of fluency in which the reader's oral expression sounds like the spoken word. "*Prosody* is a linguistic term that describes the rhythmic and tonal aspects of speech: the 'music' of oral language" (Samuels & Farstrup, 2006, p. 134). Further, prosodic reading instruction may include imitative repetition of a text read aloud that mimics natural speech (Kuhn, Schwanenflugel, & Meisinger, 2010; Miller, & Schwanenflugel, 2008; National Reading Panel Report, 2000). Imitation of text read aloud by an instructor and orally repeated by students can scaffold their encounters with unfamiliar and/or complex texts, sentence structure, and vocabulary. Students are more likely to achieve comprehension if they are familiar with language structures in the text and when they know how it is supposed to sound (Ashby, 2006; Breen, Kaswer, Van Dyke, Krivokapic, & Landi, 2016; Fodor, 1998; Gross, Winegard, & Plotkowski, 2017). Although such instruction is well-documented among young readers, little is known about its effects on adolescent readers (Beattie & Manis, 2014; Rasinski, Chang, Edmondson, Hageldinger, Nigh, Remark, & Rupley, 2016; Pikulski & Chard, 2005; Whalley & Hansen, 2006; Wolters, Kim, & Szura, 2020). Therefore, the goal of my study was to add to the body of scholarly research on the topic of prosodic reading instruction among adolescents.

The overarching question that provided the impetus for research of prosodic reading instruction among adolescents was to discover if this method has a correlational relationship to standardized reading comprehension scores. A study of how prosodic reading instruction might impact silent reading comprehension scores on a standardized assessment among adolescents was worth investigating because of the gap in scholarly literature on this topic. "While the

majority of work on prosodic awareness has been conducted with children, recent work with older readers has shown that the relationship between knowledge of prosodic information and reading is sustained with reading experience and developing skill” (Chan & Wade-Wooley, 2018). As a general practice, after fourth grade, instruction in reading shifts to a silent model of reading (Rasinski, Padak, McKeon, Wilfong, Friedauer, & Heim, 2005). Further, the oral component of reading aloud and the modeling of negotiating complex texts is disregarded because the prevalent assumption is that students should have mastered decoding by fourth grade and should be able to read silently and independently to extract meaning from text (Hawkins, Hale, Sheeley, & Ling, 2011; Mellard, Fall, & Woods, 2013). This assumption is problematic. For example, from 1992-2019, fourth grade reading scores trend upward while twelfth grade reading scores trend downward on the National Assessment of Educational Progress (National Assessment of Educational Progress, 2019). To discuss the incidence of decreasing reading scores among older readers, it is necessary to understand the nature of the reading demands placed on adolescents as a result of state and national standards and to understand that learning to read is based on a continuum of development that encompasses a progression of skills and strategies in which fluency is an integral element (National Reading Panel Report, 2000; Paige, et. al., 2017).

While reading comprehension may be regarded as a cognitive process that includes interaction between the reader’s background knowledge and the text, it may also be considered a socio-culturally based event when the reading of a text is shared with others (Rosenblatt, 1976; Vygotsky, 1978). The sharing of a text with others and the discussion and meaning making that ensues may also be a part of comprehension (Rosenblatt, 1976; Vygotsky, 1978). The need to make connections to background knowledge and express personal reactions to text

leads to a deeper understanding of text (Rosenblatt, 1976). While adolescents are generally expected to have mastered silent reading comprehension, gaps in background knowledge, vocabulary, and lack of fluency can contribute to inhibited comprehension. To understand how oral reading fluency practice may potentially increase silent reading comprehension, it is necessary to understand the relationship between oral language development and learning to read (Immordino-Yang & Knecht, 2020). Since humans are born with an innate capacity for oral language, the brain is equipped to mimic language, to develop word awareness, and to acquire the grammar of spoken discourse (Gee, 2015). Conversely, the human brain is not innately equipped to decode printed language. Since written language is a relatively recent development in human history, oral language comprehension must be delineated from silent reading comprehension. While humans naturally learn to speak, they typically do not naturally learn to read. To effectively learn to decode and comprehend text, the brain must build neural pathways to break the code of written language; the decoding of print is a skill that can be taught (Adams, 1990).

Initiatives that focus on silent reading comprehension through federal and state mandates require growth in silent reading comprehension as described in the *Every Student Succeeds Act* (ESSA) (United States. Congress. Senate. Committee on Health, Education, Labor, and Pensions, 2019). As a result, educators are often tasked with discovering and creating effective learning events that address not only struggling readers but also students who are at grade level and above in silent reading comprehension. Factors that impact the selection of appropriate reading intervention depend on grade level, funding, staffing, instructional support, and training in how to implement strategies that are flexible for teachers and students. While many studies have been conducted to investigate how to intervene with struggling adolescent readers, few

studies have been conducted to determine the role of prosodic reading instruction's role in comprehension with an ever-growing body of complex texts (Benjamin & Schwanenflugel, 2010). Although studies have investigated effects of prosody intervention for young readers, researchers suggest that further study addressing prosodic reading interventions with adolescents is needed (Chan & Wade-Wooley, 2018; Dennis, 2013; Hawkins, Hale, Sheeley, Wesley & Ling, 2011; Morris & Gaffney, 2011; Rasinski, Rikli, & Johnston, S., 2009; Wexler, et. al., 2008). Investigating this issue can perhaps provide guidance in choosing instructional methods that are appropriate and effective for adolescent learners in supporting the development of their silent reading comprehension skills.

Statement of the Problem

Currently, there is a challenge in silent reading comprehension among adolescents that is highlighted by reading achievement scores on standardized assessments. Standardized assessments are frequently used to track and report student achievement growth not only in reading but also other subjects. Over the years, adolescent reading scores have been in decline, and there is a need to discover instructional strategies that will yield growth outcomes. (Thomas, 2020; Wexler, 2019). This study may help provide a path that educators can follow to anticipate growth in standardized assessment. This path involves discovering how prosodic reading instruction might improve silent reading comprehension. To guide this study, the following research questions are addressed:

1. What is the impact of prosodic reading instruction on adolescents' silent reading comprehension?
2. What is the impact of prosodic reading instruction on adolescents' prosodic reading?

3. Is there a correlation between silent reading comprehension and prosodic reading among adolescents?

Purpose of the Study

The purpose of this study was to discover the impact of prosodic reading instruction on silent reading comprehension among adolescents. To understand prosodic reading instruction, we must first understand how it is implicated in the term reading fluency. Reading fluency is typically regarded as the ability to read automatically and correctly along with proper expression (NRP, 2000; Samuels & Farstrup, 2006; Paige, Rupley, Smith, Rasinski, Nichols & Magpuri-Lavell, 2017; Rasinski, 2003; Schrauben, 2010). Prosody, as an element of reading fluency, is difficult to measure quantitatively because it is typically measured qualitatively with a descriptive rubric. The elements of such a descriptive rubric can include rate and automaticity as two quantifiable measures of fluency, but prosody encompasses unique descriptors such as phrasing, rhythm, pauses, intonation, and expression. While silent reading comprehension can be impacted by fluency in terms of rate and accuracy, prosody can contribute to silent reading comprehension by facilitating a more robust interpretation of text that is based on more than being able to quickly decode words on a page (Rasinski, 2010; Samuels, 1994; Samuels & Farstrup, 2006).

Conceptual Framework

There are several theories and theoretical models that support the efficacy of prosodic reading instruction and its impact on silent reading. From the field of linguistic research, the Implicit Prosody Hypothesis (IPH) (Fodor, 1998) and the Phonological Hub Theory (PHT) (Ashby, 2006) describe connections among the orthographic features of written language and the phonological components of oral language. From the field of cognitive research, this study is

based on the rationale and evidence presented in the works of Vygotsky, Rosenblatt, LaBerge and Samuels, and Pearson and Gallagher. Specifically, Vygotsky's sociocultural theory of learning (Vygotsky, 1978), the Zone of Proximal Development theory (Vygotsky, 1978), and inner speech theory (Vygotsky, 1962) provided guidance in forming crucial connections among theories of cognitive development and linguistic research. The Reader Transaction Theory developed by Rosenblatt (1978, 1995) provided a basis for not only the reader's role in text comprehension but also how the cultural context of literature can shape understanding. The Automatic Information Processing theory (AIP) (LaBerge & Samuels, 1974) along with research in the method of repeated readings developed by Samuels (1979) continued to solidify the practice of prosodic reading practice to increase text comprehension. Finally, the Gradual Release of Responsibility theory developed by Pearson and Gallagher (1983) provided a framework for the delivery of prosodic reading instruction. With its structure of modeling, guided practice, suggestive feedback, and independent practice, it contributed direction for explicit instruction to help students to acquire and apply models of prosodic reading that coincide with silent reading. In addition to the theories mentioned previously, four models of the reading process proved valuable for framing this study: The Simple View of Reading (Tunmer & Gough, 1986), the Four-Part Mental Processing Model (Adams, 1990), Scarborough's Reading Rope (Scarborough, 2001), and the Three-Part Cueing System (Clay, 1993). Beyond theories and models, however, the treatment variable in this study is the framework of the Fluency Development Lesson (FDL) (Kuhn, et. al., 2014; Morrison, & Wilcox, 2020; Raskinski, 2010).

The FDL is typically a one-day lesson in which the teacher models fluent reading of a text and leads a discussion on possible interpretations of the text. The students participate several times in some form of repeated reading such as echo, choral, or paired reading, and then practice

reading the text individually (Kuhn, et. al., 2014; Morrison, & Wilcox, 2020; Rasinski, 2010). Word study, vocabulary study, and language study may also be a part of the FDL. Students are exposed to prosodic contours and orthographic patterns as described in the IPH (Fodor, 1998) and PHT (Ashby, 2006) as they attend to the teacher's modeled reading and the orthographic patterns of written language. Occurring in a classroom context, the FDL incorporates features of the sociocultural learning theory (Vygotsky, 1978) and the Reader Transaction Theory (Rosenblatt, 1978) when students participate in discussion around the meaning of the text. The Zone of Proximal Development (Vygotsky, 1978) and inner speech (Vygotsky, 1962) are involved in the students receiving guidance from the teacher and expressing their own prosodic readings. The AIP (LaBerge & Samuels, 1974) and the GRR (Pearson & Gallagher, 1983) are apparent in the FDL when the teacher begins with modeled reading, and then when students practice repeated readings (Samuels, 1979) with suggestive feedback from the teacher or peers, and then finally when they practice on their own (Pearson & Gallagher, 1983). While the Simple View of Reading (Tunmer & Gough, 1986) the Four-Part Mental Processor (Adams, 1990), Scarborough's Reading Rope (Scarborough, 2001), and the Three-Part Cueing System (Clay, 1993) are not directly implicated in the FDL, the elements within the models are represented in the FDL.

Significance of the Study

This study is important because it sought to suggest a specific method for prosodic reading instruction for adolescents. The treatment method was a lesson design known as the Fluency Development Lesson (Kuhn, et. al., 2014; Morrison, & Wilcox, 2020; Rasinski, 2010). While the title of this model names fluency, it explicitly addresses the prosodic element of reading instruction with an end goal of application to silent reading comprehension.

Specific Research Hypotheses

The general hypothesis for this study relates to question one and was that explicit instruction in prosodic reading would increase silent reading comprehension scores on standardized assessments among adolescents. Additional hypotheses in relation to research questions two and three were that explicit instruction in prosodic reading would increase students' prosodic reading scores and that a correlation exists between silent reading comprehension and prosodic reading among adolescents.

Overview of Methodology

To create a sample population, I disseminated a survey to teachers in the Northwest Arkansas Education Service Cooperative (NWAESC), a three-county region in Northwest Arkansas. This region was chosen because I am currently employed at NWAESC as a literacy specialist. After the sample of the population was established, I requested mid-year scores on standardized reading assessments from the participating teachers. The two standardized reading assessments that were used were NWEA MAP and iReady. At the end of the treatment period, I again requested scores on the most recent administration of the reading comprehension assessments so that I could analyze the relationship between the pre- and post-tests for the treatment period with the post-test scores as the independent variable.

The intervention for treatment was the Fluency Development Lesson (FDL) (Kuhn, M., et.al., 2014). The FDL was delivered in a 30- 45-minute instructional time frame and included first the teacher's reading aloud of a new a text and students subsequently imitating the text with prosody. Another element of the FDL is a discussion of the meaning of the text for each cycle of instruction (Kuhn, et. al., 2014). I trained teacher volunteers in the method of the FDL to establish consistency in the delivery of prosodic reading instruction. For fidelity checks, I

observed implementation of the FDL once a week and provided teachers with specific feedback during the treatment period.

For data analysis I used a repeated measure of analysis of variance (RMANOVA) and a correlation procedure using SAS software to examine the relationship between pre- and post-test scores on silent reading comprehension so that I could determine if the treatment produced a significant effect. The RMANOVA is used to test the equality of means, which is necessary to determine if a significant change in means occur. The correlation procedure was used to examine the relationship between prosodic reading scores and silent reading comprehension scores.

Assumptions

The assumptions of RMANOVA are that the procedure is robust to violations of independence, non-normality, and homogeneity of variance. These are important assumptions because two different standardized measures of silent reading comprehension were used across three different grade levels with one repeated measure. In this instance, the repeated measure assumes independence because of correlations in the residual errors among the treatment period. In addition, the RMANOVA reduces the chance of both Type I and Type II errors, which is vital in determining the true effect of the treatment.

Limitations on Generalizability

The generalizability of the current study's results may be limited due to issues in data reduction and the circumstances created by the COVID-19 pandemic and weather events that limited instructional time and student participation. Issues in data reduction, lack of external validity, lack of internal validity, construct irrelevant variance, and other circumstances are fully discussed in Chapter 5.

Delimitations

Data that I chose not to request that may have been relevant in this study was student attendance, each participating student's demographic information, and student information regarding special accommodations or modifications to instruction such as 504 plans (United States Equal Employment Opportunity Commission, 1973), Individualized Education Plans (IEP) for special education students (United States Department of Education, 2004), and English language proficiency status. Because of the impact of the COVID-19 pandemic and weather events, the collection of student attendance data would have added extraneous work for the teachers involved.

The following pages contain a literature review of scholarly research, research methodology, research results, discussion of results, and direction for future research.

Chapter II: Review of Literature

Introduction

The purpose of this literature review was to discover research studies and theories in scholarly literature related to the impact of prosodic reading instruction on adolescents' silent reading comprehension. I synthesized information from a broad range of scholarly literature that suggests instruction in prosodic reading may improve silent reading comprehension; however, the bulk of this literature focuses on fluency for younger students. Overall, I found that automaticity, accuracy, and rate play a more significant role for younger children than older children and that older students benefit more from prosodic reading instruction as text complexity increases; therefore, a focus on prosodic reading instruction among adolescents is warranted (Breen, Kaswer, Van Dyke, Krivokapic & Landi, N., 2016; Dennis, 2013; Dowhower, 1991; Hawkins, Hale, Sheeley & Ling, S, 2011; Johnson, 2018; Paige, Rasinski, Magpuri-Lovell & Smith, 2014; Rasinski, Padak, McKeon, Wilfong, Friedauer & Heim, 2005; Wexler, et al., 2008).

Following is a detailed description of the method used to discover scholarly research and the findings and recommendations in the extant literature.

Method for Selection of Scholarly Research

The purpose of this literature review was to discover research published in books, published reports, and peer reviewed journals that addresses the role of prosody in comprehension. To conduct the literature review, I utilized electronic databases to search for peer-reviewed journals, unpublished dissertations, and websites to discover what is already known about how instruction regarding prosodic reading impacts silent reading comprehension among adolescents. To discover resources, the following keywords were used: prosody,

prosodic, fluent, fluency, direct instruction, and comprehension. I discovered over 150 sources of information that included books, peer-reviewed journal articles, and unpublished dissertations using electronic databases such as ProQuest, EbscoHost, JSTOR, Wiley, International Literacy Association, Directory of Open Access Journals, National Council of Teachers of English, Google Scholar, and the National Institute for Child Development. I consulted resources for the College and Career Readiness Standards to identify expected outcomes in reading comprehension among adolescents (Common Core State Standards Initiative, 2012). After conducting a thorough review of the literature, I used a hierarchical and chronological organizational structure guided by emerging themes and research topics that specifically addressed the research questions:

1. What is the impact of prosodic reading instruction on adolescents' silent reading comprehension?
2. What is the impact of prosodic reading instruction on adolescents' prosodic reading?
3. Is there a correlation between silent reading comprehension and prosodic reading among adolescents?

How are these questions relevant to current research and practice? When we consider prevailing federal- and state-mandated achievement goals to increase student achievement reading comprehension, educators are tasked with discovering instructional strategies that will extend the learning of not only high-achieving students but also of students who perform at lower levels on standardized assessments of reading comprehension. Haladyna and Downing, (2004) investigated concerns relating to the validity and reliability of high-stakes assessments with regard to construct-irrelevant validity. Their findings suggest that some factors that interfere with construct validity "...include motivation to perform on a test, test anxiety, and fatigue"

(Haladyna & Downing, 2004, p. 19). Such issues are also discussed by Weir and Khalifa (2008) in which they express concerns regarding the validity and reliability of high-stakes assessments, but it is not within the scope of this literature review to rectify these contentions.

An additional concern that may be addressed in the scholarly literature relates to the increase in text complexity as students progress through grade levels; therefore, this review is also concerned with studies that may provide insight into how prosodic reading instruction regarding complex texts might increase students' comprehension of complex texts. Because of the oral component involved in prosodic reading, I have chosen to focus on prosody as a domain independent of rate and accuracy. To support fluency instruction, one can easily locate a plethora of research conducted with younger students regarding the components of accuracy and automaticity which have established norms and can be quickly quantitatively measured (FORF Risk Level Chart—Grades 6-8, 2010-2011 School Year, 2006; FORF Risk Level Chart—Grades 9-12, 2010-2011 School Year, 2006; Hasbrouck & Tindal, 2017; Rasinski, et. al., 2016;). In addition, several studies show a correlation with accuracy, automaticity, and rate regarding young students' silent reading comprehension. My quest was to find out if instruction in prosodic reading can predict and support student achievement in silent reading comprehension among adolescents as measured by standardized assessment.

Standardized assessments are typically based on national and/or state-adopted content standards. Current reading standards describe an increase in text complexity as students move through grade levels (Common Core State Standards Initiative, 2012). Prosodic reading instruction may help support students' silent reading comprehension when we consider the demands of academic language and text complexity. It is important to understand the text complexity demands placed on adolescents in standardized assessments and to understand the

development of oral reading instruction in public education in the United States over the last two-hundred years or so. Such understanding will provide a basis for establishing the role of prosodic reading instruction.

To provide context, an overview of the history of oral reading in American education is presented. Following next is a review of literature organized by topical categories as the research questions suggest, discussion of the review, gaps in the literature, limitations of the review, and conclusions suggested by randomized controlled trials, experimental research, and quasi-experimental research.

A Brief History of Oral Reading in Education in the United States

In colonial times, students were expected to recite their lessons and memorize substantial amounts of text. The general notion was that being able to decode print, to read aloud, to remember texts, and to share reading was to be a good citizen (Brandt, 2009; Morrison & Wilcox, B., 2020; Rasinski, 2010; Thomas, 2020); therefore, the focus was to learn to read with automaticity, speed, accuracy, and proper expression. The advent of the 20th century brought changes in education in which English was relegated to a single subject, and the focus on silent reading began (Rasinski, 2010; Morrison & Wilcox, 2020; Samuels & Farstrup, 2006; Thomas, 2020; Wexler, 2018). Many students during the first half of the 20th century completed elementary school at best, and secondary schools focused on the basics of reading and math because policy makers at the time viewed those as essential skills for citizens (Brandt, 2009; Thomas, 2020). Advances in technical communication focused on silent reading comprehension regardless of cultural literacy practices and meaning making (Gee, 2015). As society continued to progress into information technology, reading, writing, and oral communication became a focus of many businesses in the United States (Brandt, 2009). To support the demands of work

force and college readiness, College and Career Readiness standards began to focus on the ability to communicate orally, support claims, and to participate in discussion across a wide range of text complexity and disciplines (Common Core State Standards Initiative, 2012). Reconsidering oral reading's role in comprehension may be one path to enhance students' reading comprehension.

Prosodic Reading Instruction and Oral Language

Explicit instruction in prosodic reading is based in oral language with the teacher as a model of good prosodic reading. To read with good prosody, the reader not only adheres to punctuation and phrasing but also incorporates tone, pitch variety, and interpretive expression (Rasinski, 2010). Oral reading as a shared event creates meaning, promotes relationships, adds enjoyment to the sound of language, and supports comprehension across social, economic, and cultural groups (Fisher & Frey, 2014; Morrison & Wilcox, B., 2020; Rasinski, 2010). Intentional oral prosodic reading creates a synergistic, heteroglossic experience that invites the reader or listener to engage with the author and create meaning (Gee, 2015). While prosody is often overlooked in reading instruction, it may well be the missing link in instruction that has the potential to create scaffolds for not only struggling readers but also proficient readers who struggle with complex text (Dowhower, 1991; Kuhn, Raskinski, & Zimmerman, 2014; Morrison & Wilcox, 2020). When providing prosodic reading instruction, it is important for the educator to understand the rationale behind the instruction. The difference in how fluency (rate and accuracy) and prosody are assessed can inform instructional methods.

Customary in early grades, to assess fluency, educators typically administer and analyze a grade-level oral reading fluency passage for words correct per minute (WCPM) and calculate accuracy percentages. Prosody may be evaluated with a prosodic reading scale, and

comprehension may be assessed through a retelling procedure. Teachers then use data generated from the assessment to plan instruction, track student progress, and identify intervention needs (Kuhn, Schwanenflugel, & Meisinger, 2010). This same procedure may be used with adolescents when planning instruction in prosodic reading (Rasinski, et. al., 2016; Rasinski, et. al., 2005; Raskinski, et. al., 2009). When we know what prosodic reading is and how to assess it, then how do we teach it, and why is it really important? Such questions make it imperative to review the literature on theories, hypotheses, and models that can provide a sound rationale and guidance in implementing prosodic reading instruction.

Theories and Models that Implicate Prosodic Reading Instruction

The age-old conflict between rationalism and empiricism continues to fuel research in educational pedagogy. Because of their polarization, I doubt that the twain shall ever meet; there seems to be no equatorial balance. But it is not my purpose here to mediate the conflict. The purpose here is to share theories and models that either implicate or directly support prosodic reading instruction, which by its very nature implicates both rationalism and empiricism. Both are implicated because prosody first occurs in spoken language. Rationalism may apply when we consider that humans innately possess the capacity for language. Empiricism applies when we seek to learn how we learn, discover, and develop our language, and to collect experimental data. Since language development often parallels with typical human development, the theory that seems to provide a possible equatorial balance is Vygotsky's sociocultural learning theory (Vygotsky, 1978).

Vygotsky's Sociocultural Learning Theory

The sociocultural learning theory suggests that humans, as social beings, learn best in an environment that includes modeling and imitation. Through the use of semiotics, children learn

and develop oral language and social behaviors that allow them to participate in a social environment where they develop not only physically but also cognitively (Vygotsky, 1978). To support learning and development, knowledgeable others must know what the child is unable to do, what the child can do with support, and then eventually what the child can do independently. The area in which learning occurs is a zone in which the behavior is just beyond the child's ability to achieve. In order for the child to be successful, a more knowledgeable other supports and guides the child in the learning. This instructional theory is known as the Zone of Proximal Development (ZPD) (Vygotsky, 1978). Prosodic reading is implicated in the ZPD because verbal language is learned through modeling and practice, and verbal language is the basis for prosody.

Vygotsky's Zone of Proximal Development

Oftentimes misinterpreted and misapplied, the ZPD is not a lock-step framework through which children proceed at a standardized pace. For example, some reading programs determine a child's ZPD through a standardized test and report results either by Lexile or grade level. This practice is a misinterpretation and a misapplication of Vygotsky's theory. His theory is an explanation for the conditions under which learning and development occur (Vygotsky, 1978). Vygotsky claims that "...developmental processes do not coincide with learning processes [but]...developmental process lags behind the learning process" (Vygotsky, 1978, p. 90). That development follows learning suggests that while one might conclude that mastery of an objective (learning) has been achieved, that does not mean that development is complete. Rather, the stage has been set for later development as the child learns more complex concepts and refines his or her knowledge through subsequent experiences (Vygotsky, 1978). For example, a child may be able to recognize a written word on sight and even be able to provide a definition and discuss its use. However, this does not mean that the child's development is complete in his

or her knowledge of that particular word or word learning in general. Regarding language, Vygotsky asserts:

The acquisition of language can provide a paradigm for the entire problem of the relation between learning and development. Language arises initially as a means of communication between the child and the people in his environment. Only subsequently, upon conversion to internal speech, does it come to organize the child's thought, that is, become an internal mental function (Vygotsky, 1978, p. 89).

It is precisely the conversion of language into internal speech that makes this theory so relevant to prosodic reading instruction.

Vygotsky's Inner Speech Theory

Some rationale for prosodic reading instruction's relevancy can be found in Vygotsky's developmental theory of inner speech. According to Vygotsky, children make "...correct use of grammatical forms and structures before the child has understood the logical operations for which they stand. He masters syntax of speech before syntax of thought" (Vygotsky, 1962, p. 46). Since prosodic reading of text is based on oral language contours, it seems to follow that instruction in prosodic reading might facilitate the student's ability to apply oral language contours to text. To make an explicit connection between the idea of thought and inner speech, it seems plausible that thought and inner speech could house the mechanisms that create comprehension, and that these mechanisms have their roots in oral language. To explain, according to Vygotsky, a young child uses egocentric (or private) speech, talking to oneself, for self-regulation. This egocentric speech evolves into internal speech. It is important to note that Vygotsky explains that thought and speech come together somewhere around age two, but "...psychology still does not know how the change from overt to inner speech is accomplished,

or at what age, by what process, and why it takes place” (Vygotsky, 1962, p. 44). While Vygotsky elaborates on inner voice, he does not specifically address how it might inform comprehension. But if comprehension follows the developmental process Vygotsky describes, from external to internal, then oral reading and oral reading comprehension may support silent reading and silent reading comprehension. Further, if development moves from external to internal, then as texts become more complex (more complex thoughts), hearing those complex thoughts in verbal language might facilitate the comprehension process. So, it is here that we may look to two mutually supportive linguistic theories that may help to explain prosody’s role in reading comprehension: The Implicit Prosody Hypothesis (IPH) (Fodor, 1998) and the Phonological Hub Theory (PHT) (Ashby, 2006).

The Implicit Prosody Hypothesis

The IPH maintains that while reading silently, “...a default prosodic contour is projected onto the stimulus, and it may influence syntactic ambiguity resolution” (Fodor, 2002, p. 2). In other words, the reader entertains a type of inner voice that mimics speech and interacts with the orthographic construction of written language to create meaning (Fodor, 2002). A large number of experimental and quasi-experimental studies using spectrographic analysis and eye tracking have produced empirical evidence that suggests the IPH is reliable in relation to word, phrase, and sentence-level comprehension (Frazier, 2015). While such studies are meticulous in measurement and lend credence to the IPH, a lingering unknown is whether an “inner voice” actually exists (Gross, Millett, Bartek, Bredell & Winegard, 2014; Frazier, 2015). To further investigate the notion of the “inner voice,” the Phonological Hub Theory (PHT) is discussed next.

The Phonological Hub Theory

The PHT posits that during the act of silent reading, "...readers routinely activate elaborate speech-like phonological representation early in word recognition" (Ashby, 2006, p. vii). Early word recognition in this context refers not to a developmental stage but the actual visual processing time of orthographic patterns. Studies in support of the PHT have utilized eye tracking at the open (CV) and closed (CVC or VC) syllable level with variations in lexical stress in both high and low frequency words. The studies use sentences, but the focus is on the perception of orthographic patterns and how phonology is activated. Ashby (2006) found that "...skilled readers' activation of prosodic representations early in word recognition appears to be a reliable finding" (p. 328). Further, the eyes fixate on low-frequency words longer than high-frequency words, and it is suggested that this happens out of efficiency (Ashby, 2006). It was also found that the eye anticipates whether or not an upcoming word is congruent with the meaning of the text, and if not, the eye fixates on the word until meaning is resolved (Ashby, 2006). Ashby (2006, p. 319) refers to the IPH to further explain the HPT:

Empirical evidence of prosody during silent reading would suggest that readers supply the prosodic information that is not provided by the orthography. Fodor (1998) stated this idea in the implicit prosody hypothesis, which claims that readers impose a prosodic contour on text as they read it silently. Such a scenario would suggest that readers exploit pervasive linkages between spoken language and reading systems during silent reading. Alternatively, readers could use a simplified representation that merely captures the phonological gist of the word form (Ashby, 2006, p.319).

The research on PHT suggests that readers "...do more than activate a series of phonological segments [and] appear to activate a prosodic structure" (Ashby, 2006, p. 331). Ashby (2006, p.

319) further suggests that the notion of inner speech may actually "...be our conscious awareness of phonological representations, the abstract codes that describe the spoken form of a printed word."

While the theory of inner speech seems logical, its specific origin and mechanics are yet to be known; however, connections can be made among, the IPH, HPT, and Vygotsky's theories that may serve to inform and guide prosodic reading instruction. For example, the IPH and HPT help to explain how orthographic patterns and prosodic contours are related. It would then follow that the teacher's modeling of prosodic contours and their connection to orthographic patterns would support students' acquisition of the skill. Further, during silent reading, as the eye encounters and processes the orthographic patterns, the brain attaches meaning and checks for understanding (comprehension) based on the processing of the orthographic patterns. The teacher's knowledge of where the student is functioning developmentally invokes the ZPD so that the instruction can be efficiently targeted to the skills and processes that the student is able to acquire. Inner speech is somewhat more elusive in an explanation; however, the mystery of inner speech may play a role in comprehension. The connections among inner speech, prosodic reading instruction, and silent reading comprehension may be a bit of a stretch, but I will attempt to explain some connections. First, Vygotsky (1962) says, "Thought development is determined by language, i.e., by the linguistic tools of thought and by the sociocultural experiences of the child" (p. 51). Linguistic tools of thought may be understood by the explanations presented in the IPH and the PHT. Prosodic reading instruction involves explicit instruction in linguistic tools including orthographic patterns and prosodic contours. Vygotsky (1962) states, "Essentially, the development of inner speech depends on outside factors; the development of logic in the child..." (p. 51). Prosodic reading instruction would then be one of those outside factors. Second,

the purpose of prosodic reading instruction is to provide students with an orally delivered explicit model of instruction to facilitate comprehension, the goal of reading. As students internalize the model, the goal is for the process to become automatic so that they apply it to silent reading and are able to deepen their understanding of text. It is the use of the tools of language that help them to develop silent reading comprehension perhaps in a similar way as how Vygotsky describes the development of inner speech. In fact, Vygotsky (1962) states, “The child’s intellectual growth is contingent on his mastering the social means of thought, that is, language” (p. 51). While Vygotsky is describing intellectual and language development in children, he is also describing how thought and inner speech develop. Thought, ego-centric speech, inner speech, and language development do not develop in the same way or from the same place, but they each influence the other and begin to converge at various stages. According to Vygotsky, while our thoughts are not based on language, it is language that allows us to voice our thoughts, and so it seems that this process would be reciprocal: through language, our thoughts are influenced. For the IPH, HPT, inner speech, and the ZPD to come together in prosodic reading instruction, there are additional theories that may lend guidance and structure for instruction. These theories are the Automatic Information Processing (AIP) theory (LaBerge & Samuels, 1974), the Reader Transaction theory (Rosenblatt, 1978), and the Gradual Release of Responsibility (GRR) (Pearson & Gallagher, 1983).

The Automatic Information Processing Theory

In general, cognitive processing theories describe the brain as a reading mechanism that through training and repetition can learn to integrate modeled practices (Kalina & Powell, 2009; Perfetti & Stafura, 2014; Pugh, 2017; Rupp, Ferne & Choi, 2006; Samuels, 1994; Schrauben, 2010; van den Broek & Espin, 2012; Weir & Khalifa, 2008). Studies of repeated reading practice

have been conducted that lend credence to cognitive processing. Specifically, the Automatic Information Processing (AIP) theory developed by LaBerge and Samuels (1974) is a cognitive processing theory which hypothesizes that poor comprehension may be a result of “...too much investment of [students’] cognitive resources in the surface-level aspects of reading—slow, laborious, conscious-filled decoding words...deplete[s] or exhaust[s] what could be invested in making sense of what they read” (Samuels & Farstrup, 2006, p. 12).

The premise of the AIP theory is that to be a proficient comprehender of text, one must be able to decode a text accurately and automatically so that attention is focused on making meaning (LaBerge & Samuels, 1974). Research by LaBerge and Samuels (1974) found that through repetitive practice, accuracy and automaticity are achieved between orthographic and phonological patterns. To test the AIP theory, Samuels (1979) conducted a repeated reading experiment with children who were experiencing reading difficulties in which he found that repeated reading of the same text resulted in gains in fluency and comprehension not only on the practiced passage but also generalized to the reading of new passages (Samuels, 1979). Initially, LaBerge and Samuels (1974) did not generalize their theory to explain the process of comprehension because they did not have sufficient evidence to support phrasal processing; so, an experiment by Samuels (1979) suggested that accuracy and automaticity may support comprehension. An essential element of prosodic reading instruction is expression, which differentiates it from rate and accuracy, and it is the orally read model of text that students repeat in practice. While Samuels did not directly address prosodic reading, he made the following observation: “...if we overemphasize accuracy, we tend to impede fluency” (Samuels, 1979, p. 405). So, an overemphasis on accuracy, as Samuels (1979) asserts, would cause students to read slowly in order to achieve greater accuracy. Samuels (1979) explains that a principal element of

repeated reading is that the students are first presented with an explicit, accurate model of a text read aloud. Students then practice the passage with others and individually. During repeated reading practice, since students were not burdened with accurate decoding, they were able to focus on meaning. The AIP theory as it pertains to the method of repeated reading includes the developmental stages of learning to read. For example, the repeated reading method is appropriate not only for struggling older readers but also for beginning readers. As the orthographic code is mastered, then attention can be focused on comprehension (Samuels & Farstrup, 2006).

Using repeated reading experiments as suggested in the AIP theory with struggling adolescent readers, researchers Guerin & Murphy (2015) and Hawkins, Hale, Sheeley & Ling (2011) found that repeated readings practiced orally and silently contributed to silent reading comprehension gains. However, both studies involved limited populations. Guerin and Murphy (2015) included three students and Hawkins, et. al. (2011) included six students. Because of the small size of the study population, generalizability is limited. Not only have repeated reading methods reported increases in comprehension among elementary students (Ardoin, 2016; Kuhn, Rasinski & Zimmerman, 2014; Miller & Schwanenflugel, 2008), but they may also benefit older students. Cypert and Petro (2019) conducted a study with 47 first-year college students and found that after “training and practice in expressive reading, [students]...demonstrated improved accuracy, fluency, and reading comprehension in comparison...” with students who did not receive the training and practice (p. 1305). The Cypert and Petro (2019) findings suggest that prosodic reading practice with complex text, even if readers are already considered strong readers, is a beneficial practice to increase silent reading comprehension. Beyond repeated readings to strengthen prosodic reading and silent reading comprehension, the Reader Transaction theory

(Rosenblatt, 1978) provides explanation for the reader's interactive role with the text and its influence on comprehension beyond what has been presented so far.

The Reader Transaction Theory

Because of the Reader Transaction Theory's (Rosenblatt, 1978) influence on instructional pedagogy (Unrau, Alvermann & Sailors, 2013), it is pertinent in this review. The Reader Transaction Theory is a socioculturally based theory which maintains that the reader embodies thoughts and experiences that allow the reader to interpret, understand, or comprehend a text (Rosenblatt, 1995). Rosenblatt identifies two stances when reading: efferent and aesthetic (Rosenblatt, 1995). The efferent stance promotes a focus on extracting information while the aesthetic stance relies on the reader's thoughts and experiences (Rosenblatt, 1995). For example, the efferent stance applies when the reader encounters information, such as when reading technical texts or directions. The aesthetic stance occurs when "...the reader must broaden the scope of attention to include the personal, affective aura and associations surrounding the words evoked and must focus on—experience, live through—the moods, scenes, situations being created during the transaction" (Rosenblatt, 1995, p. 148). Rosenblatt argues that traditional literary criticism limits a broad range of possible interpretations to a narrow, expected interpretation (Rosenblatt, 1995). This theory assumes a proficient processor of text where the focus is not on decoding but on comprehension and how readers make meaning. She states, "...ultimately any literary work gains its significance from the way in which the minds and emotions of particular readers respond to the linguistic stimuli offered by the text" (Rosenblatt, 1995, p. 28). The term linguistic stimuli suggests that readers generate connotative meanings from the symbols and signs in text to create meaning; therefore, language experience is part of background knowledge that influences meaning making. Knowing how language works through

direct experience and also through explicit instruction in prosodic reading may enhance a reader's ability to comprehend.

While the signs and symbols that Rosenblatt (1995) mentions are the features of text, perhaps, at this point, it would not be too much of a stretch to connect those features of text to the linguistic theories previously described. When thinking of skilled, automatic reading processes, because the skills have become automatic, the brain does not have to spend energy on accurately decoding every word, enabling it focus more on phrasal features. The Reader Transaction theory would not need to specifically address phonology and orthography because the focus of this theory is on making meaning from text, especially when it is read silently. Interestingly, Rosenblatt's theory does include word-level comprehension when it says:

Above all, the word cannot be understood in isolation; it must be seen in the variety of its possible contexts. Moreover, we must relate it to our own experience so that it may become part of our working equipment. Only, then as we place it in its relation to other sensations, ideas, attitudes, and patterns, all equally realized, shall we be in a position to say that we understand it (Rosenblatt, 1995, p. 106).

The repeated reading strategy as supported by the AIP, allows readers to experience a text on a variety of levels, and Rosenblatt (1995) mentions the importance of readers revisiting a text to extract deeper meaning. Vygotsky's inner speech, ZPD and sociocultural learning theories are integral facets of the Reader Transaction. Since the individual reader is the transactor, his or her social experience, thoughts, and inner speech will influence how meaning is processed. The teacher's role as a more knowledgeable other is "...to help the student evoke its [text] sensuous, emotional, and intellectual import as fully as possible" (Rosenblatt, 1995, p. 105). The goal of this research study is to find out if prosodic reading instruction has an impact on silent reading

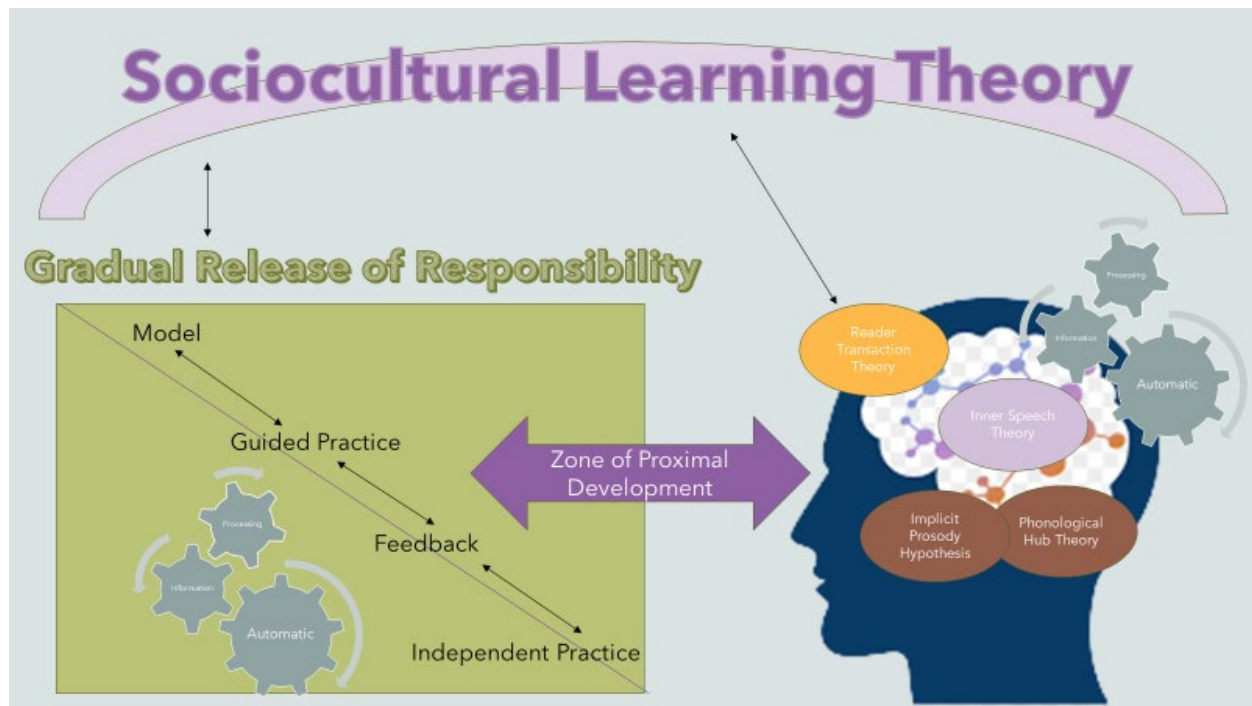
comprehension, so while the Reader Transaction theory does not specifically address prosodic reading instruction, it is crucial in understanding comprehension. While we can perhaps understand how the theories presented thus far may work in concert to support prosodic reading instruction with the outcome to increase silent reading comprehension, there is one theory that guides the execution of the instruction: The Gradual Release of Responsibility Theory (GRR) (Pearson & Gallagher, 1983).

The Gradual Release of Responsibility Theory

Regardless of the strategy or skill to be taught, the GRR is a theory that has had a profound effect on instructional practice and student learning. Pearson and Gallagher (1983) reported that methods of explicit instruction were not usually present in classrooms among older students. They posit that although many students become proficient learners/readers simply by attending school, more students could become proficient through a model of explicit instruction. The model of explicit instruction that Pearson and Gallagher (1983) propose involves four basic stages: 1.) Modeling, 2.) Guided Practice, 3.) Feedback, and 4.) Independent Practice. In the first stage, modeling, the teacher is responsible for the task demonstration and explanation. In the second stage, guided practice, the teacher releases the task to the students and guides them through it. The third stage, feedback, which may also occur during stage two, should be more suggestive than corrective in nature. During the fourth stage, independent practice, students perform their task without assistance from the teacher. An important feature of the model is that during stages two through four, the teacher is not necessarily looking for a correct answer but rather is monitoring for the justification of multiple correct answers or pathways for achieving a correct answer. It is this feature that is congruent with the Reader Transaction theory and the application of the prosodic elements of intonation, pitch, and phrasing because they both are

attuned to individual interpretations. The ZPD is implicated as well in the act of gradual release in supporting students' learning. I created the figure below to demonstrate a graphic representation of how the theories I have described might work together in a model of prosodic reading.

Figure 2.1 *Theoretical Model of Prosodic Reading*



Now that theories relevant to prosodic reading and silent reading comprehension have been presented, I will turn to theoretical models of reading.

Theoretical Models of Reading

The Simple View of Reading (SVR), a reading comprehension model created by Gough and Tunmer (1986) presents a formula that suggests if students can decode accurately and fluently and have linguistic knowledge, that they will have good comprehension; however, many researchers argue that this view is too simplistic (Cervetti, Pearson, Palincsar, et.al, 2020; Florit & Cain, 2011). Other reading models such as the Four-Part Mental Processor (Jager Adams,

1994) and Scarborough's Rope (McCardle, Scarborough, & Catts, 2001) demonstrate aspects of reading that include phonological awareness, orthographic knowledge, word meanings, language comprehension, and context. Both models emphasize the importance of fluency throughout the reading process to achieve comprehension. The Four-Part Mental Processor and Scarborough's Rope implicitly address the importance of prosody through fluency. Scarborough's Rope, because of its depiction of several aspects of the comprehension process, lends itself more to explanations in this literature review. For example, the top of Scarborough's Rope, Language Comprehension, includes vocabulary, language structures, verbal reasoning, and literacy knowledge (Scarborough's Reading Rope, 2001). Within Language Comprehension, the language structures strand includes syntax and semantics, elements of both silent and prosodic reading. The Three-part Cueing System can also imply prosody because it suggests that semantics, syntax, and visual cues facilitate reading comprehension (Clay, 1993). Specifically, visual cues imply prosody in relation to syntax (punctuation) and semantics involves intonation and expression. The process of meaning making in the Three-part Cueing System relies on knowledge of prosodic features whether reading silently or orally as in prosodic reading.

While there may be additional theories that would further support prosodic reading instruction and help to explain its impact on silent reading comprehension among adolescents, a review of the scholarly literature will help to guide the purpose of this research study.

Findings in the Scholarly Literature on Prosodic Reading

This section of the review will begin with a review of literature using prosodic reading instruction with younger students. There are numerous studies that examine fluency instruction with younger students especially regarding accuracy and rate but fewer that relate specifically to

prosody. It is the findings from studies using prosodic reading instruction with younger students that led to my interest in learning if prosody instruction with older students would be beneficial.

In the early stages of life, in fact from birth, (Vygotsky, 1962), oral language, which embodies, prosody plays a significant role in infants' speech assimilation patterns. Vygotsky (1962) says that "...reactions to the human voice were observed as early as during the third week of life, and the first specifically social reaction to voice during the second month," (p. 42-43). While the infant does not yet understand language, he does respond to human voice in this preintellectual stage of development (Vygotsky, 1962). From Vygotsky, we can understand that the capacity for language seems to be innate, and numerous studies have been conducted to learn how and when language development occurs. Vygotsky explains that as speech begins to develop in a child, he moves from "...babbling, crying...first words...[including]...laughter, inarticulate sounds, movements, etc.," (p. 42) into the development of egocentric speech and then later inner speech. With this development in mind, by the time a typically developing child reaches school age, four or five years old, the child has been using language to communicate for two or three years; so, the child is aware of language. It is this awareness of verbal speech and its prosodic contours that form the child's basic concepts of how language works. At school age, then, when students begin to learn the alphabetic code and orthographic patterns for decoding and encoding, it seems reasonable to discover which teaching methods seem to work best to help children learn to read. Following is a selection of research studies that examine the role of prosodic reading instruction with younger students.

In an experiment that included sixteen English-speaking mother-child dyads in which children were involved with play and particular objects, mothers, using a variety of phrasing, directed children to place play objects in a variety of configurations. The more ambiguous the

phrasing, the less children understood what they were directed to do. In contrast, adults seem able to apply prosodic elements to assist where semantic ambiguity exists, whereas young children have not yet developed this ability (Snedeker & Trueswell, 2003). Perhaps this is a developmental and language acquisition issue. According to Snedeker and Yuan (2008), “...prosody manipulation had an effect” with younger children when compared with adults, but “...we find no evidence that children are able to use prosodic cues...in their analysis of ambiguous utterance” (p. 605). Specifically, their findings “...suggest that both adults and children treat these information sources in a symmetric fashion—prosody influences interpretation even in the presence of strong lexical biases, and lexical biases influence interpretation even in the presence of strong prosodic constraints” (Snedeker & Yuan, 2008, p. 604). Finally, the results of Snedeker and Yuan’s (2008) study found that “the results of these experiments clearly demonstrate that children are able to use prosody to constrain their syntactic analyses” (Snedeker and Yuan, 2006, p. 604).

“Highly expressive readings resulted in better comprehension of storybooks by [ninety-two] prekindergarten children” (Mira & Schwanenflugel, 2011). Further “...one of the major ways that prosody can influence comprehension is through discourse-level effects that serve to draw attention to the salient features in text” (Mira & Schwanenflugel, 2011, p. 184). In this study, the expressive readings were recorded so that the personal interaction between the reader and the children was removed. Limitations of this study revolved around prior experience with the story and vocabulary and whether expressive reading increased engagement (Mira & Schwanenflugel, 2011).

A study was conducted in Australia that included 84 children between eight and nine years old to determine the role of prosodic reading in comprehension. Attention to punctuation

was found to correlate positively with an increase in comprehension (Whalley & Hansen, 2006). Acknowledged in this study was the sensitivity between oral pauses as punctuation and commas, periods, etc., occurred in written text and how attention to the textual punctuation translated to oral reading and comprehension (Whalley & Hansen, 2006). The researchers could not articulate a causal or correlational relationship between oral prosodic reading and silent prosodic reading (Whalley & Hansen, 2006). The ambiguity of the relationship is problematic because of the difficulty of measuring silent prosodic reading, which relates to the idea of an inner voice or inner speech for which research is ongoing.

Fluency as an important part of reading comprehension has been treated with a narrow definition of automaticity and accuracy according to Kuhn, Schwanenflugel, and Meisinger (2010). The researchers synthesized several implications for fluency across numerous studies to examine the effects of fluency on comprehension. They discuss the role of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Curriculum Based Measures (CBMs) that have entrenched teachers and students in a process of rapid, automatic, and accurate decoding that excludes the element of prosody (Kuhn, Schwanenflugel & Meisinger, 2010). The authors offer succinct definitions of prosody and its specific role in comprehension and how it should be accepted as a viable part of a definition of fluency. The researchers assert that fluency (including prosody) is "...a bridge to comprehension" (Kuhn, Schwanenflugel, & Meisinger, 2010, p. 240). Further, they assert, "It is critical that we establish assessments, and instruction that assist learners in becoming truly fluent readers rather than just fast ones" (Kuhn, Schwanenflugel, & Meisinger, 2010, p. 246).

Closely aligned with the purposes of the current study, Miller and Schwanenflugel (2008) state, "...we conclude that reading prosody plays an important role in the general development of

reading skills” (p. 352). The primary purpose of Miller and Schwanenflugel’s (2008) study was to determine whether prosodic reading reflected reading skills that led to positive comprehension outcomes. The children included in this study were 92 first grade students from north-east Georgia high-poverty schools consisting of two public schools and one private parochial school. Miller and Schwanenflugel (2008) found that prosodic, adult-like reading at the end of second grade resulted in good comprehension in third grade. The researchers employed quantitative analysis to measure results on prosody instruction and comprehension outcomes. Their study links word-level reading skills, phonological awareness, and prosody as supports of proficient comprehension (Miller & Schwanenflugel, 2008). The findings of this study are related to the current study in regard to the importance of word-level reading skills and prosody in supporting comprehension.

Specific to the treatment design in the current study, Kuhn, Rasinski, and Zimmerman (2014), report on how the use of direct instruction in prosody using three different lesson models affects reading comprehension. The three methods discussed in the study are Fluency Oriented Reading Instruction (FORI), Wide Reading Fluency Oriented Instruction (Wide FORI), and the Fluency Development Lesson (FDL). While the FORI design uses one text over a five-day period, the WideFORI method uses three texts over a five- day period, and the FDL procedure utilizes a different text each day. Within these lessons, time is also provided for a discussion of the text to promote comprehension along with word study. Specifically, the FDL format is 20-30 minutes in length for each session. The researchers report that in their clinical studies, all students who participated in these treatments showed gains. Particularly, “...students receiving the FDL treatment made significant gains from pretest to post-test in the areas of word recognition, fluency, and comprehension” (Kuhn, Raskinski, & Zimmerman, 2014, p. 79). The

key to all three methods is the teacher's modeling of prosodic reading and the students' repetition of the model for each daily session which include various methods of repeated reading such as choral reading, echo reading, and paired reading. The teacher's modeled reading provides the needed scaffolding for students to focus on comprehension instead of decoding. "The goal is to reach a point where all students are able to read the text fluently and meaningfully" (Kuhn, Rasinski & Zimmerman, 2014, p. 78). Most treatments were conducted on students in elementary grades, but the authors assert that these same methods will benefit older readers as well (Kuhn, Raskinski & Zimmerman, 2014). "The research suggests that the results of integrated fluency instruction can be generalized across a range of SES levels and classroom and clinical settings. This research also indicates that fluency instruction, whether based upon more intense repetition or the supported reading of a wider range of texts, is effective" (Kuhn, Raskinski & Zimmerman, 2014, p. 79).

A strong correlation exists between prosodic reading and comprehension for young readers (Paige, et.al., 2017). The findings suggest that "...emerging research on reading prosody, an indicator of fluent reading, is finding that it contributes to comprehension processing in students across elementary, middle, and secondary grades" (Paige, et.al., 2017, p. 245). This study began in response to many high school graduates not being prepared to take on the demands of college-level reading, but their study was not conducted with adolescents. It was conducted on 250 first-, second-, and third-grade readers (Paige, 2017). The researchers used the Multidimensional Fluency Scale (MDFS) (Rasinski, 2010) to show the effects of direct instruction in prosodic elements through the duration of one school year. They found that reading rate and accuracy rate alone are significant indicators of comprehension, but that a students' ability to pace, phrase, and chunk text had a greater impact on comprehension,

explaining more of the variance related to comprehension than rate and accuracy alone. They also found that appropriate reading rate emerges more quickly than expressive reading, which provides implications for instruction in prosodic elements. This study referred to research by Paige, et. al. (2014) and Rasinski, Rikli, and Johnston (2009) of older students' prosodic reading and found that rate and accuracy are not reliable predictors of comprehension; it is prosody that became the significant variable in comprehension. The studies by Paige, et. al., (2014) and Rasinski, Rikli, and Johnston (2009) are specifically addressed separately later in this review. Paige, et. al., (2017) also wanted to find out if the elements of prosodic reading develop at the same rate or if they develop more organically. They found that accurate word identification and expressive phrasing contributed to strong comprehension. Quantitative analysis was used to measure growth on the MDFS while qualitative analysis was used with the interpretation of phrasing. They suggested that future research should explore the ability of students to maintain prosodic reading as text complexity increases and whether or not students need explicit modeling in prosody as text complexity increases.

From the studies discussed thus far, we can see that there are strong correlations among rate, accuracy, prosody, and comprehension for younger students. Next, I will review research that focuses on the relationship of silent reading comprehension and prosodic reading instruction among adolescents.

Regarding adolescent reading comprehension and the role of prosodic reading instruction, as a summary finding, studies show that imitative, repeated prosodic reading can support adolescent and adult silent reading comprehension (Breen, Kaswer & Van Dyke, 2016; Cypert & Petro, 2019; Hawkins, et. al., 2011; Paige, et. al., 2014; Wolters, Kim & Szura, 2020;). What is the nature of the studies that led to this summary finding?

This section of the review is arranged in chronological order by date of the study because of the natural progression of the reliability of the findings to the overarching research question: What is the impact of prosodic reading instruction on silent reading comprehension among adolescents?

Steinhauer and Friederici (2001) conducted research on orally replicated patterns of language. A total of twenty-four university students participated in three experimental treatments that involved event-related brain potentials (ERPs) to determine the effects of comma placement on comprehension and replication patterns in the German language. They found that when a sentence is read aloud with attention to punctuation, a sentence of the same pattern when read by the listener will produce a similar prosodic reading. In other words, predictable patterns can be replicated by a reader who has previously heard the pattern. Indications for further research in psycholinguistics suggest investigation into deficiencies in prosodic element processing (Steinhauer & Friederici, 2001).

In 2005, Rasinski, et. al., posed the following question as the title of a research article: “Is reading fluency a key for successful high school reading?” (Rasinski, et. al., 2005, p. 22). Obviously, the focus of the research is fluency, but prosody is also directly addressed in the study. Data collection for this study was performed on 303 ninth-grade students who had performed poorly on a state literacy assessment. Toward the end of the school year, the researchers administered an oral reading fluency assessment and gathered accuracy and rate information on a grade-level passage from a college reading inventory. They found that this group of students read with an average accuracy rate of 97.4% and 136.4 words correct per minute (WCPM) (Rasinski, et., al., 2005, p. 24). They found a moderately strong relationship ($r=.530$) among these scores and silent reading comprehension scores on the state assessment.

Since no reading fluency norms could be located for ninth grade students, the researchers used Hasbrouck and Tindal fluency norms from 1992. Even though the ninth graders' average rate was well below fluency norms for eighth graders, the researchers could not fully explain the reason for low comprehension scores aside from the students reading too slowly to finish the test. The researchers cautioned educators regarding reading programs that heavily emphasize reading rate: "Our point is to suggest that teachers beware of fluency programs or interventions that seek solely to boost student reading rate. Rate-building exercises and admonitions to read faster will result only in students who read quickly but still do not comprehend what they read" (Rasinski, et., al., 2005, p. 27). The researchers suggested several strategies for intervention such as repeated reading and choral reading and suggested that more studies be done on the role of fluency among older students.

Interestingly, the next study for review here is actually a synthesis of studies relating to fluency intervention for older students. Wexler, et. al., (2007) examined prior research studies on fluency interventions with secondary struggling readers. They found 19 studies that met their selection criteria which used fluency interventions and measured comprehension. Again, only fluency (accuracy and rate) is examined, not prosody, but it was important to find out how these measures related to adolescents in previous studies. From their review, they found "...that repeated reading interventions that incorporate the opportunity for students to preview the text with a model of good reading (e.g., an adult reader or audiotape reading of the text) or someone to provide corrective feedback, made more gains in rate than students who do not preview the text or preview the text silently or on their own" (Wexler, et.al., 2007, p. 343). Still, there was ambiguity regarding discrepancies among rate and comprehension as they reported studies that

showed that improved fluency in one text did not generalize to comprehension of other texts. They suggested the need for more research regarding fluency instruction among adolescents.

Rasinski, Rikli, and Johnston (2009) conducted a study that focused on prosodic reading instruction as the treatment with third-, fifth-, and seventh-grade students and assessed the relationship between students' prosodic reading scores and silent reading comprehension on the SAT-9 test. Prosodic reading was measured with multidimensional fluency scale (MDFS). The number of students in the study were as follows: third grade ($n = 391$), fifth grade ($n = 421$), and seventh grade ($n = 392$). They found strong correlations between prosodic reading scores and comprehension for third grade ($r=.634$), fifth grade ($r=.657$), and seventh grade ($r=.571$) and found that 30%-40% of the variance in reading fluency could be explained by prosody scores. "At all three grade levels prosodic reading was significantly associated with silent reading comprehension. Students who read with greater prosody in oral reading tended to have higher levels of comprehension when reading silently" (Rasinski, Rikli & Johnston, 2009, p. 357). Further, "At all three grade levels that were assessed reading fluency was strongly and significantly associated with reading comprehension. Greater proficiency in expressive or prosodic oral reading was associated with higher levels of silent reading comprehension" (Rasinski, Rikli & Johnston, 2009, p. 358). An interesting finding in this study is that there was a decline in prosodic reading scores and comprehension from fifth to seventh grade. The researchers suggested that a possible explanation for the decline from fifth to seventh grade might be attributed to the lack prosodic reading instruction after fifth grade and/or less practice reading increasingly complex texts. Finally, they expressed the need for more research in adolescent literacy regarding prosodic reading instruction and its correlation with silent reading.

A study that targeted the effect of repeated reading on fluency and comprehension was conducted by Hawkins, Hale, and Ling (2011) that involved six high school students that were reading below grade level. For the intervention, this study also used vocabulary previewing. With this small number of students, the researchers employed an adaptive alternating treatment design in which there were two treatments that consisted of students practicing repeated reading only and repeated reading with vocabulary previewing. To gather data, oral reading fluency assessments were used to calculate fluency scores and a multiple-choice test of ten questions was used to assess comprehension for pre- and post-measures. The students received the treatment three to five days each for 10-20 minutes over 15 sessions. As a result of the repeated readings treatment, all students increased in oral reading comprehension, fluency, and silent reading comprehension rates. The five students who received the repeated reading and vocabulary treatment showed the greatest gains in comprehension. (Hawkins, et. al., 2011). The researchers suggested that "...problem-solving teams may consider recommending RR [repeated reading] interventions to help improve the reading fluency, comprehension, and comprehension rate of high-school students" (Hawkins, Hale & Ling, 2011, p. 74).

To find out if prosodic reading performance could predict reading comprehension in both struggling and proficient high school readers, Breen, Kaswer, Van Dyke, Krivokapic, and Landi (2016) designed a unique study to investigate specific aspects prosody that may contribute to proficient silent reading comprehension. They state, "...subjective rating scales offer only a coarse measure of fluency, providing little sense of the specific aspects of prosody that contribute to effective comprehension" (Breen, et. al, 2016, p. 2). Their concern intentionally moved beyond accuracy and rate and focused on acoustic measures of prosodic reading. Thirty-two participants between the ages of 13-19 participated in the study. Participants read 258

sentences resulting in 8203 utterances that could be analyzed. The Implicit Prosody Hypothesis (IPH) guided their analysis of prosodic contours including pitch variations and duration and syntax that included both ambiguous and unambiguous elements. Ultimately, they found their results to “...demonstrate that older readers’ fluency continues to predict comprehension ability and suggest that secondary school readers could continue to benefit from targeted fluency training” (Breen, et.al., 2016, pp. 14-15).

To further investigate the role of reading fluency in high school readers, Raskinski, et. al. (2016) sought to explain how reading fluency might relate to college readiness. This study included 81 college freshmen, one of whom was male. Students were assessed with an oral reading fluency passage rated an 8.5, or 11th – 12th grade reading level, using the Dale-Chall readability formula. Mean accuracy scores were 97.66% with a mean rate score of 146.37. They also used ACT scores to determine correlations to silent reading comprehension. What they found was “...that once students achieve a certain level of automaticity (say, 150–160 WCPM on grade-level materials), further increases in automaticity as measured by oral reading rate should not be a priority” (Rasinski, et. al., 2016, p. 458). The implication here is that there seems to be a ceiling at which rate no longer improves comprehension. For purposes of classroom instruction, then, once the range of 150-160 WCPM has been reached, teachers could focus on accuracy rate to track student growth. The researchers conclude that “...our present study suggests that fluency is a reading competency that manifests itself in the secondary grades and beyond” (Raskinski, et. al., 2016, p. 459).

Cypert and Petro (2019) employed prosodic reading instruction as a treatment to determine an effect on reading comprehension. This study involved 75 college students enrolled in a university writing class. Participants received either expressive reading instruction or no

expressive reading instruction. The Gray Oral Reading Test-5 was used to measure both reading comprehension and oral reading fluency and an adapted version of the MDFS was used to measure prosodic reading. Results showed that students in the expressive reading treatment showed significant gains in fluency which the researchers attributed to improved accuracy. They did not find significant improvements in fluency (prosodic reading focus) when using the adapted MDFS. However, they do maintain "...that improved prosody and comprehension are significantly linked, perhaps through increased reader attention to the semantic purpose of the text. The metacognition that is necessary for practicing expressive oral reading likely contributes to one's comprehension of what he or she is reading" (Cypert & Petro, 2019, p. 1309).

The last study for review here is a meta-analysis compiled by Wolters, Kim, and Szura (2020) to determine the strength of the relationship between reading prosody and reading comprehension. They report that reading prosody is typically measured with a prosody rating scale or spectrographic analysis. After analysis of 35 studies, they found that reading prosody and reading comprehension have a moderate correlation, $r=.51$. Interestingly, they found that when prosody is measured with a rating scale instead of spectrographic analysis, the correlation is stronger, and they are unsure of how to explain this. One explanation they explore is the inconsistency in the literature regarding fluency scales. For example, terms like intonation, expressiveness, and smoothness may be interpreted to different degrees, while spectrographic analysis is a mathematical measure of pitch and duration of sound. For direction in future research, they suggest that "...our understanding of the exact nature of the relation between reading prosody and reading comprehension is lacking and future studies are needed (Wolters, Kim, Szura, 2020, p. 15).

Discussion

First, I will discuss the implications from the research in answer to the first research question that guides this review: What is the impact of prosodic reading instruction on adolescents' silent reading comprehension? Highlights of findings in the literature report that automatic, accurate decoding usually supports reading comprehension for early readers because the texts tend to be straightforward and not complex. These texts do not contain layers of meaning; therefore, cognitive energy may focus on decoding with less energy devoted to comprehension (Miller & Schwanenflugel, 2008; Rasinski, Rikli & Johnston, 2009). Rapid, automatic, accurate decoding does not always support reading comprehension for older students because texts become increasingly complex as students move through grade levels. Such complex texts involve extracting meaning from phrasal units and strong inferential skill that take cognitive energy. Students' comprehension will increase when they learn to attend to punctuation that provides "chunks" of text as well as intentional focus on phrasing and natural prosodic breaks. Intonation, stress, word placement, diction, and focus can support students' comprehension of complex text (Breen, et. al., 2016). In addition, clearer fluency rating scales and other methods of measuring prosody such as spectrographic analysis would create more clarity in the actual relationship between reading prosody and comprehension (Wolters, Kim Szura, 2020). Another consideration are linguistic theories such as the IPH (Fodor, 1998) and PHT (Ashby, 2006) that use eye movement measurements to gain insight into how text is processed. In terms of prosodic reading instruction, it seems that a definitive description of the term should be developed, but in the meantime, studies are inconsistent in explaining the effect of prosodic reading instruction as described in the FDL on silent reading among adolescents.

Second, to address research question two: What is the impact of prosodic reading instruction on adolescents' prosodic reading? Every study in this review showed that reading fluency/prosody increased after instruction in expressive reading. Repeated readings seemed to have the most impact, but all of these are either correlational studies or conducted in a controlled setting. For adolescents, the studies did not take place in a whole group setting, so it is unclear how whole group instruction might affect students' prosodic reading.

Now, to address the third research question: Is there a correlation between silent reading comprehension and prosodic reading among adolescents? All studies in this review that looked for the relationship between prosody scores and reading comprehension found moderate to strong correlations. Several types of assessments were used that included state assessments and other norm-referenced assessments; however, for purposes of this study, it is important to note that none of the studies included in this review used measures such as NWEA MAP or iReady as an assessment of silent reading comprehension.

Aside from the findings produced by the scholarly literature, it seems relevant to consider the review of the literature on theory and to know that these theories can help set the direction for this current research. Linguistic theories like the IPH (Fodor, 1998) and the PHT (Ashby, 2006) might aid in clarity of direction for expanding and strengthening multidimensional fluency scales to make them more precise. Understanding Vygotsky's descriptions of language development can help us design targeted studies. The Reader Transaction Theory can help us to further understand the role of background knowledge in comprehension and how prosody is a part of that background knowledge.

Gaps in Current Scholarly Literature and Research

The goal of the current study is to address the need for more quantitative research regarding the effects of direct instruction in prosody especially in older students who face text complexity demands (Breen, et. al., 2016). Perhaps studies specific to the nuanced elements of prosody could discover which elements have the greatest impact on both slow progress readers in intervention or grade-level readers who encounter complex text. More quantitative research is needed regarding proposed models, including FORI, Wide-FORI, and FDL in regard to older students' comprehension (Kuhn, et. al., 2014). The proposed study will use the FDL model in response to the demonstrated need for prosodic reading investigation with older students. In addition, the benefits of prosodic reading instruction among adolescents have shown some positive gains, but further research is suggested. Further, what distinguishes the current study from research reviewed here is that the treatment uses the FDL, a lesson model designed specifically for prosodic reading instruction in a classroom setting. The silent reading comprehension assessments, while standardized and widely used at school district levels (NWEA MAP and iReady), are not mentioned in the literature used in this review. The results yielded from this study will add to the body of research in the area of instruction in silent reading comprehension among adolescents.

Conclusion

Because studies that focus specifically on adolescents and prosodic reading instruction are sparse, my research should begin to fill a void that can provide a specific method of instruction to support educators of adolescents to increase reading achievement. While reading aloud and modeling reading strategies is typical in elementary grades, the stigma that reading aloud is an elementary practice could perhaps be overcome by teachers of adolescents who

understand the importance of continuing this practice throughout all grades and subject areas because of text complexity demands. Since the literature has indicated that more research should be conducted regarding the impact of prosodic reading instruction with adolescents, this study has sound theoretical and research bases from which to work and to add legitimate information to the field of literacy instruction for adolescents.

Chapter III: Methodology

Introduction

The goal of this study was to discover the relationship of prosodic reading instruction in silent reading comprehension among adolescents. It is reasonable to infer that instruction in prosodic reading would increase students' performance in prosodic reading, especially with familiar text; however, if that is the only outcome, then the reason for reading--comprehension--is not enhanced. Currently, the bulk of research regarding prosodic reading instruction focuses on students at the elementary level and integrates rate and accuracy measures into prosodic reading measures (Sabatini, Wang & O'Reilly, 2018). Over the last fifteen years, a growing body of research reports findings regarding instruction for adolescent and adult readers who struggle with reading comprehension (Breen, Kaswer, Van Dyke, Krivokapic & Landi, 2016). Many previous studies involve either small populations or case studies, which create issues with generalizability (Beattie & Manis, 2014; Breen, et. al., 2016; Chan & Wade-Wooley, 2018; Johnson, 2018; Morris & Gaffney, 2011; Schimmel & Ness, 2017; Van Wig, 2016; Wexler, et. al., 2008). This quantitative study was designed to add generalizable results to this field of study and potentially extend evidence of the efficacy of prosodic reading instruction as a method to improve adolescent silent reading comprehension.

The overall purpose of this chapter is to introduce and explain the methodology I used to conduct applied research. This study's procedures, participants, and data analysis are the primary components addressed in this chapter.

Research Questions

The research questions were crafted to elicit empirical data to determine if a predictive and generalizable relationship exists between instruction in prosodic reading and silent reading

comprehension among adolescents. Details of the design are explained in this chapter, and discussion of the results and additional questions raised after analysis will be discussed in chapters four and five. Following are the research questions:

1. What is the impact of prosodic reading instruction on adolescents' silent reading comprehension?
2. What is the impact of prosodic reading instruction on adolescents' prosodic reading?
3. Is there a correlation between silent reading comprehension and prosodic reading among adolescents?

Related Hypotheses

The null hypotheses are as follows:

1. Prosodic reading instruction has no impact on adolescents' silent reading comprehension.
2. Prosodic reading instruction has no impact on adolescents' prosodic reading.
3. There is no correlation between silent reading comprehension and prosodic reading among adolescents.

Nature of the Study and Researcher Positionality

The nature of this study can be described as a quantitative design that incorporates standardized reading measures of comprehension and prosodic reading rating scales. Scores produced by the assessments and scales were subjected to inferential statistical analysis to determine the impact of the treatment.

Nature of the Study

The overall goal of this quantitative study was to address the impact of prosodic reading instruction on silent reading comprehension through comparison of pre- and post-test

standardized reading assessments. Scores from pre- and post-tests of silent reading comprehension were used in a repeated measure analysis of variance (RMANOVA) to determine the impact of prosodic reading instruction on silent reading comprehension. Two standardized measures of silent reading comprehension were used: NWEA MAP and iReady. For prosodic reading, RMANOVA was used to determine effects between pre-and post-prosodic reading measures. The descriptive multidimensional fluency rubric (MDFS) using the EARS acronym for each component of prosody: E=Expression, A=Automatic Word Recognition, R=Rhythm and Phrasing, and S=Smoothness (Rasinski & Cheesman-Smith, 2018) was quantified to create numerical data from the descriptive scale using score points from one to four for each of the four components of the rubric. The assignment of numerical scores resulted in composite scores of no less than four and no more than sixteen points (Rasinski & Cheesman-Smith, 2018). A correlation procedure was used to determine if there is a correlation between silent reading comprehension scores and prosodic reading scores. Next, I will discuss my positionality as a researcher in this quantitative study.

Researcher Positionality

Years before I began this research study, I often used prosodic reading instruction in my secondary English classroom; however, during that time, I would not have used the term prosodic reading instruction to describe my teaching method. I simply referred to it as oral reading. This method evolved organically, and I think it must have sprung from my undergraduate classes in mass media. One class that made a great impression on me was centered in the oral interpretation of text, and the class performed several different types of readings within the community. For me, this practice brought life to the words on the page, and I found it to be engaging for myself and others. When I entered the public school classroom as an English

teacher and realized my students (for the most part) either struggled to read or were simply unengaged, I implemented the practice of oral interpretation. While I never had hard data to show whether or not this instructional method improved students' comprehension, my anecdotal data seemed to show that it did. Over the years, many of my students would voluntarily share with me how much they enjoyed my class, and I attributed that enjoyment to the interactive nature of oral reading instruction. Besides enjoyment, another by-product I noticed from oral reading instruction was that it often supported a safe classroom environment and promoted rapport between and among me and my students. Interestingly, Rasinski (2010) addresses how interactive oral reading (fluency) instruction can promote engagement and rapport and improve students' comprehension of text. Based on my teaching experience, I wanted to conduct a research study that included oral reading instruction, which I now term prosodic reading instruction.

My interest in such a study is grounded in a pragmatic worldview in that I wanted to discover the "...what and how..." (Creswell & Creswell, 2018, p. 11) for the practice of prosodic reading instruction. Perhaps I was hoping for personal validation as well. In addition, the pragmatic worldview does not prescribe to any specific philosophy or reality but maintains that "...research always occurs in social, historical, political, and other contexts" (Creswell & Creswell, 2018, p. 11), which parallels the sociocultural theory of learning (Vygotsky, 1978) that I explained in Chapter 2.

Because this study was conducted in the sociocultural context of the classroom setting and the sociocultural theory (Vygotsky, 1978) is a theoretical basis for the study, it is pertinent to describe my positionality as the researcher in this particular context. "From a neo-Vygotskian perspective [sociocultural theory] data are social constructs developed through the relationship of

researcher, research participants, research context...and the means of data collection” (Smagorinsky, 1995, p. 192). While I employed inferential statistical methods for data analysis, some of the instruments that I used for data collection were administered by me and an interrater, specifically during the administration of pre- and post-prosodic reading assessments. To further establish my positionality, I will describe myself as a participant-observer who participated “...in the activity at the site” (Creswell, 2013, p. 166). My participant-observer role actually encompassed four stances: instructor, coach, observer, and assessor.

As instructor, I not only trained participating teachers in the Fluency Development Lesson (FDL) method (the treatment for prosodic reading instruction) but also modeled lessons in the teachers’ classrooms with their students. During these model lessons as well as during prosodic reading assessments, I had direct interaction with students. After my classroom observations, I provided constructive feedback (coaching) to teachers in the implementation of the FDL. During the guided and independent practice portion of FDL sessions delivered by teachers during my observations, I would often circulate among students and provide individual feedback and support as they practiced prosodic reading. “Positionality, therefore, can be seen to affect the totality of the research process” (Holmes, 2020, p. 3). Because of interaction with teachers and students, and as I reflect on these various roles, it is possible that I had direct influence in each of three treatments. While I employed inferential statistical methods to analyze data, because I was an assessor and data collector, it is reasonable to suggest that I had some role in shaping the data. To exercise reflexivity and grow as a researcher, it is important to examine my positionality and reflect upon it as Smagorinsky suggests:

“Researchers need to (a) acknowledge the social construction of the mediational tools provided to students during both training and assessment and (b) reflect on how their own

implication in the research process affects teaching and learning and the evaluation of both. Our effort should not be to avoid participating in the construction of data, but to recognize and account for the ways in which we inevitably contribute to the shape our data take” (Smagorinsky, 1995, p. 208).

Subjectivity most likely played a role in shaping the data regarding scoring of the prosodic reading assessments. While the probes are used to score accuracy and rate, which are easily quantifiable, the EARS rubric, a multidimensional fluency scale used for scoring prosody, is a descriptive measure. While an interrater was utilized to offset the possibility of score inflation, even with moderate to strong positive correlations among both raters’ scores in both pre- and post-assessments, subjectivity in scoring possibly shaped the data.

Having described my positionality as a researcher and explained its role in this quantitative research study, I will next describe the population involved in the study.

Participants

Teachers and students were invited to participate in this study to produce data for analysis. To protect district, administrator, teacher, and student anonymity, I adhered to policies directed by the Internal Review Board (IRB) for the University of Arkansas. To protect students’ and teachers’ physical safety during the COVID-19 pandemic, guidance from the Center for Disease Control (CDC) regarding face-to-face instruction, social distancing, and protective personal equipment were followed to reduce virus proliferation (Centers for Disease Control and Prevention, 2020). In addition, all participants and I adhered to district and building guidelines to prevent spread of the COVID-19 virus. It was crucial that all involved in the study followed such

guidelines because of class size and close proximity during prosodic reading instruction and assessment.

The participants in this study were adolescents (thirteen to eighteen years' old) and teachers in a face-to-face whole group instructional setting. Student data regarding subpopulations such as grade retention rates, characteristics of dyslexia, absenteeism, Americans with Disabilities Act (ADA) accommodations, socioeconomic standing, high mobility, ethnicity, race, individual education plans (IEP), and English language learner status were not noted in student data collection. Although subpopulation data was not part of this study, teachers involved in the study followed students' accommodations based on state and federal legislation.

Sample of Population

The population from which this study sample was drawn was fifteen public school districts and five open enrollment charters in the Northwest Arkansas Education Cooperative (NWAESC), a three-county area in northwest Arkansas (McKenzie, 2020; Arkansas Schools Demographics Databases 2019-2020, 2020). Population demographics for the 2019-2020 are summarized in Table 1, *Demographic Data Table 2019-2020 for Region, Population, and Building Groups*, below.

Table 3.1*Demographic Data 2019-2020 for Region, Population, and Building Groups*

Demographics	NWAESC Region	Population Sample	Building Grades 5-8 (Group A, Grade 8)	Building Grades 9-12* (Group B, Grade 9; Group C, Grade 10)
Enrollment	91,625	1,204	623	581
Gifted & Talented	7%	10%	11%	10%
Special Education	12%	11%	11%	11%
Homeless	3%	4%	3%	6%
Limited English Proficient	9%	1%	1%	2%
Free/Reduced Lunch	46%	49%	42%	56%
White	71%	86%	89%	82%
Hispanic	16%	8%	6%	9%
Black	2%	1%	2%	1%
Other Races	11%	6%	3%	8%
Overall Minority	29%	14%	11%	18%

(Arkansas Schools Demographics Databases 2019-2020, 2020)

*Teachers B and C taught in the same school building.

After receiving Internal Review Board approval (Appendices A and B) from the University of Arkansas on January 7, 2021, I obtained email addresses from Dr. Missy Hixson, assistant director and Teacher Center Coordinator at Northwest Arkansas Education Service Cooperative (NWAESC). She gave me verbal permission to share the survey with the curriculum supervisors, and I sent the survey via email to the seventy-two curriculum supervisors in Northwest Arkansas with the potential to reach approximately 3,000 teachers in grades 5-12 (McKenzie, 2020).

After one week, I received six responses. Two of the six respondents did not wish to participate, while four showed interest: three from one district and one from another. This

response rate was too low (.2%), so I contacted curriculum administrators in the five largest districts in the region (78% of K-12 students) (McKenzie, 2020), and found that four of them require approval from their in-district research boards. I submitted research requests to the five districts but found their approval processes prohibitive due to the infrequent meetings of their research review boards.

Having eliminated the five largest districts in the NWAESC region, to expand the sample, I again contacted Dr. Hixson and requested building administrator contact email addresses for the remaining eleven smaller districts which included 57 contacts. Dr. Hixson gave me verbal permission to redistribute the survey, which resulted in two more interested teachers. Seven teachers were scheduled to receive a one-hour either in-person or virtual training in prosodic reading instruction from January 25-27, 2021. Before delivering the training, I distributed administrator and teacher consent forms as seen in Appendix C.

After the training sessions, three teachers withdrew from participation because of curriculum fidelity concerns, and one withdrew because of low in-person student attendance (three students or less for average daily attendance that may have been a result of the COVID-19 pandemic). The final sample of the population was set, and teachers were named as Teacher A, Teacher B, and Teacher C, producing three groups: Group A, Group B, and Group C.

Next, I collected adult consent forms from the three participating teachers and their respective building administrators and delivered parent/child consent forms for each student. To expedite teachers' delivery of instruction, they began prosodic reading instruction with their selected classes of students and collected consent forms as students returned them. Students in

the sample of the population who did not return consent forms continued to receive prosodic reading instruction, but I did not use their performance in statistical analysis.

Teacher A, a National Board Certified Teacher with over twenty years of teaching experience in social studies and English Language Arts instruction, chose an eighth-grade intervention class consisting of ten students. Data was collected on nine of the ten students. Teacher B, with a bachelor's degree in English and three years of experience teaching seventh and ninth grade English Language Arts, chose to include all of the ninth-grade English students assigned to her to receive the treatment, which consisted of 93 students. Data was collected on 35 ninth-grade students. Teacher C, a first-year teacher with a bachelor's degree in English Language Arts chose her tenth-grade English classes to receive the treatment. Data was collected on ten out of thirty-three students. For data analysis, three treatment groups (Treatments A, B, and C) were organized by teacher and grade level respectively: Teacher A, eighth grade; Teacher B, ninth grade; and Teacher C, tenth grade. The table below summarizes the demographic data for the population and the sample of the population.

The following section describes the instruments I used for inviting participants, gathering data, and recording data.

Instruments for Inviting Participants, Gathering Data, and Recording Data

Instrument for Inviting Participants

The instrument I used to solicit teacher participants was an interest survey that was distributed via email to curriculum administrators in Northwest Arkansas who regularly attend curriculum group meetings at the NWAESC in Farmington, Arkansas. Within the email contact

and the survey purpose statement, I encouraged administrators to disseminate the invitation to participate to all teachers in their respective districts. The survey instrument was designed to collect email addresses so that I could follow up with interested teacher participants. This survey may be found in Appendix D.

Instruments for Gathering Data

To gather data in pre- and post-treatment, I requested district-generated standardized measures of silent reading comprehension from survey respondents who showed an interest in participation. Of the two participating districts, teacher A's district used iReady and teacher B and C's district used NWEA MAP to measure silent reading comprehension, both of which are standardized measures. The repeated measures analysis of variance was used to test assumptions for homogeneity of variance, normality, and independence of observations.

To gather pre- and post-treatment prosodic reading scores, I used the MDFS EARS rubric (Rasinski and Cheesman-Smith, 2018), Figure 3.1, along with grade-level ORF passages from the Florida Center for Reading Research (FCRR) (2003), Appendix E, as instruments for generating prosodic reading scores (Florida Center for Reading Research, 2003). The two instruments provided a robust data set that I used to produce correlational data and analysis of variance statistics. The MDFS EARS rubric, as found in Rasinski's and Chessman-Smith's book, *The Megabook of Fluency*, (2018, p. 316) is the most recently developed descriptive rubric for measuring prosodic reading (Morrison & Wilcox, 2020; Rasinski & Cheesman-Smith, 2018). I obtained permission from Dr. Timothy Rasinski via email to use the EARS rubric on February 23, 2021, as seen in Appendix F.

Figure 3.1 *Multidimensional Fluency Scale*

Multidimensional Fluency Scale

	4 Excelling	3 Proficient	2 Approaching	1 Developing
<p>E</p> <p>Expression</p> <ul style="list-style-type: none"> ✓ expression matches meaning ✓ varied volume, intonation, and tone ✓ reads with confidence ✓ natural sounding 	<ul style="list-style-type: none"> • consistently uses expression through varied intonation, volume, and tone to match meaning • reads with confidence • is natural-sounding and easy to understand 	<ul style="list-style-type: none"> • mostly uses expression by sometimes varying intonation, volume, and tone to match meaning • shows confidence but inconsistently • is mostly natural-sounding and easy to understand 	<ul style="list-style-type: none"> • attempts expression, but is inconsistent and often does not match the meaning • lacks confidence, reads quietly • primarily focuses on saying the words correctly 	<ul style="list-style-type: none"> • pays minimal or no attention to expression • reads in a quiet and monotone voice • reads words as if simply to get them out
<p>A</p> <p>Automatic Word Recognition</p> <ul style="list-style-type: none"> ✓ reads automatically ✓ reads effortlessly ✓ pace matches text (rate) 	<ul style="list-style-type: none"> • reads nearly all words automatically and effortlessly • uses a pace that is consistently conversational and appropriate for the nature of the text • number of words read per minute matches grade-level requirement. See "Target Fluency Ranges" table on page 16 	<ul style="list-style-type: none"> • reads most words automatically and effortlessly • uses a mixture of conversational and slow reading • number of words read per minute meets grade-level requirement. See "Target Fluency Ranges" table on page 16 	<ul style="list-style-type: none"> • does not read most words automatically and has to stop to recognize words • reads at a moderately slow pace • number of words read per minute is below grade-level requirement. See "Target Fluency Ranges" table on page 16 	<ul style="list-style-type: none"> • does not read words automatically and has to stop frequently to recognize words • reads at an excessively slow and laborious pace • number of words read is well below grade-level requirement. See "Target Fluency Ranges" table on page 16
<p>R</p> <p>Rhythm and Phrasing</p> <ul style="list-style-type: none"> ✓ reads phrase-by-phrase chunks ✓ attention to punctuation with intonation and pauses ✓ easy to listen to 	<ul style="list-style-type: none"> • reads primarily in phrases, chunks, and sentence units • pays attention to intonation and pauses at punctuation consistently and accurately 	<ul style="list-style-type: none"> • reads with some choppieness, but is generally able to go phrase by phrase • pays attention to intonation and usually pauses at punctuation consistently and accurately 	<ul style="list-style-type: none"> • reads in two- and three-word phrases frequently • reads with choppieness • often exhibits improper intonation and pauses at punctuation 	<ul style="list-style-type: none"> • reads word by word frequently • reads in a monotonic manner • shows little sense of phrase boundaries • exhibits improper intonation and pauses at punctuation
<p>S</p> <p>Smoothness</p> <ul style="list-style-type: none"> ✓ smooth-sounding with flow ✓ accurate word recognition ✓ minimal hesitations ✓ self-corrects 	<ul style="list-style-type: none"> • reads nearly all words accurately • reads smoothly, with minimal hesitations • has few word and structure difficulties and corrects quickly 	<ul style="list-style-type: none"> • reads most words accurately • breaks occasionally from smoothness and hesitates • has a few difficulties with specific words and/or structures, but they do not impede overall flow 	<ul style="list-style-type: none"> • struggles to read words accurately • pauses and hesitates frequently at "rough spots" in text, which disrupts the overall flow 	<ul style="list-style-type: none"> • requires frequent assistance for inaccuracies: long pauses, insertions, mispronunciation, omissions, false starts, sound-outs, repetitions • is unaware of mistakes

*Rasinski and Cheesman-Smith, 2018, p. 316

I used grade-level ORF passages developed by FCRR because the passages have been tested for grade-level readability and are available in both digital and hard copy (Florida Center for Reading Research, 2006; Hallgren, 2012). I downloaded the FCRR ORF probes and printed hard copies to record data for in-person student screening.

The scripted process used for scoring prosodic reading for each student participant is based on Rasinski's procedure for administering oral reading fluency assessments as described in *3-Minute Reading Assessments: Word Recognition, Fluency & Comprehension* (Rasinski & Padak, 2005).

Before a student was presented with a paper copy of a grade-level text, raters explained the purpose and procedure of the assessment. Students were informed that the purpose of the oral reading assessment was to gather information about how he or she reads aloud in addition to emphasizing that the oral reading was not a test but a method for generating information for the study. Raters used the following script to ensure standardization and fidelity of the process: "When I say 'begin,' you will start reading at the first paragraph and read out loud for one minute. At the end of one minute, I will ask you to stop reading out loud. May I record your voice?" All students who agreed to the screening process agreed to the recording. A timer was set for one minute, the recording was activated, and students were asked to begin reading. At the end of each one-minute session, raters thanked students for their time and participation. Raters assigned scores for prosodic reading using the EARS scale.

The EARS scale allows a narrow focus on the domains of expression, automatic word recognition, rhythm and phrasing, and smoothness (Morrison & Wilcox, 2020; Rasinski & Cheesman-Smith, 2018; Sabatini, et. al., 2018). The EARS rubric provided a structure that

allowed data to be consistently assessed using the prosodic components. While accuracy and rate are inherently intertwined with prosody, the EARS domain of automatic word recognition includes rate but does not describe grade-level expectations. Accuracy becomes intertwined in the smoothness domain, but accuracy is not clearly defined (Rasinski & Cheesman-Smith, 2018). An exhaustive search of the literature produced limited and conflicting levels to clarify performance scales for accuracy. I augmented the EARS scale in the Smoothness domain for clarification with the interrater because the language in EARS scale is vague. So, to provide consistency in scoring the smoothness domain on the EARS scale, I integrated accuracy levels into the EARS scale as follows: Frustration=Developing at 94% accuracy and below; Instructional level=Approaching with 95% accuracy; Proficient=96-97% accuracy; and Excelling=instructional level at 98% and above. These percentages were selected based on end-of-year expectations for a grade-level text taken from NWEA MAP Oral Reading Accuracy (Oral Reading Accuracy, 2022). I chose the accuracy from NWEA because treatment groups B and C used this assessment, and I could not locate accuracy expectations for treatment A, which used iReady by Curriculum Associates.

The EARS scale mentions a target fluency range in the *Megabook of Fluency* (2018, p. 16), Figure 3.2, but the range only goes through grade eight and is overly broad. To help more accurately clarify the WCPM aspect of Automatic Word Recognition, I used fluency norms produced by the Florida Center for Reading Research in 2006, Figure 3.3, which are the most recent norms that I could find after an exhaustive search for grades nine through twelve.

Figure 3.2 Target Fluency Ranges in *Megabook of Fluency*

Target Fluency Ranges as Measured by Words Correct Per Minute (WCPM)			
Grade	Fall	Winter	Spring
1		20-50	30-90 wcpm
2	30-80	50-100	70-130
3	50-110	70-120	80-140
4	70-120	80-130	90-140
5	80-130	90-140	100-150
6	90-140	100-150	110-160
7	100-150	110-160	120-170
8	110-160	120-180	130-180

*Rasinski and Cheesman-Smith, 2018, p. 16

Figure 3.3 FORF Risk Level Chart – Grades 9-12

FORF Risk Level Chart - Grades 9 - 12
2010-2011 School Year

	Grade 9			Grade 10			Grade 11			Grade 12			
	Fall Assessment 1	Winter Assessment 2	Spring Assessment 3	Fall Assessment 1	Winter Assessment 2	Spring Assessment 3	Fall Assessment 1	Winter Assessment 2	Spring Assessment 3	Fall Assessment 1	Winter Assessment 2	Spring Assessment 3	
Oral Reading Fluency	0-103	0-112	0-121	0-103	0-112	0-121	0-103	0-112	0-121	0-103	0-112	0-121	HR
	104-126	113-136	122-146	104-126	113-136	122-146	104-126	113-136	122-146	104-126	113-136	122-146	MR
	127+	137+	147+	127+	137+	147+	127+	137+	147+	127+	137+	147+	LR

HR - High Risk: Seriously below grade level and in need of substantial intervention
 MR - Medium Risk: Moderately below grade level and in need of substantial intervention
 LR - Low Risk: At grade level

Florida Center for Reading Research
 July 2006
 www.fcrr.org

*Florida Center for Reading Research, 2006

Table 2 below shows the augmented portion of the EARS scale that reflects accuracy and rate expectations. Since grade-level texts are used for the oral reading fluency measure, accuracy and rate are applied to the text.

Table 3.2*Adapted EARS Scale*

	Excelling=4	Proficient=3	Approaching=2	Developing=1
Automatic Word Recognition	Number of words read per minute matches grade-level requirement *137+	Number of words read per minute meets grade-level requirement *137+	Number of words read per minute is below grade-level requirement *136-113	Number of words read per minute is well below grade-level requirement *112 and below
Smoothness	Reads nearly all words accurately **98%+	Reads most words accurately ***96%-97%	Struggles to read words accurately ***95%	Requires frequent assistance for inaccuracies: long pauses, insertions, mispronunciation, omissions, false starts, sound outs, repetitions ****94% and below

* *FORF Risk Level Chart* (2006)

**Independent reading level

***Instructional level

****Frustration level

To ensure fidelity of scoring with the EARS rubric as suggested by Dr. Rasinski, I procured an interrater (colleague, not a teacher participant). For data collection and analysis, I assigned myself the role of Rater 1 and my colleague as Rater 2.

After prosodic reading data were gathered, raters met to ensure consensus on both pre- and post-prosodic reading measures in which incongruent domain scores of more than one score point were discussed (Hallgren, 2012). For pre-prosodic reading, I scored all students and recorded their voices. I shared recordings, blank probes, and EARS rubrics with Rater 2 for scoring. For post-prosodic reading, we both scored and recorded readings, shared recordings with each other, and then scored each other's initial recordings. A simple correlation test was conducted to verify interrater reliability. All Pearson correlation coefficients showed moderate to

strong correlations in scoring within each component of EARS scale for pre- and post-ratings. The table below shows the Pearson correlation coefficients for pre- and post-scoring in each domain of the MDFS.

Table 3.3

Pearson Correlation Coefficients for Raters 1 and 2

Pearson Correlation Coefficients (<i>r</i>)		
Components	Pretest	Post-test
Expression	.62	.76
Automatic Word Recognition	.73	.83
Rhythm	.66	.74
Smoothness	.54	.72

Instrument for Recording Data

Assessment data was entered into an electronic, password-protected spreadsheet that included the following categories: Teacher name, student name, grade level, pre- and post-measures for standardized silent reading comprehension, expression, automatic word recognition, rhythm and phrasing, and smoothness, and minutes of instruction for in-person learning. Before data analysis, all participants were checked for consent letters. Students who had not returned consent forms were removed from the final data set. Teacher names were removed and assigned the letters “A,” “B,” and “C” for grade level and length of treatment. Student names were removed and assigned a sequential number that corresponded with their data.

Quantitative Research Design

Specific Treatment to be Measured

To provide a structure for teacher participants in the delivery of prosodic reading instruction, the lesson model I chose was the Fluency Development Lesson (FDL), which is part of Fluency Oriented Reading Instruction (FORI) model (Kuhn, Zimmerman & Rasinski, 2014; Stahl & Huebach, 2005). The FORI model involves three different methods for prosodic reading instruction: 1) one text over a five-day period (FORI); 2) three texts over a five-day period (Wide-FORI); 3) one text over a one-day period—FDL (Kuhn, Zimmerman & Rasinski, 2014). While the five-day FORI procedure uses one text and Wide-FORI uses three texts over five days, the FDL daily uses a different text each day in a thirty- to forty-five-minute lesson (Kuhn, 2014; Stahl & Huebach, 2005). The FDL seemed to be the most practical choice because of its flexibility in implementation in a variety of school schedules and curriculums. The structure of the FDL may be found in Appendix G.

To prepare teacher participants for FDL instruction in prosodic reading, I provided a one-hour, face-to-face training as outlined in Appendix H. To support teachers with implementation, I scheduled weekly visits for each treatment group to observe prosodic reading instruction as outlined in the FDL and to model demonstration lessons upon teachers' request. I logged 29.5 hours of observation that included debriefing with the teacher, and approximately three hours of demonstration lessons.

It was my original goal for each teacher to explicitly deliver prosodic reading instruction for a minimum 810 minutes over a nine- to twelve-week period. As implementation began and teacher feedback was received, the goal could not be achieved because of complications due to

the spread of the COVID-19 virus, district-mandated testing, and weather events. For example, weather events forced closure for the treatment groups' schools for eight days from February 10-12, and February 15-19, 2020. Treatment groups B and C lost an additional five days of instruction because of district-mandated testing from April 12-April 16, 2020. Treatment group A did not experience district-mandated testing during the treatment period but did experience high absenteeism which resulted in cancelling an observation on March 11, 2020. Teachers recorded their weekly minutes of instruction in individual spreadsheets, which were formatted to calculate total minutes and weeks of instruction. All participating teachers' schedules followed an average 45-minute instructional period which enabled consistent implementation of the FDL. The table below shows the actual amount time and length of instruction for each of the treatment groups along with the number of students on whom data were collected.

Table 3.4

Treatment Group Characteristics Summary

Teacher/Treatment	#Classes	#Students	#Weeks	#Minutes
A	1	8	12	490
B	5	35	7	260
C	2	10	12	610
Total	8	53	31	1,360

Procedures for Inferential Statistical Analysis

For all analyses, I used the Statistical Analysis System (SAS) into which I entered the data set and appropriate syntax to generate inferential results (O'Rourke, Hatcher & Stepanski, 2005). The SAS codes used to execute the procedures mentioned in this section may be found in Appendix I.

Because two different standardized assessments of reading comprehension were used (NWEA MAP and iReady), I needed to find out if a correlational relationship existed between the two because a lack of correlation would compromise results. I used a correlation procedure across treatment groups (A, B, C) of pre-and post- reading comprehension scores to determine if a positive correlation existed.

The procedure used to measure the treatment effect was a repeated measures analysis of variance (RMANOVA) with post-silent reading scores as the dependent variable. Since RMANOVA in SAS does not calculate effect size, I used the GLM procedure to generate data that allowed me to calculate the partial eta-squared, which is frequently used to represent effect size (Wuensch, 2017).

$$\eta_p^2 = SS_{time} / (SS_{time} + SS_{error(time)}) \quad [1]$$

In addition to the research questions, I conducted follow-up procedures to further investigate effects across treatments. This is an important consideration because each treatment group showed variation in the number of instructional minutes. To determine if this variation had an effect on the results, I used a Mixed ANOVA procedure to measure differences among the treatment groups. To determine the treatment effect on prosodic reading, the means across treatment groups were compared among pre- and post-scores in the following areas: EARS composite prosody score, Expression, Automatic Word Recognition, Rhythm and Phrasing, and Smoothness. Although the follow-up procedures mentioned here were not planned as part of the research question, they are useful in promoting discussion of the results and possible implications for the treatment. Other considerations are data reduction and issues of validity and reliability, which are explained in the following section.

Data Reduction and Issues of Validity and Reliability

Data Reduction

There are several data reduction issues that may have impacted my study: lack of teacher participation, non-submission of student permissions to participate, and the ongoing COVID-19 pandemic. Out of a pool of 135 students, 72 returned permission forms, fourteen of which had missing data points. Due to this data reduction issue, the original sample of the population was reduced by 57%, which most likely conflates demographic data in terms of ethnicity, socioeconomic status, and second language learners. Because of difficulties experienced with disseminating the survey, I am concerned that teachers who may have been interested in participating were not afforded the opportunity to do so as only 31% of districts responded.

The COVID-19 pandemic created inconsistencies in student attendance because of illness, quarantine, and virtual instruction days. Instruction was also impacted by weather events. The two participating districts experienced several issues regarding virtual instruction and frequent student absenteeism; therefore, an undetermined number of students did not receive the full treatment period.

Issues of Validity and Reliability

Concerns of validity are minimized in this study because of the method used for data analysis. I used a repeated-measures analysis of variance (RMANOVA) which is highly robust to Type I errors. ANOVA itself is robust to non-normality and heterogeneity of variance if the group sizes are equal and within group size is large. Since my groups were unequal and not large, I chose RMANOVA with one treatment level for the experimental units to test the equality of the means because ANOVA alone is not robust to violations of independence. In this study,

there were no violations regarding normality of errors when assessing skewness and kurtosis values. The skewness and kurtosis values of Treatments A, B, and C from pretest to post-test on silent reading comprehension were between +1.0 and -1.0, indicating normally distributed variables; therefore, issues of reliability are reduced suggesting that issues of validity and reliability should not be of concern in the analysis methodology. Additional issues of validity, reliability, and generalizability are addressed in Chapter 5.

The purpose of this chapter was to discuss the methodology used to generate a sample population, to gather data, to record data, and to explain analysis methodology. The sample population was generated through a survey that elicited voluntary participation. Instruments used to gather and record data were oral reading probes, a descriptive oral reading rubric, and standardized assessments of silent reading comprehension. The methods used for analyzing data were the RMANOVA, correlation, and GLM procedures. In the next chapter, I will discuss the results of the data analysis.

Chapter IV: Results and Analysis

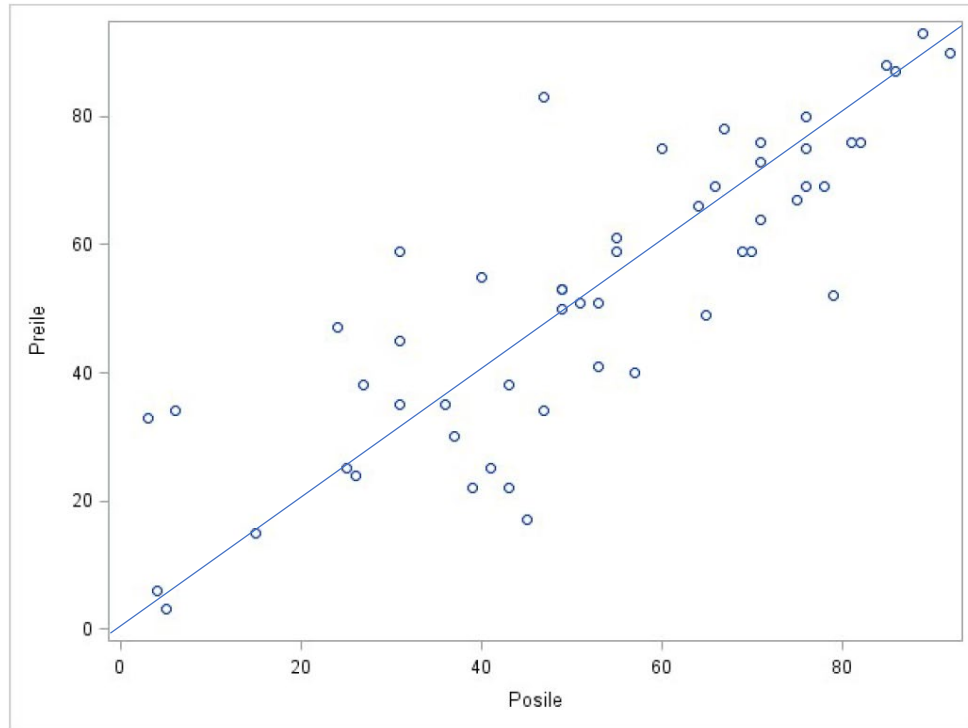
Results of the Research Study

The purpose of this research study was to determine the effect of prosodic reading instruction on silent reading comprehension and prosodic reading among adolescents and if a correlation exists between silent reading comprehension scores and prosodic reading scores.

Since two different standardized assessments were used to measure silent reading comprehension (NWEA MAP and iReady), to ensure the validity and reliability of the results, it was necessary to test whether these two different assessments were valid and reliable when comparing pre- and post-scores from both assessments. I used SAS to run a correlation procedure to find out the relationship between the two assessments. The output showed a strong positive correlation between pre- and post- reading scores ($r=.83$), which tells me that reading scores before the implementation of prosodic reading instruction (the treatment variable) are correlated to the scores after the treatment for the two different assessments as shown in Figure 4. For example, someone who scored highly on the pre-test would have a high probability of scoring highly on the post-test for both assessments. Because of the high correlation, I can trust the resulting scores on each measure and eliminate factors that might confound the impact of the treatment. Having established that pre- and post-assessment scores on the different measures are highly correlated, I then proceeded to determine whether the treatment had an effect on silent reading comprehension scores.

Figure 4.1

Scatterplot for Standardized Silent Reading Comprehension Assessments



$r=.83$

To ensure validity and reliability of results, a repeated measure of analysis of variance (RMANOVA) was used to analyze pre- and post-test measurements of silent reading comprehension scores using a standardized measure with post-test scores as the dependent variable. The RMANOVA was chosen because of group differences and differences within groups. Because of the conservative nature of RMANOVA, it is likely that a Type I error was avoided. To ensure that variables were normally distributed, I checked skewness and kurtosis values and found that each treatment group fell between +1.0 and -1.0, indicating that there were no violations of normality. The RMANOVA procedure revealed ($F=.01, p=.94$) as noted in Table 4.1.

Table 4.1*RMANOVA Output for Treatment Effect*

Source	DF	Type III SS	Mean Square	F Value	Pr > F
time	1	0.603774	0.603774	0.01*	0.9350**
Error(time)	52	4671.396226	89.834543		

*(.01 < 4.03)

**(p > .05)

In order to reject the null, the F-observed value (.01) would have had to exceed the F-critical value of 4.03 ($\alpha=.05$) to indicate significant treatment effects, or the p -value would have to be less than .05 to show that a significant change occurred in the means for the treatment period. The high p -value (.94) and the low F-observed value (.01) show that the treatment had no significant effects. Another important consideration is effect size, which explains the proportion of the variance. Since SAS does not calculate effect sizes in RMANOVA, I used the output from the GLM procedure (Table 4.2) to calculate the partial eta-squared, which is frequently used as a representation of effect size (Wuensch, 2017):

$$\eta_p^2 = SS_{time} / (SS_{time} + SS_{error(time)}) \quad [1]$$

The calculation (.0231151750 = 1183.51095 / (50017.09286 + 1183.51092)) yielded a partial-eta squared of 2.3%, a small effect size.

Table 4.2*GLM Output for Calculating Partial-Eta Squared for Silent Reading Comprehension*

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Trtmt	2	1183.51092*	591.75546	0.59	0.5573
Error	50	50017.09286**	1000.34186		

*= SS_{time} **= $SS_{error(time)}$

With RMANOVA showing no significant change in the dependent variable (post-comprehension scores) and a small effect size (2.3%), I must infer that the treatment had no positive impact on adolescents' silent reading comprehension; therefore, I must fail to reject the null for the first research question:

1. Prosodic reading instruction has no impact on adolescents' silent reading comprehension. There are factors that may have contributed to the lack of a significant change in mean scores. An important consideration is the treatment period. For example, treatment period variations in instructional minutes may have impacted the effect.

To find out if the treatment period for prosodic reading had different effects on post-reading scores (dependent variable), I used a Mixed ANOVA and found that ($p=.83$). For between subjects effects, I found ($F=.59, p=.55$). I might first infer that the three treatments (treatment groups A, B, and C) were similar in their effects. Next, when I look at time*treatment, I find ($F=.5, p=.60$), since $F=.5 > \alpha .05$, and I am looking at mean scores across treatment groups, I must infer that the difference of instructional minutes had no effect. Therefore, one treatment was not superior to any other treatment, and this factor can be eliminated as a concern.

Following is a discussion of the results of the second research question:

2. What is the impact of prosodic reading instruction on adolescents' prosodic reading?

For the prosodic reading treatment, RMANOVA was used to determine the impact of prosodic reading instruction on prosodic reading using composite scores from the EARS scale. Since $F=36.55 > \alpha .05$ and $p=.0001$ as shown in Table 4.3, there is a significant change from pre- to post-prosodic reading scores. The Greenhouse-Geisser for correction of sphericity and reduction of the possibility of a Type I error shows a corrected *p-value* of less than .05,

Table 4.3

RMANOVA for the EARS Scale

Source	DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F	
						G-G	H-F
Time	7	44.41612618	6.34516088	36.55*	<.0001**	<.0001	<.0001
Error(time)	364	63.18543632	0.17358636				

$F > 2.06^*$
 $p < .05^{**}$

To determine effect size, I again used the GLM procedure, Table 4.4, to calculate the partial eta-squared, which is frequently used as a representation of effect size (Wuensch, 2017):

$$\eta_p^2 = SS_{time} / (SS_{time} + SS_{error(time)}) \quad [1]$$

The calculation ($0.3555207009 = 67.7600236 / (67.7600236 + 122.8337264)$) yielded a partial eta-squared of .36 (36%).

Table 4.4

GLM Output for Calculating Partial-Eta Squared for Prosodic Reading

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	1	67.7600236*	67.7600236	28.69	<.0001
Error(time)	52	122.8337264**	89.834543		

*= SS_{time}

**= $SS_{error(time)}$

The large effect size, 36%, explains the proportion of the variance in post composite prosodic reading scores. Analysis showed that scores increased on the prosodic reading scale, showing that prosodic reading instruction had an impact on students' prosodic reading. Therefore, I may reject the null of research question two: Prosodic reading instruction has no impact on adolescents' prosodic reading.

Since composite prosody scores were impacted by the treatment, and the summed components yield the composite score, I was curious to find out which component(s) showed significant effect(s).

To determine which component of prosodic reading showed the most change, I used a RMANOVA to help prevent violations of independence and reduce the likelihood of a Type I or Type II error. Table 9 shows the components of the EARS Prosodic Reading Scale: Expression, Automatic Word Recognition, Rhythm and Phrasing, and Smoothness. The F-values and the *p*-values show the change within each component from pre- to post-prosodic reading assessment for the treatment period. As noted in Table 4.5 below, significant changes in mean scores occurred in all components of the EARS scale. Particularly, Expression and Rhythm and

Phrasing ($p < .0001$), which are the focus of the prosodic treatment using the FDL, suggest more significant changes from pre- to post-test than the other components.

Table 4.5

RMANOVA for EARS

Component	Description	F Value	Pr<F
Expression	<ul style="list-style-type: none"> • Expression matches meaning • Varied volume, intonation, and tone • Reads with confidence • Natural sounding 	27.48	<.0001*
Automatic Word Recognition	<ul style="list-style-type: none"> • Reads automatically • Reads effortlessly • Pace matches text (rate) 	4.66	.0355
Rhythm and Phrasing	<ul style="list-style-type: none"> • Reads phrase-by-phrase chunks • Attention to punctuation with intonation and pauses • Easy to listen to 	56.49	<.0001*
Smoothness	<ul style="list-style-type: none"> • Smooth-sounding with flow • Accurate word recognition • Minimal hesitations • Self-corrects 	8.91	.0043

*Denotes more significant changes in mean scores

Since Words Correct Per Minute (WCPM) and Accuracy are subcomponents of Automatic Word recognition (WCPM) and Smoothness (accuracy) components, their individual values were examined. Table 4.6 below is a RMANOVA for pre- and post-accuracy where $p < .05$, so there is a significant change from pre- to post-accuracy scores.

Table 4.6

RMANOVA for Pre- and Post-Accuracy

Source	DF	Type III SS	Mean Square	F Value	Pr > F
time	1	0.00425769	0.00425769	17.87	<.0001*
Error(time)	52	0.01239006	0.00023827		

*p<.05

Table 4.7 below is a RMANOVA for pre- and post-Words Correct Per Minute (WCPM). Since $p > .05$, there is no significant change.

Table 4.7

RMANOVA for Pre- and Post-WCPM

Source	DF	Type III SS	Mean Square	F Value	Pr > F
time	1	35.103774	35.103774	0.22	0.6439*
Error(time)	52	8445.396226	162.411466		

*p> .05

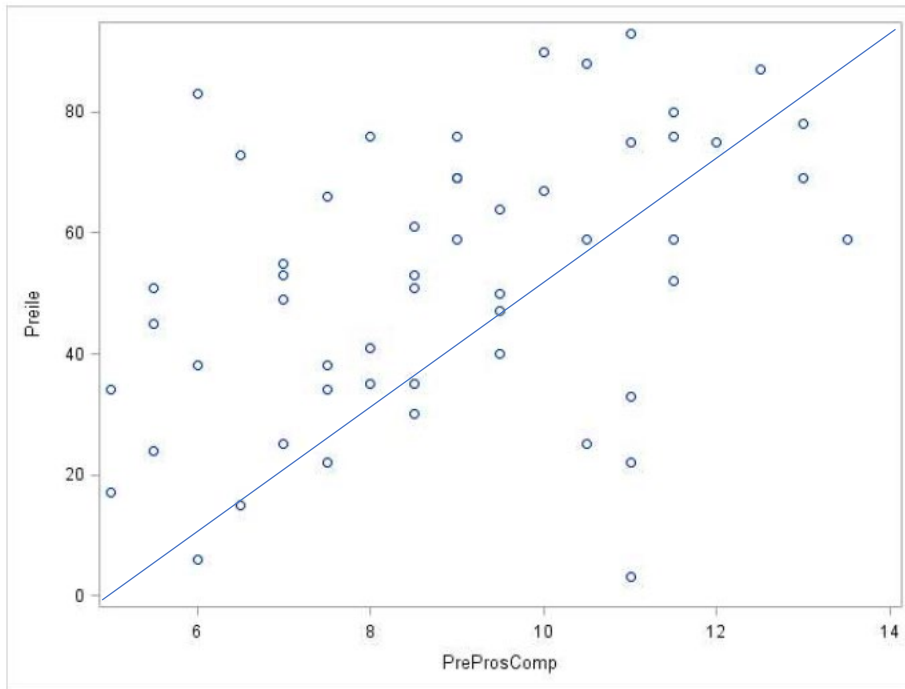
Following is a description of the results for the third research question:

3. Is there a correlation between silent reading comprehension and prosodic reading among adolescents?

To find out if there was a correlation between silent reading scores and prosody scores, I used a correlation procedure to determine the relationship. The scatterplots below, Figures 4.2 and 4.3, show scores for pre- and post- silent and prosodic reading. When comparing the scatterplots, I can see that while both show a positive correlation, the pretest scores ($r=.43$) are not as strongly correlated as the post-test scores ($r=.64$).

Figure 4.2

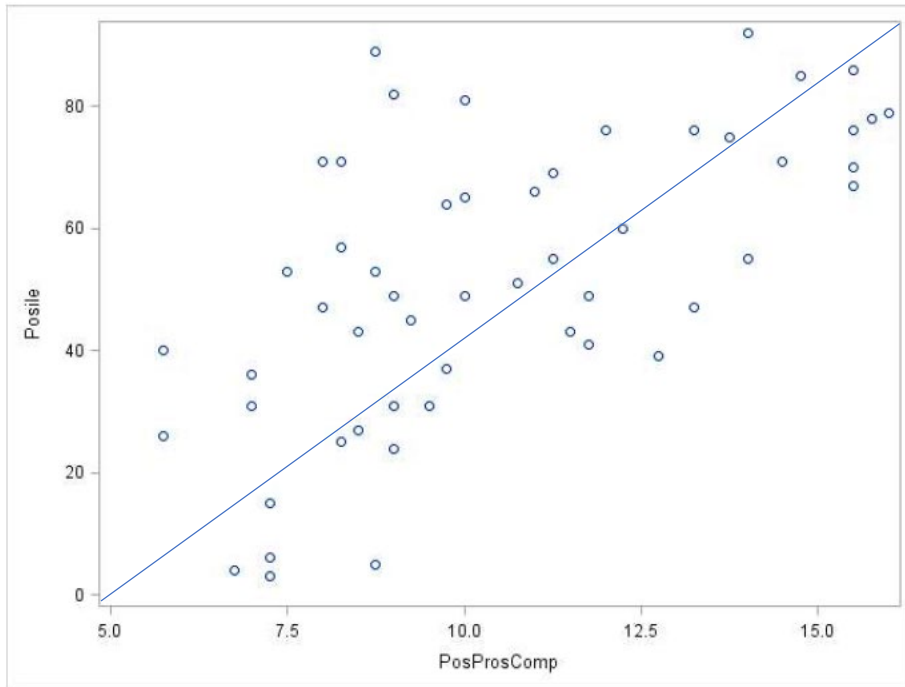
Scatterplot for Pretest Silent Reading Comprehension and Prosodic Reading Scores



Note: The correlation coefficient ($r=.43$) shows a moderate positive correlation.

Figure 4.3

Scatterplot for Post-test Silent Reading Comprehension and Prosodic Reading Scores



Note: The correlation coefficient ($r=.64$) shows a moderately strong positive relationship.

Because of the positive correlation between silent and prosodic reading scores, I can infer that when prosodic reading scores increase, it reasonable to expect silent reading scores to increase. Therefore, I can reject the null for the third research question because silent and prosodic reading are correlated.

The purpose of this chapter was to discuss the effect of prosodic reading instruction on silent reading comprehension among adolescents. The treatment produced no significant changes in mean scores on silent reading comprehension assessments. The treatment produced significant changes in composite prosodic reading mean scores and within its components of Expression and Rhythm and Phrasing. The accuracy subcomponent also showed a significant change. In addition, there is a positive correlation between silent and prosodic reading scores. In the next

chapter, I will summarize the key findings, discuss general conclusions, explore implications, and propose possible directions for further research.

Chapter V: Discussion and Conclusions

Summary

The purpose of this study was to investigate the role of prosodic reading instruction in silent reading comprehension among adolescents using quantitative analysis procedures. I reported data on 53 students across three grade levels (grades 8, 9, and 10) with three different teachers and two different districts. To perform the data analysis procedures, I used the SAS platform into which I entered data and syntax to perform the procedures for correlation and repeated measure analysis of variance (RMANOVA). Following is a summary of the key findings of the three research questions created to facilitate the investigation. The findings of each question contribute to the investigation of the role of prosodic reading instruction in silent reading comprehension among adolescents.

Key Findings

Research Question 1

1. What is the impact of prosodic reading instruction on adolescents' silent reading comprehension?

To determine the role of prosodic reading instruction in silent reading among adolescents is an important consideration because some previous studies have shown a relationship between prosodic reading instruction and silent reading comprehension (Cypert & Petro, 2019). Further, since adolescents engage in silent reading activities more frequently than oral activities, adding to the research in this field would be beneficial for purposes of increasing student achievement (Rasinski & Cheesman, 2018; Stallings, 1980). In addition, mandated reading tests for adolescents occurs in a silent reading situation. Further, this question has a basis in the research literature that suggests a strong relationship between prosodic reading instruction and silent

reading comprehension for younger students and limited studies for older students (Cypert & Petro, 2019; Hawkins, Hale, Sheeley, & Ling, 2011; Paige, Rupley, Smith, Rasinski, Nichols & Magpuri-Lavell, 2017). The present study helps to fill the gap in the research literature on the relationship between prosodic reading instruction and silent reading comprehension among adolescents. After pre- and post-assessment data were collected for 53 students, I performed a RMANOVA procedure to determine the effect of prosodic reading instruction on silent reading comprehension. The results indicated that there was no significant effect as reported and discussed in Chapters 3 and 4, respectively.

Research Question 2

2. What is the impact of prosodic reading instruction on adolescents' prosodic reading?

Beyond the first question, another consideration is the relationship between prosodic reading instruction and adolescents' prosodic reading. To produce results for question two, I again used a RMANOVA was used to determine the impact of prosodic reading instruction on students' prosodic reading. The results showed a significant change in mean scores on the post-composite prosody measure, especially in the components of Expression and Rhythm and Phrasing. Similar results were found by Van Wig (2016) with a treatment that focused on prosodic reading for seventeen eighth grade students.

Research Question 3

3. Is there a correlation between silent reading comprehension and prosodic reading among adolescents?

The correlation procedure was used to determine the relationship between silent reading comprehension scores and prosodic reading scores for both pre- and post-assessments. Although correlations for the pre- and post-assessments were positive, post-assessments showed a stronger

correlation than pre-assessments. This correlation suggests that as prosodic reading scores increase, silent reading comprehension scores increase. The correlation between composite prosodic reading scores and silent reading scores have been found before in studies including but limited to by Miller & Schwanenflugel (2008) and Rasinski, et. al. (2016).

General Conclusions

Combined, the results of the three research questions show that prosodic reading instruction positively impacts prosodic reading among adolescents even though silent reading comprehension assessments showed no significant impact.

For the remainder of this chapter, I will elaborate on the results and design of the study, including limitations, implications, and suggestions for future research.

Limitations on Generalizability and Threats to Validity

Given the results of this study specifically with regard to research question one, issues exist concerning validity, reliability, and generalizability due to a lack of external validity, the potential for lack of internal validity, and construct irrelevant variance. Threats to validity greatly reduce the generalizability of this study.

To begin, external validity was compromised concerning the sample of the population. As seen in Table 3.1, *Demographic Data 2019-2020 for Region, Population, and Building Group*, demographics of the sample of the population is not similar to the regional demographics from which the sample population was drawn. For example, the overall minority for the region is 29% while the sample population is 14% with Treatment A at 11% and Treatments B and C at 18%. This study's sample population depended on voluntary participation, but it could have been improved through soliciting participation from specific districts that more closely represented the

regional demographics. In future studies, it would be important to analyze demographic data before requesting participation.

Another factor that limits generalizability concerns a lack of internal validity because the study was not operationalized as designed. The planned design of the study was to administer reading assessments prior to and after the treatment period. Pre-assessments for both silent reading and prosodic reading were administered prior to the beginning of the treatment period as planned. Unfortunately, post-assessment data was compromised when Treatments B and C administered post-silent reading assessments per district requirements approximately four weeks into the treatment period, after which prosodic reading instruction extended another five weeks. After inquiring if it were feasible to institute an additional administration of the test at the end of the treatment period, I learned that the opening of an additional testing window was cost prohibitive for the district. Since I was able to schedule the administration of post-prosodic reading assessments, those were administered after the treatment period. Although the prosodic reading scores contain an element of subjectivity with regard to the EARS scale, the measures were administered as designed. To help resolve internal validity concerns in future studies such as the current one in which the dependent variable was generated from district-level assessments, it would be helpful to review district assessment schedules before designing the study.

Another threat to validity that limits generalizability is the uncertainty of students' engagement during the administration of the silent reading assessment. Some research suggests "...that younger students take large-scale tests more seriously than older students" (Haladyna & Downing, 2004, p. 24). Since this study was conducted with older students (adolescents), this is a potential threat to validity and generalizability. Such issues may have interfered with producing the true impact of the treatment. To help ameliorate concerns of motivation and engagement, it

might be helpful to administer pre- and post-surveys of students' level of engagement with the assessment. Based on results of such a pre-assessment, the study design could incorporate strategies to increase student engagement on the assessment and perhaps yield a better outcome.

The impact of prosodic reading instruction on silent reading comprehension in this study is not consistent with other studies that have shown strong effects for such treatment. For example, DiSalle and Rasinski (2017) showed significant effects in reading comprehension with six fourth-grade students over a 12-week period using prosodic reading instruction as outlined in the Fluency Development Lesson (FDL) explained in Chapters 3 and 4 of this study. Cypert and Petro (2019) found that among 47 first-year college students, explicit instruction in expressive reading (prosodic reading) improved accuracy and "...that improved prosody and comprehension are significantly linked, perhaps through increased reader attention to the semantic purpose of the text" (p. 1309). In addition, Hawkins, Hale, Sheeley, and Ling (2011) showed positive results for struggling high school readers who received interventions that involved repeated readings and vocabulary previewing. Repeated reading and vocabulary study are elements of the FDL which was used the treatment design for the current study. Further, Henry and Jackson (2017) found that prosodic instruction had a long-lasting impact on comprehension when acquiring a second language. To yield a better result, perhaps future designs should be based on studies that found positive effects.

Given the somewhat limited results and scope of the current study and inconsistency with previous studies, I have considered possible weaknesses in the research design. For example, a weakness in this study was that the three treatment groups were uneven with regard to the treatment period. While RMANOVA is robust to violations of normality, heterogeneity, and independence, because of different lengths of treatment periods and other factors validity

mentioned previously, a true effect of the treatment could not be discovered. For example, Treatment A yielded 490 minutes of instruction with Treatment B reporting 260 minutes and Treatment C reporting 610 minutes. Although RMANOVA showed no significant differences in the outcome, it seems logical to conclude that a longer treatment period across all treatment groups might have produced different effects. Regardless, the results of RMANOVA can be trusted given the data that was analyzed. For future studies, a longer and more even treatment period with reduced validity concerns might be considered so that stronger effects could potentially be found with regard to the impact of prosodic reading instruction.

Another weakness in this study is that there was no control group. The pervasive complicating factor that I must mention is the COVID-19 pandemic. Quarantine restrictions, social-distancing guidelines, mask mandates, and virtual instruction negatively impacted teachers' ability to interact with students and to deliver a normal day of instruction. The demand for virtual instruction forced teachers to create and adapt existing curriculum and learning objectives conducive to a virtual environment. This task alone was monumental. The most likely place where I might have created a control group would have been with the teacher for Treatment B who taught five sections of ninth-grade English. However, given the circumstances in the public school settings where the study was conducted and the reliance on teacher volunteers, I decided early on that the formulation of a control group would have created perceived inequity within the teachers' classrooms and among students. Also for consideration is that a control group could have created an undue burden on already overworked teachers. With a small pool of students to generate data (end sample population of 53 students), I hesitated to burden teachers with additional stipulations and the possibility of further reducing the data. A

stronger study design would necessitate a larger sample population from which a control group could be created.

Upon reflection, it would have been useful to have collected attendance records for the students involved in the study. Attendance data would have added an important dimension to the impact of the treatment because it would have provided an additional dependent variable upon which I could have measured and compared silent reading comprehension scores. For example, it is reasonable to expect that students who had limited attendance would not perform as well as students who had high attendance. This study was conducted in the Spring of 2021, during the COVID-19 pandemic which negatively affected student and teacher attendance rates. In addition, weather events restricted days of instruction. Had I collected attendance data, the study may have yielded a different impact for the treatment. While I had considered gathering attendance data, again, it seemed that this would have created an extra burden for the teachers. Because I was not personally allowed access to attendance records, teachers would have had to take extra steps to provide me with the data. A more robust study would include student and teacher attendance data and help explain variances in the treatment effect.

Perhaps I created undue restrictions on the study in an effort to ease teachers' burdens. Regardless of the self-imposed restrictions I may have created, the study still produced significant results that have positive implications for classroom instruction.

Implications

Even though no significant changes in post means for silent reading comprehension were produced by the treatment, there were significant changes in students' prosodic reading, specifically in the components of Expression and Rhythm and Phrasing. In addition, prosodic

reading scores showed a strong correlation to silent reading scores. Because there was a significant increase in means produced by the treatment for Expression and Rhythm and Phrasing, it seems plausible that the prosodic reading treatment could be implemented in whole group instruction to support students' success with grade-level texts. Both the IPH (Fodor, 1998) and the PHT (Ashby, 2006) suggest that explicit prosodic reading instruction links prosodic contours to orthographic features and helps resolve text ambiguity. The implication of the IPH and PHT is that the phonological and prosodic components of oral language "...influence the course of syntactic processing" (Fodor, 2002, p. 1; Ashby, 2006). Simply stated, the IPH suggests that readers hear an inner voice as they read silently, which is also suggested by Gross, Millett, Bartek, Bredell, & Winegard (2014) and Kadota (1987). The application of the IPH and PHT with respect to the outcomes of the current study suggests that instructional time on prosodic instruction will benefit adolescents' reading outcomes. As students are exposed to increasingly more complex texts, it seems plausible that prosodic reading practice would enhance complex text comprehension by supporting students' acquisition of more complex language structures related to syntax, text cohesion, and vocabulary (Fisher & Frey, 2014; Rasinski, 2010; Rasinski, Rikli & Johnston, 2009; Shanahan, 2021).

Suggestions for Future Research

Since I adapted the EARS scale to reflect more precise measurements for accuracy and rate, it would be helpful for such norms to be integrated within the prosodic reading scale, especially when used in a quantitative study. Such integrations would facilitate interrater reliability and help to remove subjectivity from the scoring process (Breen, 2016; Rasinski & Cheesman-Smith, 2018). I am concerned that although research suggests that 95% accuracy is sufficient for comprehension at the independent reading level (Kuhn, et. al., 2014; Oral Reading

Accuracy, 2022; Rasinski & Cheesman-Smith, 2018), the demands of discipline-specific vocabulary in complex and/or ambiguous texts may require greater accuracy for good comprehension. Therefore, it seems important to examine the accuracy demands inherent in complex texts and conduct research to establish reasonable levels of expected accuracy for independent reading of those texts. Beyond accuracy, rate, and complexity, there are issues in prosodic reading instruction that should be considered.

There is much to be learned about instructors' perception of the prosodic reading method of instruction. While the teachers in the current study volunteered to participate and implement prosodic reading instruction, it would be interesting to conduct a study that included teacher perceptions of themselves as prosodic reading instructors. Also, intentional observation of the lessons by the researcher combined with coaching would ensure fidelity of implementation. To gather data, the implementation of pre- and post-qualitative and quantitative data could strengthen outcomes of a study in conjunction with protocols for observations of teachers. With such measures, perceptions of the instruction and fidelity of implementation might strengthen outcomes of the study. It might also be helpful to design a study with a longer treatment period and be able to execute it. For example, the research suggests 12-18 weeks of intervention for 15-20 minutes is likely to create an impact on silent reading (DiSalle & Rasinski, 2017; Kuhn, 2005).

Conclusion

The purpose of this study was to investigate the impact of prosodic reading instruction on silent reading comprehension among adolescents. Although the statistical analysis of the data in this study found that prosodic reading instruction had no significant impact on silent reading comprehension scores, it did find that adolescents' prosodic reading scores increased after the

treatment and that a strong positive correlation exists between adolescents' prosodic reading scores and silent reading comprehension scores. While this study has contributed some knowledge to the field of adolescent literacy, there is a need for further research in this area to discover evidence-based instructional strategies that will yield positive outcomes for adolescents' silent reading comprehension. Prosodic reading instruction has the potential to significantly impact students' silent reading comprehension when the treatment is delivered consistently (Rasinski, 2010).

References

- Abramson, M., & Goldinger, S. D. (1997). What the reader's eye tells the mind's ear: Silent reading activates inner speech. *Perception & Psychophysics*, 59(7), 1059-1068.
- Adams, M. J. (1990). *Beginning to read*. MIT.
- Afflerbach, P., Pearson, P. D., & Paris, S. G. (2008). Clarifying differences between reading skills and reading strategies. *The Reading Teacher*, 61(5), 364-373.
- Ardoin, S. P., Binder, K. S., Foster, T. E., & Zawoyski, A. M. (2016). Repeated versus wide reading: A randomized control design study examining the impact of fluency interventions on underlying reading behavior. *Journal of School Psychology*, 59, 13-38.
- Arkansas Schools Demographics Databases 2019-2020. (2020). *Office for Education Policy*. University of Arkansas. <http://www.officeforeducationpolicy.org/arkansas-schools-data-demographics/>
- Arrow, A. W., & Tunmer, W. E. (2012). Contemporary reading acquisition theory: The conceptual basis for differentiated reading instruction. *Contemporary Debates in Childhood and Education*, 241-249.
- Ashby, J. (2006). Prosody in skilled silent reading: Evidence from eye movements. *Journal of Research in Reading*, 29(3), 318-333.
- Ashby, J. (2006). *The nature of phonological representation in reading: Evidence from eye movements and event-related potentials*. University of Massachusetts Amherst.
- Ashby, J. (2016). Why does prosody accompany fluency? Re-conceptualizing the role of phonology in reading. In *Reading Fluency* (pp. 65-89). Springer, Cham.
- Baer, J., Kutner, M., Sabatini, J., & White, S. (2009). Basic Reading Skills and the Literacy of America's Least Literate Adults: Results from the 2003 National Assessment of Adult Literacy (NAAL) Supplemental Studies. NCES 2009-481. *National Center for Education Statistics*.
- Barner, D., & Snedeker, J. (2006). Children's early understanding of mass-count syntax: individuation, lexical content, and the number asymmetry hypothesis. *Language Learning and Development*, 2(3), 163-194.
- Beattie, R. L., & Manis, F. R. (2014). The relationship between prosodic perception, phonological awareness and vocabulary in emergent literacy. *Journal of Research in Reading*, 37(2), 119-137.
- Benjamin, R. G., & Schwanenflugel, P. J. (2010). Text complexity and oral reading prosody in young readers. *Reading Research Quarterly*, 45(4), 388-404.
- Bodrova, E., & Leong, D. J. (2007). *Tools of the mind: The Vygotskian approach to early childhood education*. Upper Saddle River: Pearson.

- Bögels, S., Schriefers, H., Vonk, W., Chwilla, D. J., & Kerkhofs, R. (2010). The interplay between prosody and syntax in sentence processing: The case of subject-and object-control verbs. *Journal of Cognitive Neuroscience*, 22(5), 1036-1053.
- Brandt, D. (2009). *Literacy and learning: Reflections on writing, reading, and society*. San Francisco: Jossey-Bass.
- Breen, M., & Clifton Jr, C. (2011). Stress matters: Effects of anticipated lexical stress on silent reading. *Journal of Memory and Language*, 64(2), 153-170.
- Breen, M., Fitzroy, A. B., & Oraa Ali, M. (2019). Event-related potential evidence of implicit metric structure during silent reading. *Brain Sciences*, 9(8), 192.
- Breen, M., Kaswer, L., Van Dyke, J. A., Krivokapić, J., & Landi, N. (2016). Imitated prosodic fluency predicts reading comprehension ability in good and poor high school readers. *Frontiers in Psychology*, 7, 1026.
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5–51. <https://doi.org/10.1177/1529100618772271>
- Cazden, C., Cope, B., Fairclough, N., Gee, J., Kalantzis, M., Kress, G., ... & Nakata, M. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard educational review*, 66(1), 60-92.
- Cervetti, G. N., Pearson, P. D., Palincsar, A. S., Afflerbach, P., Kendeou, P., Biancarosa, G., ... & Berman, A. I. (2020). How the Reading for Understanding initiative's research complicates the simple view of reading invoked in the science of reading. *Reading Research Quarterly*, 55, S161-S172.
- Chan, J. S., & Wade-Woolley, L. (2018). Explaining phonology and reading in adult learners: Introducing prosodic awareness and executive functions to reading ability. *Journal of Research in Reading*, 41(1), 42-57.
- Chard, D. J., Pikulski, J. J., & McDonagh, S. (2006). Fluency: The link between decoding and comprehension for struggling readers. In *Fluency Instruction: Research based best practices*. (pp. 39-61). Guilford Press.
- Chomsky, C. (1976). After decoding: What? *Language Arts*, 53(3), 288-314.
- Clay, M. M. (1993). *An observation survey of early literacy achievement*. Heinemann, 361 Hanover St., Portsmouth, NH 03801-3912.
- Clifton, C. (2015). The roles of phonology in silent reading: A selective review. *Explicit and implicit prosody in sentence processing*, 161-176.
- Common Core State Standards Initiative. (2018).
- Common Core State Standards Initiative. (2012). College and career readiness anchor standards for reading.(2012).<http://www.corestandards.org/ELA-Literacy/CCRA/R/>

- Connor, C. M., Morrison, F. J., & Katch, L. E. (2004). Beyond the reading wars: Exploring the effect of child-instruction interactions on growth in early reading. *Scientific studies of reading*, 8(4), 305-336.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Cypert, R., & Petro, M. (2019). Prosody instruction intervention as a means to improved reading comprehension. *Applied Cognitive Psychology*, 33(6), 1305-1311.
- Daniels, H.; Zemelman, S.; Bizar, M. (1999). Whole language works: Sixty years of research. *Educational Leadership*, 57(2), 32-37.
- Davidson, J. (1993). Bakhtin as a theory of reading. *Center for the Study of Reading Technical Report*, no. 579.
- Dennis, D. (2013). Heterogeneity or homogeneity: What assessment data reveal about struggling adolescent readers. *Journal of Literacy Research*, 45(1), 3-21.
- DeVries, R. (2000). Vygotsky, Piaget, and education: A reciprocal assimilation of theories and educational practices. *New Ideas in Psychology*, 18(2-3), 187-213.
- DiSalle, K., & Rasinski, T. (2017). Impact of short-term intense fluency instruction on students' reading achievement: A classroom-based, teacher-initiated research study. *Journal of Teacher Action Research*, 3(2), 1-13.
- Dowhower, S. L. (1991). Speaking of prosody: Fluency's unattended bedfellow. *Theory into practice*, 30(3), 165-175.
- Dressman, M. (2007): Theoretically framed: Argument and desire in the production general knowledge about literacy. *Reading Research Quarterly*, 42(3), 332-363, DOI:10.1598/RRQ.42.3.1
- Ehri, L. C. (2014). Orthographic Mapping in the Acquisition of Sight Word Reading, Spelling Memory, and Vocabulary Learning. *Scientific Studies of Reading*, 18(1), 5-21, DOI: 10.1080/10888438.2013.819356
- Ehrich, J. F. (2006). Vygotskian inner speech and the reading process. 12-25. <https://ro.uow.edu.au/edupapers/1074>
- Fisher, D., & Frey, N. (2014). Speaking and listening in content area learning. *The Reading Teacher*, 68(1), 64-69.
- Florida Center for Reading Research. <https://www.fcrr.org/>
- Florida Oral Reading Fluency Assessment Grade 8*. (2003). Florida Department of Education.
- Florida Oral Reading Fluency Assessment 1 High School*. (2003). Florida Department of Education.

- Florida Oral Reading Fluency Assessment 2 High School*. (2003). Florida Department of Education.
- Florit, E., & Cain, K. (2011). The simple view of reading: Is it valid for different types of alphabetic orthographies? *Educational Psychology Review*, 23, 553-576.
- Fodor, J. (1972). Some reflections on LS Vygotsky's Thought and language. *Cognition*, 1(1), 83-95.
- Fodor, J. D. (1998). Learning to parse? *Journal of Psycholinguistic Research*, 27(2), 285-319.
- Fodor, J. D. (2002). Prosodic disambiguation in silent reading. In *North East Linguistics Society*, (Vol. 32, No. 1, p. 8).
- FORF Risk level Chart—Grades 6-8, 2010-2011 School Year*. Florida Center for Reading Research. (2006). <https://www.fcrr.org>
- FORF Risk level Chart—Grades 9-12, 2010-2011 School Year*. Florida Center for Reading Research. (2006). <https://www.fcrr.org>
- Frazier, L., & Gibson, E. (Eds.). (2015). *Explicit and implicit prosody in sentence processing: Studies in honor of Janet Dean Fodor* (Vol. 46). Springer.
- Gee, J. P. (2015). *Social linguistics and literacies: Ideology in discourses*. (5th ed.). New York City, New York, United States: Routledge.
- Ghafar Samar, R., & Dehqan, M. (2013). Sociocultural theory and reading comprehension: The scaffolding of readers in an EFL context. *International Journal of Research Studies in Language Learning*, 2(3), 67-80.
- Goering, Christopher. (2017). *Dramatic oral reading with adolescents*. Fayetteville: University of Arkansas.
- Goodman, Y. M. (1989). Roots of the whole-language movement. *The Elementary School Journal*, 90(2), 113-127.
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7(1), 6-10.
- Gross, J., Millett, A. L., Bartek, B., Bredell, K. H., & Winegard, B. (2014). Evidence for prosody in silent reading. *Reading Research Quarterly*, 49(2), 189-208.
- Gross, J., Winegard, B., & Plotkowski, A. R. (2018). Marking Stress ExPLICITly in Written English Fosters Rhythm in the Reader's Inner Voice. *Reading Research Quarterly*, 53(3), 305-321.
- Guerin, A., & Murphy, B. (2015). Repeated reading as a method to improve reading fluency for struggling adolescent readers. *Journal of Adolescent & Adult Literacy*, 58(7), 551-560.

- Haladyna, T., & Downing, S. (2004). Construct-irrelevant variance in high-stakes testing. *Educational Measurement: Issues and Practice*, 23(1), 17-27.
- Hall, A. (1995). Sentencing: The Psycholinguistic Guessing Game. *The Reading Teacher*, 49(1), 76-77. Retrieved June 26, 2020, from www.jstor.org/stable/20201563
- Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: an overview and tutorial. *Tutorials in quantitative methods for psychology*, 8(1), 23.
- Harste, J. C., & Short, K. G. (1996). Ken and Yetta Goodman: Exploring the roots of whole language. *Language Arts*, 73(7), 508.
- Hasbrouck, J., & Tindal, G. (2017). *Hasbrouck-Tindal oral reading fluency chart*. <https://www.readnaturally.com/knowledgebase/how-to/9/59>
- Hawkins, R. O., Hale, A., Sheeley, W., & Ling, S. (2011). Repeated reading and vocabulary-previewing interventions to improve fluency and comprehension for struggling high-school readers. *Psychology in the Schools*, 48(1), 59-77.
- Henry, N. & Jackson, C. N. (2017). The role of prosody and explicit instruction in processing instruction. *The Modern Language Journal*, 101(2), 294-314.
- Herron, J. (2008). Why phonics teaching must change. *Educational Leadership*, 66(1), 77-81.
- Hiebert, E. H., & Reutzel, D. R. (2014). Revisiting silent reading: New direction for teachers and researchers. Newark: *International Literacy Association*.
- Holmes, A. G. D. (2020). Researcher Positionality--A Consideration of Its Influence and Place in Qualitative Research--A New Researcher Guide. *Shanlax International Journal of Education*, 8(4), 1-10.
- Huey, E. B. (1908). *The psychology and pedagogy of reading*. Macmillan.
- Immordino-Yang, M. H., & Knecht, D. R. (2020). Building meaning builds teens' brains. *Educational Leadership*, 77(8), 36-43.
- Jaramillo, J. A. (1996). Vygotsky's sociocultural theory and contributions to the development of constructivist curricula. *Education*, 117(1), 133-141.
- Johnson, G. J. (2018). The effects of decoding instruction on oral reading fluency for older students with reading delays (Order No. 13877054). Available from ProQuest Central; ProQuest Dissertations & Theses Global. (2213544815). Retrieved from <https://search.proquest.com/docview/2213544815?accountid=8361>
- Kadota, S. (1987). The role of prosody in silent reading. *Language Sciences*, 9(2), 185-206.
- Kalina, C., & Powell, K. C. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education*, 130(2), 241-250.
- Kentner, G., & Vasishth, S. (2016). Prosodic focus marking in silent reading: effects of discourse context and rhythm. *Frontiers in Psychology*, 7, 319.

- Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Hoboken: Wiley.
- Kim, J. S. (2008). Research and the Reading Wars. *Phi Delta Kappan*, 89(5), 372–375.
<https://doi.org/10.1177/003172170808900514>
- Krashen, S. (2002). Defending whole language: The limits of phonics instruction and the efficacy of whole language instruction. *Reading Improvement*, 39(1), 32-42.
- Kuhn, M. R. (2005). A comparative study of small group fluency instruction. *Journal of Investigative Surgery*, 26(2), 127-146.
- Kuhn, M., Rasinski, T., & Zimmerman, B. (2014). Integrated Fluency Instruction: Three Approaches for Working with Struggling Readers. *International Electronic Journal of Elementary Education*, 7(1), 71-82.
- Kuhn, M. R., Schwanenflugel, P. J., & Meisinger, E. B. (2010). Aligning theory and assessment of reading fluency: Automaticity, prosody, and definitions of fluency. *Reading research quarterly*, 45(2), 230-251.
- LaBerge, D., & Samuels, S. J. (1974). Toward a theory of automatic information processing in reading. *Cognitive psychology*, 6(2), 293-323.
- Levine, S. (2019). A century of change in high school English assessments: An analysis of 110 New York State Regents Exams, 1900-2018. *Research in the Teaching of English*, 54(1), 31-53.
- Linn, B. M. (2013). In the wake of reading wars: cognitive psychologists' and teacher educators' familiarity with and evaluation of cognitive reading research.
- McBride, B. T. (2000). "Educators seeking 'reading wars' truce". *English Journal*, 89(4), 17-18.
 Retrieved from <https://search.proquest.com/docview/237292833?accountid=8361>
- McCardle, P., Scarborough, H. S., & Catts, H. W. (2001). Predicting, explaining, and preventing children's reading difficulties. *Learning Disabilities Research & Practice*, 16(4), 230-239.
- McKenzie, S. (2020). 2019 Northwest Arkansas Education Report Card. *Office for Education Policy*. University of Arkansas. <https://www.officeforeducationpolicy.org/2019-report-card-on-northwest-arkansas-schools/>
- Mellard, D. F., Krieschok, T., Fall, E., & Woods, K. (2013). Dispositional factors affecting motivation during learning in adult basic and secondary education programs. *Reading and writing*, 26(4), 515-538.
- Miller, J., & Schwanenflugel, P. J. (2008). A longitudinal study of the development reading prosody as a dimension of oral reading fluency in early elementary school children. *Reading Research Quarterly*, 43(4), 336-354.

- Mira, W. A., & Schwanenflugel, P. J. (2013). The impact of reading expressiveness on the listening comprehension of storybooks by prekindergarten children. *Language, Speech, and Hearing Services in Schools, 44*, 183-194.
- Moats, L. C. (2007). Whole-Language High Jinks: How to Tell When "Scientifically-Based Reading Instruction" Isn't. *Thomas B. Fordham Institute*.
- Moats, L. C. (2009). Knowledge foundations for teaching reading and spelling. *Reading and Writing, 22*(4), 379-399.
- Moats, L. C. (1998). Teaching decoding. *American Educator, 22*(1), 42-49.
- Morris, D., & Gaffney, M. (2011). Building reading fluency in a learning-disabled middle school reader. *Journal of Adolescent & Adult Literacy, 54*(5), 331-341, DOI:110.1598/JAAL.54.5.3
- Morris, P. (1994). *The Bakhtin reader: Selected writings of Bakhtin, Medvedev and Voloshinov*. London: Arnold.
- Morrison, T. G., & Wilcox, B. (2020). Assessing expressive oral reading fluency. *Education Sciences, 10*(3), 59.
- Nagy, W., & Townsend, D. (2012). Words as tools: Learning academic vocabulary as language acquisition. *Reading Research Quarterly, 47*(1), 91-108.
- National Center for Education Statistics. (2019). *2019 NAEP Mathematics and reading assessments: Highlighted results at grades 4 and 8 for the nation, states, and districts*. <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020012>
- National Reading Panel Report. Washington, D.C. (2000). *National Institute for Child Health and Development*. Retrieved 7 4, 2018, from <https://www1.nichd.nih.gov/publications/pubs/nrp/Documents/report.pdf>
- O'Rourke, N., Hatcher, L., & Stepanski, E. J. (2005). *A step-by-step approach to using SAS for univariate & multivariate statistics*. SAS institute.
- Ohta, A. S. (1995). Applying sociocultural theory to an analysis of learner discourse: Learner-learner collaborative interaction in the zone of proximal development. *Issues in Applied Linguistics, 6*(2), 93-121.
- Oral Reading Accuracy. (2020). *mapnwea.org*. https://teach.mapnwea.org/impl/maphelp/Content/ReadFluency/InterpretiveTables.htm#Oral_Reading_Accuracy
- Paige, D. D., Rasinski, T., Magpuri-Lavell, T., & Smith, G. S. (2014). Interpreting the relationships among prosody, automaticity, accuracy, and silent reading comprehension in secondary students. *Journal of Literacy Research, 46*(2), 123-156.

- Paige, D. D., Rupley, W. H., Smith, G. S., Rasinski, T. V., Nichols, W., & Magpuri-Lavell, T. (2017). Is prosodic reading a strategy for comprehension? *Journal for Educational Research*, 9(2), 245-275.
- Paige, D. D. (2011). "That Sounded Good!": Using whole-class choral reading to improve fluency. *The Reading Teacher*, 64(6), 435-438, DOI:10.1598/RT.64.6.5
- Pearson, P. D. (2004). The Reading Wars. *Educational Policy*, 18(1), 216–252. <https://doi.org/10.1177/0895904803260041>
- Pearson, P. D. (2007). An historical analysis of the impact of educational research on policy and practice: Reading as an illustrative case. In *56th yearbook of the national reading conference* (pp. 14-40). Oak Creek, WI: National Reading Conference.
- Pearson, P. D., & Gallagher, G. (1983). The gradual release of responsibility model of instruction. *Contemporary Educational Psychology*, 8(3), 112-123.
- Perfetti, C., & Stafura, J. (2014). Word Knowledge in a Theory of Reading Comprehension. *Scientific Studies of Reading*, 18(1), 22-37, DOI: 10.1080/10888438.2013.827687
- Pikulski, J. J., & Chard, D. J. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher*, 58(6), 510-519.
- Pugh, K. R. (2017). Contributions from cognitive neuroscience to current understanding of reading acquisition and reading disability. *Developmental Perspectives in Written Language and Literacy: In honor of Ludo Verhoeven*, 29.
- Purcell-Gates, V. (2011). Epistemological tensions in reading research and a vision for the future. *Reading Research Quarterly*, 47(4), 465-471, DOI:10.1002/RRQ.031
- Rasinski, T. V. (2003). *The fluent reader*. New York: Scholastic.
- Rasinski, T. V. (2010). *The fluent reader: Oral & silent reading strategies for building fluency, word recognition & comprehension*. Scholastic.
- Rasinski, T. V., Chang, S.C., Edmondson, E., Nageldinger, J., Nigh, J., Remark, L., & Rupley, W. H. (2016). Reading fluency and college readiness. *Journal of Adolescent and Adult Literacy*, 60(4), 453-460.
- Rasinski, T. V., & Padak, N. (2005). 3-Minute Reading Assessments: Word Recognition, Fluency & Comprehension. Grades 5-8. *Education Review*.
- Rasinski, T. V., Padak, N. D., McKeon, C. A., Wilfong, L. G., Friedauer, J. A., & Heim, P. (2005). Is reading fluency a key for successful high school reading? *Journal of Adolescent & Adult Literacy*, 49(1), 22-27.
- Rasinski, T. V., Rikli, A., & Johnston, S. (2009). Reading fluency: More than automaticity? more than a concern for the primary grades? *Literacy Research and Instruction*, 48(4), 350-361. Retrieved from <https://search.proquest.com/docview/205336315?accountid=8361>

- Rasinski, T. V. (2017). Readers who struggle: Why many struggle and a modest proposal for improving their reading. *The Reading Teacher*, 70(5), 519-524, DOI:10.1002/trtr.0533
- Rasinski, T. V., & Cheesman-Smith, E. (2018). *The megabook of fluency: Strategies and texts to engage all readers*. New York: Scholastic.
- Rasinski, T. V., Reutzel, D., Chard, D., & Linan-Thompson, S. (2011). Reading Fluency. *Handbook of Reading Research*, 285-319. Taylor & Francis
- Riley, B. (2017). Drawing on reading science without starting a war. *Education Leadership*, 77(5), 16-22.
- Rosenblatt, L. M. (1978). *The reader, the text, the poem: The transactional theory of the literary work*. Southern Illinois University Press.
- Rosenblatt, L. M. (1995). *Literature as exploration*. Modern Language Association.
- Rupley, W. H., Blair, T. R., & Nichols, W. D. (2009). Effective reading instruction for struggling readers: The role of direct/explicit teaching. *Reading & Writing Quarterly*, 25(2-3), 125-138.
- Rupp, A. A., Ferne, T., & Choi, H. (2006). How assessing reading comprehension with multiple-choice questions shapes the construct: A cognitive processing perspective. *Language Testing*, 23(4), 441-474.
- Sabatini, J., Wang, Z., & O'Reilly, T. (2019). Relating reading comprehension to oral reading performance in the NAEP fourth-grade special study of oral reading. *Reading Research Quarterly*, 54(2), 253-271.
- Samuels, S. J. (1979). The method of repeated readings. *The Reading Teacher*, 32(4), 403-408.
- Samuels, S. J. (1994). Toward a theory of automatic information processing in reading, revisited. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading*, (p. 816-837). International Reading Association.
- Samuels, S., & Farstrup, A. E. (2006). *What research has to say about fluency instruction*. Newark: International Reading Association.
- Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for research in early literacy*, (pp. 97-110). New York, NY: Guilford Press.
- Schimmel, N., & Ness, M. (2017). The effects of oral and silent reading on reading comprehension. *Reading Psychology*, 38(4), 390-416.
- Schrauben, J. E. (2010). Prosody's contribution to fluency: An examination of the theory of automatic information processing. *Reading Psychology*, 31(1), 82-92.
- Schwanenflugel, P. J., Westmoreland, M. R., & Benjamin, R. G. (2015). Reading fluency skill and the prosodic marking of linguistic focus. *Reading and Writing*, 28(1), 9-30.

- Shafer, G. (1998). Whole language: Origins and practice. *Language Arts Journal of Michigan*, 14(1), 5.
- Shanahan, T. (2021, December 04). Teaching oral reading fluency to older students. *Shanahan on Literacy*. <https://www.shanahanonliteracy.com/blog/teaching-oral-reading-fluency-to-older-students#sthash.LW6XsNS1.VGZAxFHZ.dpbs>
- Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. *Cognition*, 55(2), 151-218.
- Share, D. L., Jorm, A. F., Maclean, R., & Matthews, R. (1984). Sources of individual differences in reading acquisition. *Journal of Educational Psychology*, 76(6), 1309.
- Singer, H., & Ruddell, R.B. (Eds.), *Theoretical Models and Processes of Reading* (2nd ed., pp. 497–508). Copyright 1976 by the International Reading Association. Originally published in *Journal of the Reading Specialist*, 1967, 6, 126–135.
- Slaughter, H. (1988). Indirect and Direct Teaching in a Whole Language Program. *The Reading Teacher*, 42(1), 30-34. Retrieved June 14, 2020, from www.jstor.org/stable/20199998
- Smagorinsky, P. (1995). The social construction of data: Methodological problems of investigating learning in the zone of proximal development. *Review of educational research*, 65(3), 191-212.
- Smagorinsky, P. (2013). What does Vygotsky provide to the 21st-century Language Arts teacher? *Language Arts*, 90(3), 192-204.
- Smith, F. (1999). Why systematic phonics and phonemic awareness instruction constitute an educational hazard. *Language Arts*, 77(2), 150-155. Retrieved from <https://search.proquest.com/docview/196849287?accountid=8361>
- Snedeker, J., & Trueswell, J. (2003). Using prosody to avoid ambiguity: Effects of speaker awareness and referential context. *Journal of Memory and Language*, 48, 103-130.
- Snedeker, J., & Yuan, S. (2008). Effects of prosodic and lexical constraints on parsing in young children (and adults). *Journal of Memory and Language*, 58, 574-608.
- Stahl, S. A., & Heubach, K. M. (2005). Fluency-oriented reading instruction. *Journal of literacy Research*, 37(1), 25-60.
- Stahl, S. A., McKenna, M. C., & Pagnucco, J. R. (1994). The effects of whole-language instruction: An update and a reappraisal. *Educational Psychologist*, 29(4), 175-185.
- Stallings, J. (1980). Allocated academic learning time revisited, or beyond time on task. *Educational Researcher*, 9(11), 11-16.
- Steinhauer, K., & Friederici, A. D. (2001). Prosodic boundaries, comma rules, and brain responses: The closure positive shift in ERPs as a universal marker for prosodic phrasing in listeners and readers. *Journal of Psycholinguistic Research*, 30(3), 267-295.

- Stetsenko, A. (2008). From relational ontology to transformative activist stance on development and learning: Expanding Vygotsky's (CHAT) project. *Cultural Studies of Science Education*, 3(2), 471-491. doi:10.1007/s11422-008-9111-3
- Stetsenko, A., & Vianna, E. (2009). Bridging developmental theory and educational practice: Lessons from the Vygotskian project. Barbarin, O. A., Wasik, B. H., & Wasik, B. H. (Eds.). (2009). *Handbook of child development and early education: Research to practice*. ProQuest Ebook Central <https://ebookcentral.proquest.com>
- Strauss, S. L., Goodman, K. S., & Paulson, E. J. (2009). Brain research and reading: How emerging concepts in neuroscience support a meaning construction view of the reading process. *Education Research and Review*, 4(2), 021-033
- Street, B. (2016). Learning to read from a social practice view: Ethnography, schooling and adult learning. *Prospects*, 46(3), 335-344.
- Thomas, P.L. (2020). *How to end the reading war and serve the literacy needs of all students: A primer for parents, policy makers, and people who care*. Information Age Publishing, Inc.: Charlotte
- Thompson, R. A. (1992). A critical perspective on whole language. *Reading Psychology: An International Quarterly*, 13(2), 131-155.
- Toth, P. D., & Davin, K. J. (2016). The sociocognitive imperative of L2 pedagogy. *The Modern Language Journal*, 100(S1), 148-168.
- U. S. Department of Education. (2015). *Every student succeeds act*. <https://www.ed.gov/essa?src=rn>
- U. S. Department of Education. (2019). *A guide to the individualized education program*. <https://www2.ed.gov/parents/needs/spced/iepguide/index.html>
- U. S. Department of Education. (2020). *Protecting students with disabilities*. <https://www2.ed.gov/about/offices/list/ocr/504faq.html>
- Unrau, N. J., Alvermann, D. E., & Sailors, M. (2013). Literacies and their investigation through theories and models. *Theoretical models and processes of reading*, 6, 47-90.
- van den Broek, P., & Espin, C. A. (2012). Connecting cognitive theory and assessment: Measuring individual differences in reading comprehension. *School Psychology Review*, 41(3), 315-325.
- Van Wig, A. (2016). *Reading with ease: The impact of an oral reading fluency intervention with adolescent struggling readers*, (Order No. 10194119). Available from ProQuest Central; ProQuest Dissertations & Theses Global. (1937915857). Retrieved from <https://search.proquest.com/docview/1937915857?accountid=8361>

- Vianna, E., & Stetsenko, A. (2006). Embracing history through transforming it: Contrasting Piagetian versus Vygotskian (activity) theories of learning and development to expand constructivism within a dialectical view of history. *Theory & Psychology*, 16(1), 81-108.
- Vianna, E., & Stetsenko, A. (2011). Connecting learning and identity development through a transformative activist stance: Application in adolescent development in a child welfare program. *Human Development*, 54(5), 313-338. doi:10.1159/000331484
- Vygotsky, L. S. (1962). *Thought and language*. M.I.T. Press, Massachusetts Institute of Technology.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.
- Wanzek, J., Vaughn, S., Scammacca, N. K., Metz, K., Murray, C. S., Roberts, G., & Danielson, L. (2013). Extensive reading interventions for students with reading difficulties after grade 3. *Review of Educational Research*, 83(2), 163-195.
- Webman-Shafran, R. (2018). Implicit prosody and parsing in silent reading. *Journal of Research in Reading*, 41(3), 546-563.
- Weir, C., & Khalifa, H. (2008). A cognitive processing approach towards defining reading comprehension. *Cambridge ESOL: Research Notes*, 31, 2-10.
- Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge: Harvard University Press.
- Wessel-Powell, C., Buchholz, B. A., Rust, J., Husbye, H. E., & Vander Zanden, S. (2020). The promise of slow reading. *Educational Leadership*, 77(5), 32-37
- Weston, J., Lenain, R., Meepegama, U., & Fristed, E. (2021, July). Learning de-identified representations of prosody from raw audio. In *International Conference on Machine Learning*, (pp. 11134-11145). PMLR.
- Wexler, J., Vaughn, S., Edmonds, M., & Reutebuch, C. K. (2008). A synthesis of fluency interventions for secondary struggling readers. *Reading and Writing*, 21(4), 317-347.
- Wexler, N. (2019). *The knowledge gap: The hidden cause of America's broken education system-and how to fix it*. Avery: New York.
- Whalley, K., & Hansen, J. (2006). The role of prosodic sensitivity in children's reading development. *Journal of Research in Reading*, 29(3), 288-303.
- White, S., Sabatini, J., Park, B. J., Chen, J., Bernstein, J., & Li, M. (2021). Highlights of the 2018 NAEP Oral Reading Fluency Study. NCES 2021-026. *National Center for Education Statistics*.
- William, C.; Tong, X., & Cain, K. (2016). Lexical prosody beyond first-language boundary: Chinese lexical tone sensitivity predicts English reading comprehension. *Journal of Experimental Child Psychology*, 148, 70-86.

- Willingham, D. T., Rotherham, A. J. (2020). Education's research problem. *Educational Leadership*, 77(8), 70-75.
- Wolters, A. P., Kim, Y. S. G., & Szura, J. W. (2020). Is reading prosody related to reading comprehension? A meta-analysis. *Scientific Studies of Reading*, 1-20.
- Wuensch, K. (2017). Effect Size Estimates for One-Way Repeated Measures ANOVA. *StuDoc*. East Carolina University. <https://www.studocu.com/en-us/document/east-carolina-university/psychological-statistics/effect-size-estimates-for-one-way-repeated-measures-anova/1068435>
- Zhang, Y., Frassinelli, D., Tuomainen, J., Skipper, J. I., & Vigliocco, G. (2021). More than words: Word predictability, prosody, gesture and mouth movements in natural language comprehension. *Proceedings of the Royal Society B*, 288(1955), 20210500.
- Zhao, Y. (2017). What works may hurt: Side effects in education. *Journal of Educational Change*, 18. <https://doi.org/10.1007/s10833-016-9294-4>
- Zimmerman, B. S., Rasinski, T. V., Was, C. A., Rawson, K. A., Dunlosky, J., Kruse, S. D., & Nikbakht, E. (2019). Enhancing outcomes for struggling readers: Empirical analysis of the fluency development lesson. *Reading Psychology*, 40(1), 70-94.

Appendices

Appendix A: IRB Approval 1/07/2021



To: Judy Lynn Fields
From: Douglas J Adams, ChairIRB
Expedited Review
Date: 01/07/2021
Action: **Expedited Approval**
Action Date: 01/07/2021
Protocol #: 2011301410
Study Title: The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension
Expiration Date: 12/17/2021
Last Approval Date:

The above-referenced protocol has been approved following expedited review by the IRB Committee that oversees research with human subjects.

If the research involves collaboration with another institution then the research cannot commence until the Committee receives written notification of approval from the collaborating institution's IRB.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date.

Protocols are approved for a maximum period of one year. You may not continue any research activity beyond the expiration date without Committee approval. Please submit continuation requests early enough to allow sufficient time for review. Failure to receive approval for continuation before the expiration date will result in the automatic suspension of the approval of this protocol. Information collected following suspension is unapproved research and cannot be reported or published as research data. If you do not wish continued approval, please notify the Committee of the study closure.

Adverse Events: Any serious or unexpected adverse event must be reported to the IRB Committee within 48 hours. All other adverse events should be reported within 10 working days.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, study personnel, or number of participants, please submit an amendment to the IRB. All changes must be approved by the IRB Committee before they can be initiated.

You must maintain a research file for at least 3 years after completion of the study. This file should include all correspondence with the IRB Committee, original signed consent forms, and study data.

cc: Vicki S Collet, Investigator

Appendix B: IRB Approval 12/18/2021



To: Judy Lynn Fields
From: Justin R Chimka, Chair
IRB Expedited Review
Date: 12/06/2021

● **Action: Expedited Approval**

Action Date: 11/22/2021
Protocol #: 2011301410R001
Study Title: The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension
Expiration Date: 12/17/2022
Last Approval Date: 12/18/2021

The above-referenced protocol has been approved following expedited review by the IRB Committee that oversees research with human subjects.

If the research involves collaboration with another institution then the research cannot commence until the Committee receives written notification of approval from the collaborating institution's IRB.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date.

Protocols are approved for a maximum period of one year. You may not continue any research activity beyond the expiration date without Committee approval. Please submit continuation requests early enough to allow sufficient time for review. Failure to receive approval for continuation before the expiration date will result in the automatic suspension of the approval of this protocol. Information collected following suspension is unapproved research and cannot be reported or published as research data. If you do not wish continued approval, please notify the Committee of the study closure.

Adverse Events: Any serious or unexpected adverse event must be reported to the IRB Committee within 48 hours. All other adverse events should be reported within 10 working days.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, study personnel, or number of participants, please submit an amendment to the IRB. All changes must be approved by the IRB Committee before they can be initiated.

You must maintain a research file for at least 3 years after completion of the study. This file should include all correspondence with the IRB Committee, original signed consent forms, and study data.

cc: Vicki S Collet, Investigator

Appendix C: Internal Review Board Consent Letters: Adult/Teacher, Child/Parent, and Administrator

Adult/Teacher Consent

The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension

Consent to Participate in a Research Study

Principal Researcher: Judy Fields

Faculty Advisor: Dr. Vicki Collet

Invitation to Participate

You are invited to participate in a research study about the impact of prosodic reading instruction adolescents' silent reading comprehension performance as measured on standardized assessments. You are being asked to participate in this study because you have indicated an interest in participation.

What You Should Know about the Research Study

Who is the Principal Researcher?

Judy Fields is the principal researcher and may be reached at jlf017@uark.edu or 479-216-4268.

Who is the Faculty Advisor?

Dr. Vicki Collet is my faculty advisor and may be reach at collet@uark.edu or 479-575-2224.

What is the purpose of this research study?

The purpose of this study is to determine the effect of prosodic reading instruction on adolescents' silent reading comprehension scores on standardized measures.

Who will participate in this study?

The teacher participants in this study may range from novice to master teacher. The student participants will range in age from eleven to eighteen. **Since the researcher is awaiting response from volunteers, the number of participants is unknown.**

What am I being asked to do?

Your participation will require the following:

1. Attend a one-hour training session either virtually or in person to learn how to deliver a lesson that focuses on prosodic reading instruction.
2. Keep a log of minutes of instruction in prosodic reading.

3. Allow the researcher to observe at least one lesson per week to ensure fidelity.

What are the possible risks or discomforts?

There are no possible risks or discomforts associated with this study.

What are the possible benefits of this study?

A possible benefit of this study is that you will learn a method of instruction to support adolescents' silent reading comprehension.

How long will the study last?

The study is expected to last for nine weeks, during which time you will follow your regular schedule of instruction including any intervention periods that you may have.

Will I receive compensation for my time and inconvenience if I choose to participate in this study?

There is no stipend associated with participation in this study, but you may be allowed release time as approved by your administrator.

Will I have to pay for anything?

There is no cost to you for participating in this study.

What are the options if I do not want to be in the study?

If you do not want to be in this study, you may refuse to participate. Also, you may refuse to participate at any time during the study. Your job or your relationship with the University, the researcher, the advisor, or your administrator will not be affected in any way if you refuse to participate.

Informed Consent

I, _____, adult/teacher _____,

have read the description and purpose of the study, the procedures to be used, the potential risks, the confidentiality, as well as the option to withdraw from the study at any time. My signature below indicates that I understand what is involved and agree to allow the those named above to conduct/participate in this study in our school.

Signature

Date

Child/Parent Consent

The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension

Consent to Participate in a Research Study

Principal Researcher: Judy Fields

Faculty Advisor: Dr. Vicki Collet

You are being asked to give permission for your child to participate in a research study. Before you give permission for your child to participate, it is important that you read the following information and ask as many questions as necessary to be sure you understand what your child is being asked to do.

Investigators

My name is Judy Fields. I am a graduate student in the Curriculum and Instruction Department at the University of Arkansas. My advisor is Dr. Vicki Collet.

Purpose of the Research

This research study is designed to find out the impact of prosodic instruction on adolescents' silent reading comprehension scores on standardized reading assessments.

The data from this research will be used to inform evidenced based teaching practices.

Procedures

Your child's participation will take approximately nine weeks of classroom-based instruction or intervention delivered by a certified teacher trained in the instructional procedure. The duration of instructional time will range from twenty to forty-five minutes per class period depending on the school's schedule. Instruction may occur each day or two to four times per week.

Your child will be asked to assent to participate in this research. He/she can refuse to participate without penalty or can stop participation at any time just by telling the investigator that he/she wants to stop.

Potential Risks or Discomforts

There are no apparent risks involved in participating.

Potential Benefits of the Research

Participation in the research has the potential to enhance students' silent reading comprehension performance on standardized tests.

Confidentiality and Data Storage

Your child’s name will only be collected on this permission form and will not be connected to any performance data in any way. In addition, your child’s teacher and school district will be kept confidential to the extent allowed by law and University policy.

Data base information containing student performance will be maintained specifically by the investigator.

Participation and Withdrawal

Participation in this research study is voluntary. You may refuse to allow your child to participate without penalty to you or your child. If you decide to allow your child to participate, you are free to stop his/her participation without penalty by just telling the investigator. In addition, your child may stop participating by telling the investigator that he/she wants to stop.

You cannot withdraw from the study after data collection has been completed since your name is not linked to the data.

Questions about the Research

If you have any questions about the research, please ask them now. If you have questions later, you may contact Dr. Vicki Collet or Judy Fields.

This research project has been reviewed and approved by the Institutional Review Board for the Protection of Human Subjects at The University Arkansas. If you have any questions or concerns about your child’s rights as a research subject, you may contact the University’s Compliance Coordinator at (479) 575-3845.

Child’s Permission:

I have discussed this study with my parent and guardian and agree to participate in the study.

Signature of Participant

Parent or Legal Guardian Permission:

I have read the information provided above. I agree to let my child participate in this research study. I also understand my child’s assent to participate in this study will be sought. Please return one copy of this consent form and keep one copy for your records.

Name of Child (please print)

Signature of Parent/Legal Guardian

Date

Signature of Investigator

Date

Administrator Consent

Title: *The Impact of Prosodic Reading Instruction on Adolescents' Silent Reading Comprehension*

Investigator(s): Judy Fields, Principal Researcher

University of Arkansas

College of Education and Health Professions

Department of Curriculum and Instruction

Fayetteville, AR 72701-1201

Dear _____,

I am submitting to you a description of a study I would like to conduct in your school because teacher(s) have volunteered to participate in this study.

I will follow all district and building social distancing requirements and other guidelines for student and teacher contact.

I am very mindful teachers' time and will work to accommodate them any way possible so as not to interfere with current schedules.

Description

The purpose of this study is to determine the impact of prosodic reading instruction on adolescents' silent reading comprehension scores as measured on standardized reading assessments. In order to assess the impact, pre- and post-treatment scores on standardized measures are necessary as well as pre-and post-prosodic reading scores. After a nine-week instructional period, after all data is gathered, it will be statistically analyzed to determine impact. It is my hope that this study will provide teachers with a practical tool for increasing adolescents' reading comprehension scores on standardized assessments.

I project an eleven-week timeline that includes nine weeks of instruction and two weeks of pre- and post-data collection to occur during the third quarter of 2020-2021 academic year. One week will be needed to gather pre-assessment data and train teachers, nine weeks will be needed to implement prosodic reading instruction, and one week will be needed to gather post-assessment data. In order for teacher(s) and students to participate, I would like to request the following support from you:

- One hour of released time for teachers to be trained in prosodic reading instruction (virtually or in person)
- Mid-year reading comprehension scores for student participants (pre-assessment for silent reading)
- Space for researcher to conduct one-minute prosodic reading pre-assessment of student participants
- Teachers record minutes of prosodic reading instruction
- Weekly observation by researcher (virtual or in person) of prosodic reading instruction for fidelity check (nine weeks)
- Post-assessment of silent reading comprehension on standardized measure of participating students
- Post-assessment of prosodic reading scores of participating students

Risks and Benefits

A benefit of participation is to contribute to the knowledge base of evidenced-based strategies for increasing adolescents’ silent reading comprehension. There are no anticipated risks to anyone participating in the study.

Voluntary Participation

Your participation in the research is completely voluntary. Failure to participate or discontinue with the study will not affect your standing with the University of Arkansas in any way. There are no stipends or academic credits for participating.

Confidentiality

All information will be entered into an electronic spreadsheet to track student performance. Only the researcher will know participants’ names and identification numbers, but this information will be deleted before statistical analysis. All information will be held in the strictest of confidence.

Right to Withdraw

You are free to refuse to participate in the research and to withdraw from this study at any time. Your decision to withdraw will bring no negative consequences to you, teachers, or students.

Informed Consent

I, _____, principal of _____,

have read the description and purpose of the study, the procedures to be used, the potential risks, the confidentiality, as well as the option to withdraw from the study at any time. My signature below indicates that I understand what is involved and agree to allow the those named above to conduct/participate in this study in our school.

Signature _____ Date _____

Appendix D: Survey for Inviting Participants

Invitation to Participate in Adolescent Reading Comprehension Study

The goal of this study is to examine and implement a method of reading instruction to determine its effect on silent reading comprehension scores on standardized reading assessments among adolescents. The purpose of this survey is to create a group of teacher volunteers and students who are interested in increasing adolescents' silent reading comprehension scores on standardized assessments. No additional curriculum, time, or expense will incur. The body of volunteers will be participants in dissertation research that ensures anonymity of districts, teachers, and students. To participate, informed consent documents will be distributed to building administrators, teacher participants, and parent/student participants. The study is expected to commence in early January 2021.

* Required

Email address * _____

1. Are you interested in participating in this study with the researcher and your students? If you do not wish to participate in the study, simply exit the survey.

Mark only one oval.

Yes

2. Which standardized reading assessment does your district/building administer for silent reading comprehension? Please select only one option. * *Mark only one oval.*

NWEA

MAP

STAR

iStation

Other:

3. Is your district/building willing to release standardized reading assessment scores with the assurance of anonymity?

Mark only one oval.

Yes

No

4. Please select your content area. Choose all that apply. *

Check all that apply.

English Language Arts

Social Studies

Mathematics

Science

Art

Physical Education

Fine Arts

CTE

Other: _____

5. To which grade levels are you currently assigned? Please check all that apply. *

Check all that apply.

Grade 5

Grade 6

Grade 7

Grade 8

Grade 9

Grade 10

Grade 11

Grade 12

Reading Intervention Classes

Dyslexia Intervention Classes

Advanced Placement, IB, or Honors classes

Other: _____

6. Please choose the option that best describes your teaching environment. *

Mark only one oval.

- Virtual
- Face-to-
- Face
- Blended
- Virtual and face-to-face at the same time

Other:

7. Are you willing to participate in a virtual or in-person one-hour training to support this study? *

Mark only one oval.

- Yes
- No

8. If the answer to the previous question is "no," would you be willing to participate if release time is provided by your district? *

Mark only one oval.

- Yes
- No

9. Are you willing to allow the researcher to observe in your classroom setting (virtual, blended, face-to-face) to provide support and feedback regarding implementation of the reading comprehension strategy? * *Mark only one oval.*

- Yes
-

No

10. Are you willing to allow the researcher to contact you via the email address you provided regarding training and participation? * *Mark only one oval.*

Yes

No

11. If you wish to participate in all aspects of this study, please provide the name and email contact of your building administrator. *

This content is neither created nor endorsed by Google.

Google Forms

Appendix E: Oral Reading Fluency Probes and Score Sheets

8th Grade Pretest Probe

Antarctica

Antarctica is the last unspoiled place on Earth, our last frontier. When I have a busy day or am stuck in traffic, knowing Antarctica exists makes me more confident about the future of our natural places. I imagine the sheets of ice, the crunch of snow under foot. I think of the light blue of the sky and the darker blue of the encircling ocean. Lately, though, that vision of Antarctica has changed because of things my sister has told me. Knowledge is a good thing, but it changes how we think about a place.

My sister, Elizabeth, works in Brazil, studying the environmental plans of Brazilian cities. She knows a lot about many different places because of her degree in environmental science. One day, while she was visiting, she told me there may be species of plants and animals in Antarctica that biologists have yet to discover.

“Antarctica has violent hundred-mile-long snowstorms. It also has one of only three permanent lakes of lava in the world,” she told me. “And in the deep waters, it’s almost like another planet. We just don’t know that much about it yet.”

My sister’s comments made me want to find out more. She sent me books on the subject. I discovered some interesting facts. More than 270 million years ago, Antarctica wasn’t a sheet of ice. It was a wilderness of forest and marsh, part of the giant continent of Gondwana. And Antarctica’s unspoiled condition isn’t just because it is located at the “bottom” of the world. Antarctica wasn’t even discovered until 1838. Before British and Russian explorers mapped the area, people thought it was a group of islands. Early maps look silly now.

In the twentieth century, British, Australian, and Norwegian explorers tried to discover more about this remote place. Just the tales of Antarctic adventure would fill a

book, starting with the miraculous expedition of Sir Ernest Shackleton in 1915. Shackleton’s ship, the Endurance, became trapped in ice far from home base. Shackleton somehow led his crew 800 miles to safety, without losing a single man. It’s hard to imagine how those early explorers felt, walking where no human being had ever been before. It must have been both exciting and frightening.

8th Grade Pretest Score Sheet

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Words Attempted _____
Errors _____
Words Read Correctly _____

Diamonds

Diamonds, perhaps the most desired of jewels, have several unique properties. They are the hardest substance in the world, one of the most beautiful, and also, one of the most expensive. Some even think they are the most romantic.

People have called them “splinters from fallen stars,” and “tears from the gods.” One cannot deny that diamonds have a strong allure. However, we now know how the Earth forms diamonds and even how to produce human-made diamonds. So why are they still so expensive?

The Diamond Supply Will Run Out

Some experts believe that the Earth no longer makes diamonds. I once believed that diamonds were just compressed carbon, but it turns out that the diamond making process is much more complicated.

First, carbon does not just have to be pressed under a few rocks. It must endure extreme pressure (50,000 times atmospheric pressure) about 124 miles underground. The pressure and heat make the black, dusty carbon change into the bright, clear crystal we call diamond. After their formation, diamonds come to Earth’s surface when volcanoes erupt.

All these steps require perfect timing and unusual circumstances. A few experts think that these unusual circumstances happened only three times in Earth’s history: 3.3 billion years ago, 2.9 billion years ago, and 1.2 billion years ago. These same experts believe that the Earth no longer has the capability to make diamonds. Steve Shirley, a geologist, has said, “Something was different then. Perhaps the planet was hotter on the inside, or the composition of rocks was subtly different. Whatever it was, it has changed now. Diamond formation was chiefly a feature of the Earth’s youth.”

The Diamond Monopoly

A journalist and author, Edward Jay Epstein, thinks that the price of diamonds does not have much to do with their rarity. In his book *The Rise and Fall of Diamonds*, he describes the hidden story of diamond prices. He believes that there are lots of diamonds—so many that diamonds should be much cheaper.

8th Grade Post-test Score Sheet

Diamonds	
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Words Attempted _____
Errors _____
Words Read Correctly _____

Blight on the Hill

It was high noon on a brusque October day, sunshine flooding the Earth with warmth and light. A gray horse and two large mules, a man and two young girls rode quietly, single-file, through the water worn crevasse etched into the Cumberland Mountains. Riding the gray horse, I led the arduous way. Following after, riding mule-back, came my small sister, and after her, riding mule-back as well, rode the Blight—dressed as she would be for a gallop in Central Park, or as though riding a mount in a horse show.

I was taking them, as promised, to a place where only the feet of experienced mountaineer women and men had ever trod. We were headed beyond the crest of the Big Black, to the waters of the Cumberland—the lair of moonshiner and feudsman. Here was housed a culture that only still existed in this secluded mountainous region. This had been a pet dream of the Blight's for a long time, and now, finally, the dream was coming to fruition. The Blight was in the hills.

Nobody ever went to her mother's house without asking to see her, even when she was a little thing with raven black hair, smiling face, and jet black eyes. Both men and women, with children of their own, have said that she was, perhaps, the most captivating child that ever lived. There are those that claim that she has never changed—and I am among them. That's how it was in her world and how it was when she came to mine. On the way down from the North, the conductor's voice changed from a command to a request upon asking for her ticket. The jacketed lord of the dining-car saw her from a distance and proceeded to show her to a most desirable seat allowing her to face forward, next to a spotted casement in order to be free from the glare of the sun on the other side.

9th Grade Pretest Score Sheet

Blight on the Hill

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desirable seat allowing her to face forward, next to a spotted casement in order to be 320
free from the glare of the sun on the other side. 331

Words Attempted _____
Errors _____
Words Read Correctly _____

9th Grade Post-test Probe

Space Shuttle Launch

Most of us, who live in Florida, live near enough to go and watch a Space Shuttle
Launch at least once in our lives. Last year, we decided to take the Shuttle Launch
Experience (which is a simulated shuttle take off); it was awesome because it coincided with
the launch of the space shuttle Discovery.

The journey began as we entered a gantry styled walkway into a building inspired by

Space Shuttle processing facilities at Kennedy Space Center. We listened to astronauts' testimonials of their experiences on launch, landing and space flight (which were fascinating). This set the stage for what was to come. Next was a technical explanation of the steps of a Space Shuttle launch. Dramatic sound and lighting effects, rumbling floors, and fog dramatized the moments before launch. We boarded the mock Space Shuttle and strapped in for launch (inside the unique motion simulator) which brought the launch to life by replicating the sights, sounds, G- forces, and rattle of lift off. The sensations of launch continued as we experienced Max Q. Max Q is the zone where enormous forces squeeze the Shuttle, the Solid Rocket Booster separates, the main engine cuts off, and the External Tank separates. It was an incredible experience.

After our mock launch we got to watch the real thing. The weather was perfect; it was a scheduled early evening launch. The sky was reddening on the horizon when the countdown began. After the Shuttle Launch Experience, I will never view a launch in the same way again. We felt as though we had first-hand knowledge of what the astronauts were going through having heard their testimonies and having experienced a mock launch. Take off was outstanding! The brilliant light emitted by the two solid rocket boosters was painfully bright and visible for 2 minutes. Discovery was a go! The shuttle lifted up straight into the air; after a few minutes it seemed to flicker and then abruptly winked out just 8 minutes and 23 seconds after launch. During those few minutes the main engines shut down and the huge, external tank was jettisoned over the Atlantic. At that moment, Discovery had risen to an altitude of 341,600 feet (64.7 miles), while moving at nearly 17,000 mph.

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Words Attempted _____
Errors _____
Words Read Correctly _____

10th Grade Pretest Probe

Aesop's Fables

Aesop's fables have long been used to teach children lessons about moral living. A fable is a form of storytelling that usually features animals behaving like humans. The

purpose of the fable is to teach a lesson about a human weakness or folly. To reinforce this lesson, fables usually include a moral at the end of the tale. In addition to teaching a lesson, fables offer a satirical look at human beings and their behaviors. A fable is closely related to allegory in that characters often have no individual personality, but embody certain stereotypical qualities. For example, a fox is sly or crafty; a crow is loud or brazen.

Notice that in this version of the fables, the animal's names are capitalized. This convention is in keeping with the notion that the animals are the principal characters.

The Hares and the Frogs

The Hares were so persecuted by the other beasts, they did not know where to go. As soon as they saw a single animal approach them, off they used to run. One day they saw a troop of wild Horses stampeding about, and in quite a panic all the Hares scuttled off to a lake near by, determined to drown themselves rather than live in such a continual state of fear. But just as they got near the bank of the lake, a troop of Frogs, frightened in their turn by the approach of the Hares scuttled off and jumped into the water. "Truly," said one of the Hares, "things are not so bad as they seem."

"There is always someone worse off than yourself."

The Shepherd Boy

Once a Shepherd Boy tended his sheep at the foot of a mountain near a forest. It was rather lonely for him all day, so he thought up a plan by which he could have company and some excitement. He ran towards the village calling out "Wolf, Wolf," and the villagers came to meet him. Some stayed with him for a considerable time. This pleased the boy so much that a few days later he tried the same trick, and again the villagers came to help.

10th Grade Pretest Score Sheet

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Words Attempted _____
Errors _____
Words Read Correctly _____

10th Grade Post-test Probe

The Study of Paleontology

Paleontology is the study of ancient and prehistoric life here on earth. Its purpose is to investigate plant and animal species evolution, as well as ancient ecosystems and the earth's climate.

Paleontology is a branch of geology which is the study of physical nature. It is also

concerned with living things. Most people associate Paleontology with the study of Dinosaurs and fossils. Thanks to movies such as Jurassic Park; paleontology has a wide following. Paleontologists use the fossils of organisms to give them some idea of the conditions on earth during that organism's lifetime. Changes in the fossils of particular species of organisms help answer questions about the evolution of the species. Most fossils are embedded in various types of rock formations; therefore, paleontology is a 'sub-science' of geology and the two are closely related.

Paleontologists not only get their information from looking at fossils, but also from their composition, placement and any surrounding preserved environment.

Paleontology is also very useful in the mining industry. It is critical to determine the age of geological formations. Paleontology helps because of its systematic approach to the dating of fossils. A paleontologist can determine the age of the rock, as opposed to the miner going solely on the rock's physical properties.

Paleontology is invaluable in our understanding of the environment and climate cycles that naturally exist on earth, which contributes to our understanding of where we humans fit into the current environmental crisis. More importantly, the earth has gone through various cycles of warming and cooling; paleontology gives us insight as to how organisms responded; whether they adapted or perished. Although we humans blame ourselves for the 'greenhouse effect,' global warming and other environmental problems that we are experiencing; paleontology provides evidence that there were similar environmental happenings on our planet long before we had a chance to destroy the environment with our cars and other pollutants! This gives us invaluable insight into possible solutions to prevent or slow further damage. It also is at least an acknowledgement that the earth itself has cycles which need to be taken into consideration.

10th Grade Post-test Score Sheet

The Study of Paleontology

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possible solutions to prevent or slow further damage. It also is at least an acknowledgement that the	337
earth itself has cycles which need to be taken into consideration.	348

Words Attempted _____
Errors _____
Words Read Correctly _____

Appendix F: Permission Letter from Dr. Timothy Rasinski to Use EARS Rubric

From: Rasinski, Tim <trasinsk@kent.edu>
Sent: Tuesday, February 23, 2021 7:28:53 AM
To: Judy Fields <jlf017@uark.edu>
Subject: RE: EARS Fluency Rubric Request for Dissertation

Hi Judy – thanks for your note and your kind words. Yes, absolutely you have my permission to use the EARS rubric. The only concern is that there is no reliability information on it. You might want to have 2 raters for each rating to see how reliable they are with one another.

Another possibility is to use my attached multidimensional rubric - -the EARS rubric is based on it. There is actually a fair amount of research to support it. Of course, you can infer that the EARS is reliable since it is based on the Multidimensional scale. I've attached a supporting article. Hope that makes sense. In either case, you are welcome to use either scale and have my permission to do so.

One more thing – I would love see the results of your study – it sounds like a really good one. And, if you would like, would love to have you write a short article on my blog about your study.

Good luck with your study. PLEASE stay in touch.
Best
tim

Timothy Rasinski, Ph.D.
Professor of Literacy Education
Rebecca Tolle and Burton W. Gorman Chair in Educational Leadership
Kent State University

Appendix G: Fluency Development Lesson Model

The Fluency Development Lesson (Kuhn, M., Rasinski, T., & Zimmerman, B., 2014)

Goal: Read new text accurately, fluently, and with good comprehension each day

Steps:

1. Teacher reintroduces previous day's text; students read or perform
2. Teacher Read Aloud of new text
3. Class discussion for content and teacher fluency
4. Several choral readings (use variations)
5. Partner or trio re-reading multiple times
6. Individuals or groups perform for the class
7. Word harvesting or word study

Teacher led: 5-10 minutes

- a. word games
 - b. vowels, syllables, parts of speech, word families, roots
 - c. Cloze sentences/passages
 - d. Create word derivations
8. Students practice passage at home
 9. Instructional routine repeats the following day (steps 1 & 2)

Appendix H: Teacher Training for the Fluency Development Lesson

Slide 1

Training in Prosodic Reading Instruction

Judy Fields, Ed.S.

University of Arkansas

Doctoral Dissertation Research

Slide 2

Goal of the Research Study

Determine the effect of prosodic reading instruction on standardized assessments of reading comprehension.

Slide 3

What is Prosody?

- “*Prosody* is a linguistic term that describes the rhythmic and tonal aspects of speech: the ‘music’ of oral language” (Samuels & Farstrup, 2006).
- Prosodic reading involves oral reading that sounds like the spoken word.

Slide 4

What is prosodic reading instruction?

- *Prosodic reading instruction may include imitative repetition of a text read aloud that mimics natural speech* (Henry, N. & Jackson, C. N., 2017; Kuhn, M. R.; Schwanenflugel, P. J.; Meisinger, E. B., 2010; Miller, J. & Schwanenflugel, P. J., 2008; National Reading Panel Report, 2000).
- *Imitation of text read aloud and orally repeated scaffolds students’ encounters with unfamiliar and/or complex text. Students are more likely to achieve comprehension if they are familiar with language structures in the text when they know how it is “supposed” to sound* (Breen, M., Kaswer, L., Van Dyke, J., Krivokapic, J., Landi, N., 2016; Gross, J., Winegard, B. & Plotkowski, A.R., 2017).

Slide 5

Introduction to Fluency Oriented Reading Instruction (FORI)

- Teacher-modeled read aloud of text
- Students imitate the teacher
- Students practice the modeled reading
- Students read aloud the text independently

(Kuhn, Zimmerman, Rasinski, 2014)

Slide 6

Fluency Oriented Reading Instruction (FORI)

- One text over a five-day period

Wide Fluency Oriented Reading Instruction (WideFORI)

- Three texts over a five-day period

Fluency Development Lesson (FDL)

- One day
- Lesson-specific

(Kuhn, Zimmerman, Rasinski, 2014)

Slide 7

Basic 5-Day FORI Procedure (1 text)

Day 1

- Teacher Read Aloud
 - Pre-teaching may include building background knowledge, pre-teaching vocabulary, brainstorming, text structure, predicting
- Students follow along with copy of text
- Discussion of the text for comprehension

Day 2

- Echo Reading
- Teacher reads two-three sentences; students repeat
- Teacher intersperses questions for comprehension
- Teacher assigns activities to accompany the text
- At-home practice

Day 3

- Choral Reading

Day 4

- Partner Reading
 - Page by page

Day 5

- Extension Activities
- Written responses
- Extended Discussion
- Self-Directed Projects

Slide 8

Basic WideFORI Procedure (3 texts)

Days 1 & 2

- Follow Basic FORI with primary text

Day 3

- Extension Activities
 - Written responses, alternative endings, extended discussion

Days 4 & 5

- Echo reading and discussing second and third texts with students
 - “Close reading”
 - All three texts should be sent home for practice

Slide 9

Fluency Development Lesson

Goal: Read new text accurately, fluently, and with good comprehension each day

Steps:

1. Teacher reintroduces previous day's text; students read or perform
2. Teacher Read Aloud of new text
3. Class discussion for content and teacher fluency
4. Several choral readings (use variations)
5. Partner or trio re-reading multiple times
6. Individuals or groups perform for the class
7. Word harvesting or word study

Teacher led: 5-10 minutes

- a. word games
 - b. vowels, syllables, parts of speech, word families, roots
 - c. Cloze sentences/passages
 - d. Create word derivations
8. Students practice passage at home
 9. Instructional routine repeats the following day (steps 1 & 2)

Slide 10

Sample Lesson: Teacher Read Aloud

“We had to leave the flat on Loomis quick. The water pipes broke and the landlord wouldn't fix them because the house was too old. We had to leave fast. We were using the washroom next door and carrying water over in empty milk gallons. That's why Mama and Papa looked for a house, and that's why we moved into the house on Mango Street, far away, on the other side of town.” --*The House on Mango Street*, Sandra Cisneros, 1954

Slide 11

Teacher Model

“We had to leave the flat on Loomis/quick. The water pipes broke/and the landlord wouldn't fix them/because the house was/too old.//We had/ to leave fast.//We were using the washroom/ next door/and carrying water/over in empty milk gallons.//That's why Mama and Papa looked/for a house,//and that's/why we moved into the house/on Mango Street,//far away,//on the other side/of town.”--*The House on Mango Street*, Sandra Cisneros, 1954

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Parsing & Rehearsing Example

“We had to leave the flat on Loomis/quick [Echo].//The water pipes broke/and the landlord wouldn't fix them/because the house was/too old.//[Echo] We had/ to leave fast.//[Echo]

We were using the washroom/next door/and carrying water over/in empty milk gallons.// [Echo]

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Parsing & Rehearsing Example

“We had to leave the flat on Loomis/quick. The water pipes broke/and the landlord wouldn’t fix them/because the house was/too old.//We had/ to leave fast.//We were using the washroom/ next door/and carrying water over/in empty milk gallons.//That’s why Mama and Papa looked/for a house,//and that’s/why we moved into the house/on Mango Street,//far away,//on the other side/of town.”--*The House on Mango Street*, Sandra Cisneros, 1954

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What am I asking of you?

- Implement prosodic reading instruction with at least one class whether virtual, in-person, blended, or intervention.
- Collect student/parent consent forms.
- Provide me with pre- and post-standardized assessment scores.
- Allow me to conduct both pre- and post-prosodic reading assessments.
- Allow me to observe your instruction once a week
- Record weekly minutes of prosodic reading instruction with each class you have chosen.

Slide 15

Data and Instruction

- You may submit data for all students you select.
- You may use prosodic reading instruction in a class even with students who have not returned a consent form.
- I will determine which students’ data may be used for this study.

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Timeline

- Begin prosodic reading instruction on February 1, 2021.
- Distribute student/parent consent forms.
 - Begin collection of parent/student consent.
 - Submit all student/parent forms to me.
 - Submit pre-test scores to me.
 - Your latest standardized assessment scores
- Enter weekly minutes of instruction for 9-12 weeks.
 - Submit post-test scores to me.

Appendix I: SAS Codes

RMANOVA procedure for treatment effect

```
proc glm DATA=jf; CLASS Trtmt; MODEL PREile POSile = trtmt/ NOUNI;  
  
REPEATED TIME 2/SUMMARY PRINTE; run;
```

Correlation procedure for comparing silent reading comprehension assessments

```
proc corr data=JF; var preile posile; run;
```

Correlation Scatter Plot

```
PROC sgscatter DATA = JF; PLOT preile * posile; RUN;
```

GLM procedure for calculating partial-eta squared

```
proc glm DATA=jf; MODEL PREile POSile = / NOUNI; REPEATED TIME  
  
2/SUMMARY PRINTE; run;
```

Mixed ANOVA procedure for treatment period effect

```
proc glm DATA=jf; CLASS Trtmt; MODEL PREile POSile = trtmt/ NOUNI;  
  
REPEATED TIME 2/SUMMARY PRINTE; run;
```

RMANOVA for elements of the EARS scale

```
Composite: proc glm data=jf; class trtmt; MODEL PreProsC PosProsC=trtmt / NOUNI;  
  
REPEATED measure 2 / SUMMARY PRINTE; RUN;
```

```
Elements: proc glm data=jf; model preE posE preA posA preR posR preS posS =/noui;  
  
repeated Time 2; run;
```

RMANOVA for Accuracy

```
proc glm data=jf; class trtmt; MODEL PreAcc PosAcc=trtmt / NOUNI; REPEATED  
measure 2 / SUMMARY PRINTE; RUN;
```

RMANOVA for WCPM

```
proc glm data=jf; class trtmt; MODEL PreWCPM PosWCPM=trtmt / NOUNI;  
REPEATED measure 2 / SUMMARY PRINTE; RUN;
```