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# Evaluating a Daily 90-Minute, Remedial Reading Intervention for Influence on Students' Reading Achievement

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Evaluating a Daily 90-Minute, Remedial Reading Intervention for Influence  
on Students' Reading Achievement

by  
Loretta Faith Harris

An Applied Dissertation Submitted to the  
Abraham S. Fischler School of Education  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Education

Nova Southeastern University  
2011

## Approval Page

This applied dissertation was submitted by Loretta Faith Harris under the direction of the persons listed below. It was submitted to the Abraham S. Fischler School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

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## **Abstract**

Evaluating a Daily 90-Minute, Remedial Reading Intervention for Influence on Students' Reading Achievement. Loretta Faith Harris, 2011: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler School of Education. ERIC Descriptors: Achievement Level, High School, Reading Fluency, Remedial Reading, Criterion Referenced Tests

The goal of NCLB educational reform was to bring all students to a level of academic proficiency by 2014-2015. Tenth-grade students are expected to show success in meeting the state standards by achieving a passing score of 1926 DSS on the reading section of the criterion-referenced test. Level 1 students demonstrating need in the areas of decoding or fluency are required to have an extended block of reading intervention with the same teacher for the entire 90-minute period of instruction. The research examined the effects of such extended time on Level 1 tenth-grade students' reading-achievement levels as indicated by the state-mandated criterion-referenced test scores and oral reading fluency.

The study revealed a daily 90-minute high school remedial reading program influenced Level 1 tenth-grade students' fluency scores as measured by oral-reading fluency probes. On the other hand, a daily 90-minute high school remedial reading program did not adequately prepare students to demonstrate success in terms of state standards as measured by the state criterion-referenced test. A recommended change to the current reading program included the use of grade-level texts with increasing levels of complexity during whole-group and small-group instructions. Exposure to grade-level texts heightens students' comprehension proficiency, essential for the increasingly complex texts encountered on the state-mandated criterion-referenced test. Overall, the results of the 90-minute high school remedial reading program confirmed the sustainability of the program.

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## Chapter 1: Introduction

The primary goal of the No Child Left Behind Act of 2001 (NCLB) was to elevate all student achievement to a minimal level of academic proficiency by 2013-2014, as determined by state-mandated criterion-referenced tests. Each state is responsible for identifying a set of academic standards and creating a state assessment system to monitor student progress in reading and math compliant with federal legislation. Schools are required to show progress towards universal academic proficiency by achieving adequate yearly progress (AYP), which indicates the annual minimum growth rate needed to eliminate the discrepancy between a school's initial proficiency status and universal proficiency within the established timeframe (Fuchs & Fuchs, 2004). According to Ardoin et al. (2004), children not making AYP will be detected early and be provided with supplemental, research-based instructional procedures to improve performance.

The most recent Florida state educational reform, State Board Rule 6A-6.053 (Just Read Florida, 2009), focuses on fluency intervention for Level 1 students. Level 1 students demonstrating need in the areas of decoding, fluency, or both are required to have an extended block of reading intervention with a dedicated highly qualified teacher (HQT). According to Osceola County School District (2007), to be considered highly qualified, a core subject teacher must obtain a bachelor's degree or higher, a valid temporary or permanent certificate, and—specifically—a reading endorsement or reading certificate to teach reading for the entire 90-minute period of instruction. The proposed study explores the effectiveness of a local research-based intervention for the lowest performing students in reading.



## **Statement of the Problem**

In a local, public high school, one in three 10th graders fail to achieve minimal scores on the reading subtest, and fewer than 4 in 10 high school students read at or above grade level (Bush, 2001). Research shows reading fluency, both oral and silent, is a factor in varying individual differences in performance on the state-mandated criterion-referenced test (Buck & Torgesen, 2002; Florida Center for Reading Research, 2007; Torgesen, Nettles, Howard, & Winterbottom, 2004). Secondary students who struggle with reading often have challenges in multiple areas of reading: decoding, fluency, vocabulary, and comprehension (Archer, Gleason, & Vachon, 2003). Traditionally, secondary reading programs focused only on developing reading comprehension skills not fluency or decoding skills (Archer et al., 2003). This misdirection may have occurred because considerably little is known about the effectiveness of fluency instruction at the secondary level (Wexler, Vaughn, Edmonds, & Reutebach, 2008).

In the host state in which the proposed work occurred, approximately 1.8 million public school students in grades 3 through 11 take the annually mandated criterion-referenced test (Florida Department of Education [FDOE], 2010a). A 10th-grade student is expected to achieve a minimal Developmental Scale Score (DSS) of 1926 on the reading subtests of the state-mandated criterion-referenced test. The DSS is a scale used to track students' progress over time and across grade levels to indicate student growth or learning gains (FDOE, 2008). A Level 1 tenth-grade student has a DSS range of 844-1851 and has little success with the challenging content on the state standards.

State curricula standards are divided into benchmarks identifying what a student should know and be able to do at each grade level (FDOE Office of Assessment, 2008).

Reading benchmarks are grade-level-specific statements of expected student achievement for each reading standard. Students are required to demonstrate comprehension proficiency and consequent processing of text for each reading benchmark. The 10th-grade reading subtests present 25-30% challenging test items, and fewer than 40% of students are likely to respond correctly (FDOE Office of Assessment, 2008). Therefore, efforts to increase student automaticity in silent and oral reading fluency aligned with research on overall reading comprehension is relevant to proposed actions by the primary researcher.

Notable trends of 10th-grade students throughout the state have not demonstrated minimal reading proficiency on the reading subtests of the criterion-referenced test. In 2010, the host state identified 57,513 of 179,729 tenth-grade students as Level 1 readers, a local school district identified 1,464 of 3,660 tenth-grade students as Level 1 readers, and a local public high school identified 140 of 379 tenth-grade students as Level 1 readers (FDOE, 2010b).

Reading program specifications (Just Read Florida, 2001), Florida's guidelines for effective local reading programs, require comprehensive and well-organized reading programs that support high quality reading instruction so all students can meet the state standards. A list of specific reading knowledge, resources, and instructional practices must be in place to facilitate student-learning gains (Just Read Florida, 2001). Teachers must use instructional strategies supported by scientific reading research and supplemented with a wide variety of reading materials (School District of Osceola County, 2006). Teachers are required to coordinate instructional assessments in each of the five major components of reading (Just Read Florida, 2001).

The focus of the proposed study is to evaluate the effectiveness of a research-based remedial instruction within a 90-minute, mandated reading block focused on the reading achievement level of enrolled students. To do so, the primary researcher proposes to observe the use of research-based instructional strategies and instructional assessments within a 90-minute reading block. Scheduled classroom walk through observations will examine the use of research-based instructional strategies. The state-mandated criterion-referenced test and oral reading fluency probe will measure students' achievement levels.

### **Definitions**

Within the proposed research, the following terms and definitions will be used:

*Achievement level* describes the success a student has attained on the state standards according to the mandated criterion-referenced test.

*Adequate yearly progress (AYP)* is the calculation required by the USDOE that determines whether a school is meeting standards in reading and mathematics.

*Benchmarks* are grade-level specific statements of expected student achievement for each reading standard.

*Block schedule* is a master schedule affording extended classroom learning periods, generally between 85 to 100 minutes.

*Comprehension* is the understanding and interpretation of what is read.

*Criterion-referenced competency tests (CRCT)* compare individual students' performance to pre-established criteria, often in the form of specific learning objectives.

*Decoding* is the process of converting printed words into their spoken forms by using knowledge of letter-sound correspondences and word structure.

*Developmental Scale Score (DSS)* is a score used to track students' progress over

time and across grade levels to indicate student growth or learning gains. Scores range from 0 to 3000 across grades 3 through 10.

*Disfluency* is an interruption in the smooth flow of speech, as by a pause or the repetition of a word or syllable.

*English language learner (ELL)* refers to a person from a diverse population who is learning English. Such learners come from various cultural and economic backgrounds.

*English Speakers of Other Languages (ESOL)* is the instructional program that assists students in learning English in areas of speaking, reading, writing, and listening.

*Exceptional student education (ESE)* programs offer students with disabilities and gifted students the opportunity to receive free appropriate public education in the least restrictive environment.

*Florida Oral Reading Fluency (FORF)* is a state-approved reading probe consisting of grade-level passages students read aloud while being timed for one minute.

*Fluency* is the evidence of both speed and accuracy of reading with appropriate expression.

*Highly qualified teacher (HQT)* refers to a teacher who earned at least a bachelor's degree, demonstrates content knowledge in each core content area he or she teaches, and does not have any waivers of the requirements for full state certification.

*Observation* involves an administrator who looks for and notes strategies used successfully in classrooms.

*Phonemic awareness* is the ability to notice, think about, and work with the individual sounds in spoken words.

*Phonics* is the process of connecting sounds (phonemes) of spoken English with

letters (graphemes).

*Reading standard* is a general statement of expected student achievement within a strand at each grade level in the standards.

*Standards* are general statements of expected student achievement within a strand or broad category of knowledge at each grade level.

*Vocabulary* refers to the words people must know to communicate effectively.

### **Setting**

The proposed study was conducted within an urban community located in a southeast state of the United States. The development began in the summer of 1996 as a master-planned community. The city has a population of 4,019 residents, with 1,955 males (48.6%) and 2,064 females (51.4%). The median resident age is 36.9 years. The average household has 2.8 people, 75.3% of the population represent family households, and 3.2% of households have unmarried partners. The community demographics are 87.36% White, 7.6% Hispanic, 1.7% Black, 0.8% Asian, 0.6% Chinese, 1.0% from other races, and 1.0% from two or more races (City-Data.com, 2010).

A probable cause contributing to the increase in Level 1 tenth-grade students may be insufficient instructional time spent remediating the students' areas of reading deficiency while they are enrolled in a remedial reading course. The report of the National Education Commission on Time and Learning (1994) indicated that American schoolchildren spend less of their school day receiving substantial academic instruction than students in most of the nations that outperform the United States in international comparisons. Students in the Asian countries of Singapore, Taiwan, Japan, and Hong Kong have longer school years (190 to 201 days) than the United States (180 days) and

consistently outscore the U.S. students on math and science tests (“President Obama,” 2009).

Instructional time is the in-class time teachers spend on teaching tasks as opposed to management-oriented activities (Mid-continent Research for Education and Learning, 2010). Fisher (2009) conducted a study on the use of instructional time in a typical high school and revealed that reading received the second lowest amount of time per day (3.4 minutes or 6%). The findings indicated that far too much time was wasted, and simply using the full amount of time allotted could improve student achievement throughout the school (Fisher, 2009). In the state in which the research study will occur, students attending public high school are required to have 900 hours or 180 days of instructions each year (FDOE, 2010a).

The second probable cause for the increase in Level 1 tenth-grade students may be insufficient instructional strategies for the population of students identified as English language learners (ELLs) and those in exceptional student education (ESE). ELL students face the challenging task of mastering a new language while also learning subject-area content (Northwest Regional Educational Laboratory, 2005). An ESE student has a disability: physical, educational, emotional, or a combination of all three (Star, 2010). According to a local public high school’s school improvement plan, 39% of the student population is English speakers of other languages (ESOL), 17.3% are both ESOL and ESE, and 20.8% are ESE students. Currently, only 18.5% of 108 instructional staff members are ESOL endorsed (Rhinehart, 2010).

Limited English proficient (LEP) students and students with disabilities are two of the five disaggregated student population groups in each school and district required to

attain yearly AYP goals (FDOE, 2009). The Florida Legislature (2010) required school districts to provide LEP students with ESOL instruction or home language instruction in the basic subject areas, which include reading with a highly qualified teacher (HQT). Reading teachers assigned to teach intensive reading to students classified as ELL are required to obtain ESOL Endorsement (FDOE, 2007).

In the state where the proposed study occurred, students aged 3-21 who have a disability and gifted students in grades K-12 are eligible for ESE services. In 2008, 79% of 10th-grade students identified with disabilities participated in the state-mandated criterion-referenced test. Only 11% of 10th-grade students with disabilities earned a passing score on the 2008 reading subtest (Florida Legislature, Office of Program Policy, 2010). The Florida Department of Education (FDOE) Bureau of Exceptional Education and Student Services (2005a) administered programs and provided support to strengthen the quality and variety of services available to students with disabilities. Currently, the state provides 14 exceptional education programs and services for students identified with disabilities at the secondary level (Florida Legislature, 2011).

### **Background and Justification**

After carefully reviewing over 100,000 studies on how children read, the National Reading Panel (2000) identified phonemic awareness, phonics, vocabulary, fluency, and comprehension as essential components of effective reading instructions. NCLB (2002) required the use of scientifically based reading instruction to ensure the delivery of high quality reading instructions. Research has confirmed that systematic and explicit instruction with opportunities for extensive practice is imperative in the development of important reading skills (Crawford & Torgesen, n.d.; Kuhn & Stahl, 2003; O'Shea,

McQuiston, & Michelle, 2009; Rasinski et al., 2005).

The most recent educational reform (Just Read Florida, 2009) targets specific reading deficiencies of low-achieving students in the areas of decoding and fluency. Kuhn and Stahl (2003) indicated that students demonstrating reading deficiency in decoding, fluency, or both spend most of their energy identifying words while not understanding text. Students incapable of using appropriate decoding skills required to read text with speed and accuracy will lack the comprehension skills necessary to understand the text. Most important, if readers can read the words but do not understand what they are reading, they are not really reading (Reading Recovery Council of North America, 2010).

To be a fluent reader, a student should be able to recognize and identify words instantly and then connect the words to meaning (National Reading Panel, 2000). Reading practice is an important contributor to fluency in general (National Institute of Child Health and Development [NICHD], 2010; Jeanne, McCormack, & Kuhn, 2007; Kuhn & Schwanenflugel, 2008; Rasinski, 2003). O'Connor, Swanson, and Geraghty (2010) indicated that, if readers can identify words automatically and organize these words into phrases without paying much attention to this process, capacity is freed for higher order processing, which includes understanding passages and monitoring comprehension. Repeated readings of a particular text allow struggling readers the opportunity to increase their fluency and comprehension of the passage practiced (Rasinski et al., 2005).

The purpose of the host state criterion-referenced test is to assess student ability to comprehend a wide variety of grade-level texts, including literary and informational text.



Grade-level text is determined by text complexity according to lexile scores. However, text complexity for grade level varies from district-to-district (Bergeson, 2007). Students reading at low levels often have difficulty understanding the increasingly complex texts encountered in high school and beyond (Slavin, Cheung, Groff, & Lake, 2008). The state-mandated 10th-grade criterion-referenced test allows for individual words or phrases no more than two grade levels beyond the tested grade (FDOE Office of Assessment, 2008). Although text presented on the criterion-referenced test should be grade-level appropriate, many students who are unable to read on grade level cannot comprehend the test material.

### **Deficiencies in the Evidence**

The area of focused need for the proposed research study is the effectiveness of a state-mandated research-based remedial-instruction reading block and the reading achievement of Level 1 tenth-grade students. The host state's rationale for a 90-minute intensive reading course at the secondary level is to provide systematic and explicit instructions for Level 1 students demonstrating reading deficiencies primarily in the areas of decoding and fluency (Just Read Florida, 2009). Additional instructional time for increased academic achievement is suggested; however, research does not specify the most effective way to increase the amount of instructional time necessary to achieve this goal (Hossler, 1988). Furthermore, Fisher, Frey, and Lapp (2009) noted that, for many secondary schools, the problem is not the development of content literacy instruction but rather the implementation of the plan.

### **Purpose of the Study**

The purpose of the proposed study is to determine whether the placement of Level

1 tenth-grade students in a 90-minute intensive reading class will have a significant impact on students' reading achievement levels as measured by the state-mandated criterion-referenced test and oral reading fluency. The study will evaluate the current means of remedial reading instruction within a local public high school setting, individual rates of personal achievement within the remedial course, and the sustainability of the program. The researcher will formulate a program summary and findings not only to influence further action within the local public high school setting but also to share with similar educational institutions throughout the state.

## **Chapter 2: Literature Review**

This chapter includes a comprehensive review of literature for an applied dissertation examining ways to effectively remediate poor readers at the high school level. The host state recommends the use of block scheduling for high school students scoring a Level 1 on the state-mandated criterion-referenced test while demonstrating need in the areas of fluency and decoding. The literature review will include research-based remedial reading programs used in the participating high schools, instructional strategies, and methods of assessment used to evaluate achievement levels and oral reading fluency within a 90-minute, mandated reading block.

### **Reading Legislation**

In response to student underachievement throughout American public schools, legislated reform to existing educational systems was enacted (USDOE, Office of Elementary and Secondary Education, 2002). As legislated education reform unfolded and current research began to influence intervention models, minimal components of effective reading instruction were actually legislated. The collection of over 100,000 studies gathered by the National Reading Panel (2000) confirmed the importance of fluency in effective reading instructions. Research has suggested a direct connection between fluency and comprehension (Archer et al., 2003; Rasinski et al., 2005) and recognized fluency as a key indicator of student reading achievement (Buck & Torgesen, 2002). In a recent study conducted by Greenburg, Howe, Levi, and Roberts (2006; as cited in Baker et al., 2008), over 90% of 1,600 districts and 5,283 schools in the United States have implemented the use of oral fluency to screen students for reading problems and monitor reading problems over time.

According to State Board Rule, 6A-6.053 (Just Read Florida, 2009) schools must diagnose specific reading deficiencies of students scoring at Level 1 on the state criterion-referenced reading subtest. School districts are required to establish an acceptable set of standards for placing students into reading-intervention classes beyond the state criterion-referenced test. Reading legislation mandated scientific researched-base instruction included in reading programs across America (National Reading Panel, 2000; School District of Osceola County, 2006; USDOE, Office of Elementary and Secondary Education, 2002). A diverse level of intensity within a remedial reading program is required to meet individual instructional needs of students. Reading assessments—including screenings, progress monitoring, diagnostic, and teacher recommendation—must be in place to monitor students' reading progress in fluency and state standards during additional instructional time in reading intervention (School District of Osceola County, 2006).

### **Reading Level**

Teachers' matching books to students according to reading levels ensures that students will read with little frustration and find the selection of reading materials easier (Rasinski, 2003; Weaver, 2000). Frustration (National Reading Panel, 2000) occurs when a student reads with less than 90% accuracy (Rasinski, 2003). Rasinski (2003) and Sternberg, Kaplan, and Borck (2007) found that successful reading is achieved when students are encouraged to engage with text on an independent reading level (97-100% accuracy) or instructional reading level (90-96% accuracy). According to Allington (2001), extensive reading of independent-level material and guided reading of instructional-level material are good ways to develop reading fluency (as cited in

Rasinski et al., 2005).

Tens of millions of students receive a lexile measure each year from state or classroom assessments (MetaMetrics, 2008). Lexiles are the most widely adopted reading measure in use today, measuring both reader ability and text difficulty on the same scale. The Lexile Framework for Reading, developed by MetaMetrics Educational Measurement, is a scientific approach to measuring text difficulty and reading ability, putting both texts and readers on the same scale and matching readers with reading materials (MetaMetrics, 2008). This framework uses a measure and scale to identify the lexile levels of the reader and the text. The lexile scale is a developmental scale for reading ranging from 200L for beginners to above 1700L for advanced. MetaMetrics (2008) suggested selecting a book based on the reader's lexile range rather than focusing on the reader's measure. The reader may read 50L above to 100L below his or her reading level. A student reading above his or her lexile range will have difficulty drawing meaning from text at the independent level. Likewise, material below the reader's level may offer little challenge for the reader's comprehension.

Some researchers challenge the effectiveness of a lexile system in a literacy program. According to Betty Carter (as cited in "Lexile: Will All Books Need This Reading-Level Rating?," 1998), the Lexile Framework rating ignores the internal qualities of the book and limits a child's literature choices, thereby jeopardizing the child's opportunity to become a lifetime reader. However, MetaMetrics (2008) indicated that lexile measures refer only to the text difficulty of a book and do not address the content or quality of a book. Weaver (2000) recommended providing students with a variety of literature in a balanced literacy program to accommodate individual reading

needs as well as standards of the state and nation. Blackburn (2000) suggested using the Lexile Framework as a tool with existing programs, methods, and strategies to enhance reading growth.

### **Grade Level Text**

Lennon and Burdick (2004) indicated that, when reader and text were appropriately matched, a reader could enjoy a comprehension rate of about 75%. Leveled books provide literacy instructions to match the needs of students and provide a guideline for selecting grade-level-appropriate materials (Weaver, 2000). Proper determination of reading grade level is determined by dozens of established mathematical formulas for estimating the readability of text (Chall, 1991; Oakland & Lane, 2004). Chall (1991) described readability as the characteristics of texts that make text more or less readable for given groups of readers.

Readability levels usually give an objective numerical score by a formula measuring sentence difficulty and word difficulty to indicate the grade at which most students should be able to read the passage independently (Rasinski, 2003). Most readability formulas provide a numerical rating referenced to a grade difficulty level for a specific text (Oakland & Lane, 2004). Readability formulas are popular devices used by educational publishers and teachers to match students to level appropriate textbooks, tests, and other educational materials (Chall, 1991). Research has shown that struggling readers in middle school or high school programs often read between the 2.5 and 5.0 grade level (“Intermediate Decoding Skills,” 2004).

However, researchers have contested reliance on readability formulas as a primary guide to children’s reading ability. According to Booth (1998), the selection of a

book shows a child's responsibility for learning; therefore, the child's ability to read the book may be secondary because interest can motivate a child to read a book that may be challenging. Oakland and Lane (2004) examined data from two popular readability formulas, Fry and Dale-Chall, and concluded that readability formulas lacked credibility based on inconsistencies in analyzing passages from Plato's *Parmenides* and Tolstoy's *Anna Karenina*. The reading levels identified by both reading formulas measured one to two grade levels in difference. Despite the discrepancies among leveling systems (Weaver, 2000), readability formulas are one of many responsible ways to evaluate and understand a student reader's skills.

A local public high school reading program recommends the use of instructional level text during whole group and small group differentiated instructions. Differentiated instruction involves matching instruction to meet the diverse needs of learners in a given classroom (Orange County Public Schools, 2009). According to the new reading mandate (Just Read Florida, 2009), small-group differentiated instruction is one of many reading instructions offered on a daily basis during a reading intervention course. Most small-group differentiated instruction engages students in guided reading practice, which involves instruction with small groups usually formed using students' ability levels or skill needs the reading material genre or title (Weaver, 2000). Weaver (2000) stated that guided oral reading encourages students to read passages orally with systematic and explicit guidance and feedback from the teacher. On the other hand, Collins (1996) proposed a small-group guided reading approach may offer a challenge for struggling high school readers who lack confidence in personal ability to succeed in reading.

## **The Importance of Reading Fluency**

Fluency is a critical but often neglected element of reading programs (Chard, Vaughn, & Jean-Tyler, 2002). Researchers have confirmed the importance of reading fluency at the secondary level (Archer et al., 2003; Buck & Torgesen, 2002; Just Read Florida, 2001; National Reading Panel, 2000; Rasinski, 2005; School District of Osceola County, 2006; USDOE, Office of Elementary and Secondary Education, 2002). The effectiveness of particular approaches to teaching fluency has led to increased detection of fluency's importance in the classroom and adjustments to instructional practices. Research has indicated that fluency practices with improved outcomes for younger students may apply to fluency intervention used with older students (Murray, Wexler, Vaughn, Roberts, & Tackett, 2008). However, considerable limitations exist in research addressing the effectiveness of fluency instructions at the secondary level (Wexler et al., 2008).

According to Samuels and Farstrup (2006), one of the problems with fluency resides with its definition because the emphasis on what comprises reading fluency has evolved over time. Fluency is the ability to read a text accurately and quickly (Reading Rockets, 2010a). Furthermore, one of the largest school districts in the southeast United States has suggested that fluency extends to the ability to read text accurately, quickly, and with proper expression (Orange County Public Schools, 2009). While Rasinski (2003) indicated that successful high school reading focuses on reading rate as a useful and valid measure of students' fluency, Meyer and Felton (1999) observed that reading fluency is the ability to read a sequence of text rapidly, smoothly, effortlessly, and automatically with little attention to the idiosyncrasies of reading such as decoding.



After reading fluency is fully developed, Wolf (2003) stated that reading fluency refers to a level of accuracy and rate in which decoding is relatively effortless, oral reading is smooth and accurate with correct prosody, and attention is given to comprehension. An increase in reading fluency heightens comprehension of text (Rasinski et al., 2005). Research by Torgesen et al. (2004) investigating the relationship between reading fluency and performance on the state-mandated criterion-referenced test revealed that Level 1 tenth-grade students read passages at an average rate of 130 words per minute while Level 3 students attained an average rate of 175 words per minute. Torgesen et al. concluded that it is important for students to continue to grow in their ability to read increasingly complex text fluently and accurately and even more important to expand general reasoning abilities to accommodate the increasingly complex text encountered at each succeeding grade level.

### **The Development of Reading Fluency**

Rasinski (2003) noted four principles for developing students' fluency skills: modeling, support, practice and feedback. Modeling is the first step in developing students' fluency (Jeanne et al., 2007). Teachers should provide a model of expressive reading by reading aloud. Expressive oral reading of enjoyable texts provides learners with an example of what their reading should ultimately sound like. Support is the second step in the process of fluency development (Jeanne et al., 2007). Teachers should provide support or assistance as learners make the transition to fluency. Support can be provided through choral, echo, partner, or paired reading, and gives learners access to materials that would otherwise be inaccessible (Rasinski, 2003).

Choral reading is a teacher-assisted oral reading strategy in which the teacher and

the students simultaneously read a section of a text aloud, focusing on fluency practice. Researchers such as Allington (2001) asserted that choral word-by-word reading serves no useful practice. Echo reading is a teacher-assisted oral reading strategy, which requires the teacher read a section of text aloud as students follow along silently with a copy of the text (Kuhn & Schwanenflugel, 2008). Echo reading strategy introduces new and challenging text and new words and gives the readers a sense of the story as well as the fluent model to emulate (Allington, 2001).

Paired or partner reading occurs when children are paired to provide one another with support in the oral reading of connected text (Rasinski, 2003). Partner reading is a widely used strategy to provide oral reading practice with immediate and explicit feedback and the opportunity to engage in comprehension practice (Murray et al., 2008). One partner reads aloud while the assigned partner listens, follows along, and provides the support and assistance (Allington, 2001). Research has indicated several considerations for effective partner reading (Murray et al., 2008): involving students' participation three days each week for 15-20 minutes daily, assigning partners based on data, assigning reading materials at the independent or instructional level, and graphing individual and partner goals for reading fluency. Providing adequate time to practice is the third step in effective fluency instructions (Jeanne et al., 2007). Kuhn and Schwanenflugel (2008) stated that students should have ample opportunities to practice reading connected text, and Rasinski (2003) and Jeanne et al. (2007) concurred that opportunities for reading practice are important in the development of students' reading fluency skills.

The fourth step in developing students' fluency is direct feedback (Jeanne et al.,

2007). Teaching students the use of appropriate phrasing through direct feedback (e.g., explaining how the words should be grouped in a given sentence) is important, as is indicating how inappropriate phrasing can muddle the meaning of a text. Dowhower (1987) asserted that integrating these principles into the literacy curriculum would help learners make the transition from laborious word recognition and unexpressive renditions of text to flowing and facile reading (as cited in Jeanne et al., 2007).

### **The Assessment of Reading Fluency**

Rasinski (2003) indicated that the ability to assess students' level of achievement in fluency and progress is the answer to successful fluency teaching. Because fluency is increasingly integrated into the literacy curriculum, teachers should have a clear understanding of reading fluency and how fluency should be evaluated (Jeanne et al., 2007). Rasinski (2003) suggested fluency assessments have some degree of reliability and validity and are efficient in administration, scoring, and interpretation. Jeanne et al. (2007) recommended when assessing students' oral fluency to consider correct words read per minute (cwpm) and prosody. Students should not have the opportunity to practice reading the material previously. In addition, it is important to evaluate students using grade level material.

Fluency in beginning reading has historically been measured primarily by recording oral reading rate. The Gray Standardized Oral Reading Paragraphs (Allington, 2001) began this tradition by providing reading rate criteria to determine the adequacy of an oral reading performance. According to Deno and Mirkin (1985, as cited in Baker et al., 2008), the origin of oral reading fluency lies in curriculum-based measurement (CBM), a set of procedures used for measuring academic proficiency in basic skill areas

including reading, spelling, written expression, and mathematics (Baker et al., 2008).

Many ways exist to evaluate student's oral reading fluency. Coulter, Shavin, and Gichuru (2009) suggested that students may read texts associated with classroom literacy curriculum or selected specifically for assessment purposes (e.g., a 100-200 word passage determined to be at a specific reading level). The most common way to evaluate students' oral reading is to determine their reading rate along with the percentage of correct and incorrect words. According to Jeanne et al. (2007), this measure is correct words read per minute (cwpm). Reading-rate research has shown a steady increase in the number of cwpm, the most common rate measure, as children progress through school (Allington, 2001). Once a student's cwpm rate is established, a cwpm guideline determines whether the student is making adequate progress in terms of fluency development.

One type of oral reading probe is a 1-minute timed reading. The child reads for 1-minute while the teacher notes the number of errors made (Coulter et al., 2009). The Florida Oral Reading Fluency (FORF) reading probe is a 1-minute state-approved progress-monitoring device. The purpose of FORF is to satisfy legislation requirements mandating students scoring a Level 1 on the state criterion-referenced test (Florida Center for Reading Research, 2009) take tests to monitor progress in reading. Fluency assessment can help to ensure a good match between the teacher's instruction and goals the teacher creates for the students in the classroom as well as help the teacher evaluate the students' progress to date (Jeanne et al., 2007).

A variety of established norms present expectation for readers both across grade levels and at various points within a given grade, usually spring, winter, and fall (Jeanne et al., 2007). According to a local school district's established norms comparing students'

fluency results and expected grade level performances, 10th-grade students should be able to read up to 127+ cwpm in the fall, 137+ cwpm in the spring, and 147+ cwpm by the end of the 10th-grade year (Florida Center for Reading Research, 2008). In spring 2009, a local public high school's intensive-reading teachers measured 229 10th-grade students' fluency using the district-approved progress-monitoring assessment. The results of the fluency assessment showed 10th-grade students read an average of 125 cwpm.

### **Readers at Risk**

According to Grigg, Daane, Jin, and Campbell (2003), more than 8 million middle and high school students are struggling readers, and among those, many are at a high risk of dropping out of school. A longitudinal study conducted by the U.S. Department of Education National Center for Education Statistics (2009) revealed schools with a higher percentage of minority students had a higher dropout rate, which increased as the school poverty level increased. Hispanic students and Black students had the highest dropout rates (11% and 10%, respectively) of all racial groups. According to a local public high school's AYP report (Florida Department of Education, 2010b), 320 of 743 Hispanic students were on track to graduate. The 2010 AYP results revealed that 38 of 107 Black students were on track for graduation.

In accordance with the Florida Legislature (2010), students aged 3-21 who have a disability and gifted students in grades K-12 are eligible for exceptional student services (ESE). Thus, an exceptional student is any student determined eligible for a special program in accordance with the Florida Legislature (2010). A national survey of teachers in public schools conducted by the USDOE National Center for Education Statistics (NCES; 2001, as cited in Lovett et al., 2008) found only 32% of teachers whose classes

includes students with reading disabilities felt well prepared to address students' academic needs. In a local school district, results of the state-mandated criterion-referenced test (2009) showed that 73% of high school students identified with disabilities were reading below grade level. Ten percent of 10th-grade students with a disability left school, compared to 5% of those reported as having no disability (USDOE, National Center for Education Statistics [NCES], 2009). Students with exceptionalities unable to meet the appropriate special state minimum requirements receive a special certificate of completion (Florida Legislature, 2010).

Traditionally, English language learners are underserved by the public school system (Morahan & Loftus, 2003). Today, more than 10% of teachers' classes with a majority of ELLs are not prepared to meet language needs, according to a report from the USDOE (2002). According to the USDOE (2009), the ELL population is required to achieve AYP goals. A local public high school's 2009-2010 AYP report (2010) revealed that 171 of 207 ELL students read below grade-level proficiency.

Collins (1996) indicated that secondary teachers are responsible to help low achieving or low performing students break the cycle of failure. Despite teachers who work hard to develop students' reading, Fisher et al. (2009) suggested secondary schools are not places in which students achieve. Research acknowledges the existence of various obstacles affecting secondary learner's ability to achieve reading proficiency. Primarily, limited research exists on effective implementation of reading interventions designed to assist secondary learners (Archer et al., 2003; Buck & Torgesen, 2002; Just Read Florida, 2001; National Reading Panel, 2000; Rasinski, 2005; Wexler, Vaughn, Edmonds, & Reutebach, 2008). A student with language or learning disabilities lack the personal

confidence to succeed in an academic setting (Lovett et al., 2008) often times resulting in elevated high school dropout rates (Florida Department of Education, 2010b) and an ongoing cycle of poverty (U.S. Department of Education National Center for Education Statistics, 2009). Despite the obvious barriers to delivering basic reading instruction in secondary schools, Sternberg et al. (2007) indicated it is possible for adolescents to become proficient readers.

### **Established Research-Based Remedial Reading Programs**

Recent federal legislation mandates each state establish an accountability system to assess student progress in both reading and math (USDOE, Office of Elementary and Secondary Education, 2002). According to Slavin et al. (2008), once only seen in remedial or special education programs, reading courses are now common in middle schools, and remedial courses are becoming more widespread in high schools. The host school district for the proposed study implements a comprehensive core reading program (CCRP) that provides instruction in multiple areas of reading designed to accelerate growth in reading with the goal of returning students to grade-level proficiency (FDOE, 2009). The comprehensive core reading program is a widely applicable program providing systematic and explicit instruction to help children understand and apply the critical skills of reading (Orange County Public Schools, 2009). Torgesen et al. (2004) agreed that, in addition to improving students' ability to think about the text they are reading, reading programs should seek to improve students' access to texts by increasing students' reading accuracy and fluency.

The "Reading Program Specifications" of the host state (Just Read Florida, 2001) contain four strands or vital components to ensure student learning gains and CCRP

effectiveness. Reading program specification strands include professional development, administrative practices in support of school-wide reading instructions, high quality reading instructions, and extensive reading text materials and resources. To implement an effective reading program, the reading knowledge base of the teacher is critical to the reading program effectiveness and, consequently, in the successful reading outcomes of students (Just Read Florida, 2001). Preparing teachers through professional development is important so that teachers can identify specific reading barriers facing students and have the tools to help students learn to read (Just Read Florida, 2001). Fisher et al. (2009) recognized that engaging teenagers in new literacies, preparing them for the world of work and college, and meeting state and federal accountability demands are a few ways faculties in secondary schools across the country are working hard to address the current literacy skills of students.

To implement an effective reading program, the knowledge base of the administration with the school and district is vital (Just Read Florida, 2001). Educational reform reports since 1980 have concluded schools are only as good as their administrators (Lunenburg & Ornstein, 2004). Klauke (1990) indicated that school administrators should share a common vision about the role and style of 21st-century schools and administrative positions within society and world community. Title II, a division of NLCB (USDOE, Office of Elementary and Secondary Education, 2002), provides funding for state, local, and higher education agencies to increase student academic achievement through strategies such as recruiting, training, and preparing highly qualified teachers and principals (Osceola County School District, 2007).

High quality reading instruction is a cohesive system involving a dynamic



interplay between assessment, teaching, and effective student learning (Just Read Florida, 2001). Reading instruction must focus on all major reading components to develop student understanding of the reading process (National Reading Panel, 2000). Federal guidelines call for systematic and explicit instruction in remedial reading (Just Read, 2001; National Reading Panel, 2000; School District of Osceola County, 2006; USDOE, Office of Elementary and Secondary Education, 2002). Systematic and explicit instructions strategically link to five areas of reading. First, teacher-led with modeled expectations suggests teacher introduce and demonstrate expectations. Second, teacher should provide support and immediate feedback. Third, systematic and explicit instructions tied to reading instructions involve lesson planning. Fourth, the teacher builds on previously taught information. Fifth, increase in complexity with clear and precise instruction supports student achievement (Orange County Public Schools, 2009). Ediger (1998) did not view explicit teaching as high quality reading instructions because explicit instructions provide fewer opportunities for student creativity and critical thinking.

Slavin et al. (2008) conducted a 12-week mixed-method study to evaluate the effectiveness of 121 middle and high school reading programs. The results of the investigation placed Read 180 in the top four programs showing evidence of effectiveness. The Read 180 program has over 37 research studies, showing its positive impact on student achievement across multiple grade levels and student populations (Scholastic, 2010). Read 180 is a multidimensional program for struggling readers whose reading achievement is below proficiency. Read 180 programs include three stages: Stage A for elementary school, Stage B for middle school, and Stage C for high school. The

classroom library contains 40 leveled readers with lexile scores ranging from 100 to 1200. Read 180 designed a 90-minute research-based instructional model, which included whole-group and small-group instruction, technology software, an independent reading library, and whole-group wrap up (Scholastic, 2010). The host school district adopted Read 180 Stage C for Level 1 ninth-grade students enrolled in a 90-minute remedial reading course.

Edge (National Geographic School Publishing, 2008) is a series of research-based core reading and language arts programs designed for striving readers and English language learners in grades 9-12 reading below grade level. Edge has four instructional levels: Fundamentals (grades 1-3), Level A (grades 3-5), Level B (grades 5-7), and Level C (grades 7-9). A local public high school uses Edge Level C during a 90-minute remedial reading course of Level 1 tenth-grade students. According to a local school district's department of curriculum and instruction newsletter (2009), Edge was adopted for use in grades 9 and 10 and meets the needs of ELLs and struggling readers.

The 12-week research of Slavin et al. (2008) showed that supplemental computer-assisted instruction (CAI) is a successful component in high school reading classrooms. A local public high school adopted Empower3000, a web-based instructional program, for Level 1 tenth-grade students enrolled in a 90-minute remedial reading instruction. Empower3000 provides daily nonfiction articles, scientifically matching students' reading ability (Achieve3000, 2010). Empower3000 assesses students' lexile levels using a proprietary assessment tool, LevelSet. LevelSet results automatically match students with appropriate levels of text, which ensure students are working in the zone of proximal development or skill level at which students learn best (Achieve3000, 2010). Slavin et al.

(2008) concluded that well-evaluated reading programs capable of enabling middle and high school students with poor reading skills to meet the demands of complex texts ensure students not only succeed in high school coursework but also graduate ready for college and work-related tasks.

### **Instructional Strategies**

Reading fluency consists of three distinct components: prosody, decoding, and automaticity (Rasinski, 2003). Prosody is reading with expression, proper intonation, and phrasing (Orange County Public Schools, 2009). Decoding is the ability to apply knowledge of letter-sound relationships, including knowledge of letter patterns, to pronounce written words correctly (Reading Rockets, 2010b). Automaticity is reading with accuracy and speed with fast, effortless word recognition resulting from a great deal of reading practice (Orange County Public Schools, 2009).

Fluent readers decode words accurately and automatically, without or with nominal use of their limited attention or conscious cognitive resources (Rasinski, 2003). One of the most common characteristics of a disfluent reader is word-by-word reading (Rasinski, 2003), decoding, and fluency (K. Smith, personal communication, June 2, 2010). Furthermore, many older students with a learning disability (LD) can decode single syllable words but struggle to decode longer words (Moore & Smith, 2007). Struggling readers in high school demonstrate major difficulty decoding multisyllabic words, resulting in the inability to decode important vocabulary within text, thus compromising both fluency and comprehension (Archer et al., 2003; “Intermediate Decoding Skills,” 2004).

Development of important decoding skills involves teaching readers to divide

unknown multisyllable words into decodable parts, referred to as chunks, based on their knowledge of common word patterns such as suffixes, prefixes, and base words (“Intermediate Decoding Skills,” 2004). Readers are taught to identify one or more familiar parts in the multisyllable word, read the known parts first, and then figure out the whole word. Teaching syllabication is another way to develop important decoding skills. This strategy focuses on teaching readers the different syllable types found within words (McQuiston, O’Shea, & McCollin, 2009). Opportunities to improve decoding skills will assist students in building reading fluency, developing vocabulary knowledge, and enhancing comprehension (McQuiston et al., 2009). Research has suggested combining instruction in decoding and comprehension to make fluency practice most effective (Murray et al., 2008).

Secondary reading programs, such as Edge, offer cooperative learning strategies with opportunities for paired reading and group projects. Cooperative learning structures are generic activities usually adapted to grade level and subject matter (Canady & Rettig, 1996). The use of cooperative learning in the classroom involves implementing a process creating a collaborative classroom environment. According to Canady and Rettig (1996), effective cooperative learning structures in an extended-block classroom must meet four criteria: group goal, face-to-face meetings, positive interdependence, and individual accountability.

Morahan and Loftus (2009) recommended using a scaffolding strategy with second language learners of English. Scaffolded instructions provide necessary support for learners through modeling and practice, then gradually remove the support as the learner moves toward independence (Orange County Public Schools, 2009). Scaffolding

learning supports students with new concepts and content until students can proceed independently (Morahan & Loftus, 2009). In a local public high school, reading teachers assigned to a 90-minute remedial reading program use scaffolded instructions to ensure instructions match diverse subgroups. For struggling readers, diversity in instruction is essential (Samuels & Farstrup, 2006).

### **Block Schedule**

According to the Osceola County School District (2007), Level 1 students demonstrating deficiencies in the areas of decoding, fluency, or both are required to have a 90-minute block of reading intervention with a dedicated highly qualified teacher. In general, block scheduling refers to an extended classroom-learning period, generally 85-100 minutes. Canady and Rettig (1996) determined that approximately 50% of high schools in the United States use some form of block scheduling. While block scheduling takes many forms, it always involves extended class periods intended to improve instruction and to enhance student learning (Jenkins, Queen, & Algozzine, 2002; Marshak, 1999; Woronowicz, 1996). Despite the intent behind block scheduling, Fisher (2009) argued that time on task or time spent engaged in learning is a significant predictor of academic achievement.

Block scheduling has been a practicable scheduling choice for over 40 years, but it was not until the late 1980s that block scheduling became more widespread in secondary schools throughout the United States (Lewis, Dugan, Winokur, & Cobb, 2005). The two common forms of block scheduling are the alternating block, referred to as the A/B plan, and the accelerated block, referred to as the 4x4 plan. A local public high school uses a modified block schedule to satisfy reading legislation requiring Level 1

high school students' enrollment in a 90-minute remedial reading class with uninterrupted instructions (Osceola School District, 2007).

Adopting the alternating block format is usually the first move or transitional step from having traditional single periods (Canady & Rettig, 1996). The alternating block schedule is also referred to as *A/B*, *Day 1 Day 2*, *A Day, B Day*, and *Week 1/ Week 2* schedules (Canady & Rettig, 1996). The student takes three to four 90-120 minute classes on alternate days through the 180-day school year (Lewis et al., 2005). An advantage of A/B scheduling is the benefit teachers have from the additional instructional time (Canady & Rettig, 1996; Lewis et al., 2005). Teachers are better able to plan for differentiation of instruction and adopt teaching strategies to meet the needs of the students (Jenkins, Queen, & Algozzine, 2002).

The most common type of block scheduling found in U.S. high schools is the 4x4 semester plan, also known as the accelerated plan (Lewis et al., 2005). Canady and Rettig (1996) indicated that this model of scheduling operated in selected high schools in Canada for more than 10 years. Accelerated block uses four 90-minute class periods (Lybbert, 1998). Students attend the same four year-long courses every day of the week for a complete semester (90 days). An advantage found with the 4x4-semester plan is that teachers work with fewer students during one semester (Canady & Rettig, 1996).

Furthermore, Eineder and Bishop (1997) indicated that block scheduling allows teachers to spend more time with fewer students and visa versa, resulting in improved student-teacher relationships. In addition, children in smaller classes demonstrate higher achievement (Allington, 2001). Moreover, research has shown that disciplinary problems significantly decrease as a result of the 4x4 semester plan (Canady & Rettig, 1996;

Hughes, 2004; O'Neil, 1995). Disciplinary problems may decrease because students have fewer changes of classes, resulting in fewer disruptions in the hallways and less instructional time taken away from the teachers (Hughes, 2004).

An obstacle considered when adopting a block schedule format is ensuring instruction offered in block classes is appropriate for the longer format (O'Neil, 1995). Queen et al. (2002) found a disadvantage to block scheduling included too much independent study, a limited number of electives, and an overemphasis on lecture (as cited in Lewis et al., 2005). Thus, Hughes (2004) suggested that teachers take time to adjust their teaching technique to accommodate a block schedule. If teachers do not adjust their teaching technique, the result is students doing little during the last 20 to 30 minutes of the class period.

### **High School Intensive Reading 90-Minute Period Schedule**

The host school district for this proposed study designed the High School Intensive Reading 90-Minute Period Schedule (Osceola County School District, 2007) to guide intensive-reading teachers through the delivery of 90 minutes of uninterrupted reading instruction for Level 1 students. According to the host school districts' reading schedule, teachers should first deliver 10-20 minutes of initial instruction. Initial instruction engages the whole class with scaffolded modeling of strategies for the instructional level text (Just Read Florida, 2001). The reading schedule designates 5-10 minutes for daily vocabulary review: listening speaking, reading, and writing (National Institute for Literacy, 2009).

The host school district's reading schedule designates 30-60 minutes for differentiated instruction. Differentiated instruction enhances students' comprehension,

vocabulary, fluency, phonics, and phonemic awareness (Just Read Florida, 2009).

Tomlinson (2004) suggested that differentiated instruction addresses what a student learns and how the student learns it, and learning matches the students' readiness level, interests, and preferred modes of learning. Suggested differentiated instructional strategies include individual and small-group instruction, literacy centers, technology, audio-assisted reading, reading-strategy instruction, and application and feedback (Osceola County School District, 2007). Independent reading practice consists of 10-20 minutes and involves student-selected titles at the students' independent reading levels. Independent text is relatively easy text for the reader, with no more than approximately 1 in 20 words that are difficult for the reader and read with 95% success (Butte County Office of Education, 2006).

While students are engaged in independent reading practice, the host school district's reading schedule recommends progress monitoring using fluency and comprehension leveled texts and follow up with individual student conferences (Osceola County School District, 2007). Students enrolled in a local public high school maintain a readers' logs, an accountability measure used after students complete 20 minutes of independent reading. A log is a natural portfolio, tracing reflections and responses throughout the reading experience, and it is used as the basis for discussions and conferences (Kooy & Wells, 1996).

Finally, the host school district's reading schedule suggests 5-10 minutes for a closing activity. Closing activities may include the teacher reading aloud, discussion of new vocabulary, or discussion of concepts (Osceola County School District, 2007). The district suggests using young adult novels or newspaper articles to supplement closing



activities. The School District K-12 Comprehensive Reading Plan for 06-07 recognizes each school may have a different schedule for the 90-minute reading block (Osceola County School District, 2007). The host state has recommended classroom observations of instructional strategies implemented using the state-approved classroom walk-through (CWT) model for grades 6-12 (Osceola County School District, 2007). Trained instructional coaches, school administration, and district personnel may use the CWT model to conduct classroom walkthroughs in a 90-minute remedial reading intervention.

### **State Criterion-Referenced Test**

Criterion-referenced measurement has been widely considered since Robert Glaser originally popularized the term in 1963 (Swezey, 1981). Criterion-referenced tests show how well a person has learned a specific body of knowledge and skills interpreted against an eternal standard (Florida Center for Reading Research, 2009; Swezey, 1981). Research has supported the use of criterion-referenced tests designed to measure students' ability to meet or exceed state-level literacy standards (Torgesen & Miller, 2009). Criterion-referenced tests may be used as diagnostic aids for determining appropriate areas of remediation as well as providing an evaluative outlook on instructional programs in terms of their adequacy for preparing learners to perform required tasks (Swezey, 1981).

Before the development of a test occurs, the developer should consider strongly the objectives used as the basis of the test items (Swezey, 1981). The host state criterion-referenced test assesses student achievement in comprehending a wide variety of grade-leveled texts. According to the FDOE Office of Assessment (2008), grade-leveled text is determined by text complexity. Dzaldov and Peterson (2005) asserted that features such

as sentence and word length play a role in determining text difficulty in addition to other factors within the reader-text interaction that account for a text's level of difficulty for any particular reader. Item characteristics that determine the nature of the text used in tests can have a strong impact on item difficulty (Oakland & Lane, 2004).

The host state criterion-referenced test assesses high school students' ability to comprehend grade-level text using 13 reading benchmarks. The host state organized the tested reading benchmarks into four reporting categories: vocabulary, reading application, literary analysis, and informational text and the research process. Reporting Category 1—vocabulary—measures students' understanding of context clues, advanced words and phrases, and words with multiple meaning. Reporting Category 2—reading application—measures students' ability to determine the main idea, analyze the author's purpose and perspective, analyze a variety of text structures and organizational patterns, compare and contrast elements in multiple text, and identify cause-and-effect relationships in the text. Reporting Category 3—literary analysis—measures students' knowledge of the author's use of literary elements and descriptive language and students' ability to analyze and evaluate information from text features. Reporting Category 4—informational text and the research process—measures students' ability to explain how text features aid the understanding of text and their ability to use a variety of techniques and strategies within and across texts to locate and gather information (FDOE, Office of Assessment, 2008).

According to Torgesen et al. (2004), 70% of the questions on the 10th-grade criterion-referenced test require higher order thinking skills. Readability methods estimating test difficulty (Oakland & Lane, 2004) are considered the best methods for

assessing reading grade level (Jensen, Fabiano, Lopez-Williams, & Chacko, 2006). Based on the Criterion-Referenced Reading Test Item Specifications (FDOE, Office of Assessment, 2008), the grade 10 reading subtest allows individual words or phrases no more than two grade levels beyond the tested grade. Most modern reading formulas combine statistics across all items, presenting an average readability level overestimating the reading grade level necessary to comprehend the majority of items (Jensen et al., 2006). This excessive calculation may contribute to higher complexity levels of grade level text.

### **Reading Motivation**

By motivating students to read and develop good reading habits, teachers can positively affect students' lives and empower them to become lifelong learners (Duncan, 2010). Motivation to read is a complex construct that influences readers' choices of reading material, willingness to engage in reading, and, ultimately, competence in reading, especially related to academic reading tasks (Pitcher et al., 2007). Students reading high-interest material are more likely to finish reading the material because of a background connection (Fisher, 2009). Therefore, motivation is essential to keep students on task while developing important reading skills (Collins, 1996; Samuels & Farstrup, 2006).

### **Summary**

The most recent educational reform legislation required the establishment of a state-accountability system to help underachieving students meet state and federal demands in reading (FDOE, 2005a; Fisher et al., 2009; USDOE, Office of Elementary and Secondary Education, 2002). Research confirms that highly qualified teachers are

directly linked to increasing student academic achievement (Osceola County School District, 2007; Just Read Florida, 2001) when scientific-research-based, systematic, and explicit instructional strategies are combined. Despite Title II efforts to recruit, train, and prepare highly qualified teachers (Osceola County School District, 2007), a small percentage of teachers have expressed lack of confidence teaching students with special needs and disabilities (Lovett et al., 2008).

In general, reading fluency has been considered a necessity in elementary grades but was not taught directly or systematically in secondary grades (Rasinski et al., 2005). Repetition is important when developing fluency skills; however, further research should extend beyond the need for fluency practice at the high school level to how much time is required to build students' fluency skills. Practice makes perfect, but most students find such practice tedious unless motivated by an attractive goal (Madden & Jane, 2008). Research has indicated numerous instructional strategies when remediating critical reading skills, specifically reading fluency, for struggling readers at the secondary level. Effective instructional strategies include cooperative learning, differentiated instruction, scaffolding, and self-monitoring strategies. More specific fluency instruction requires students to engage in repeated, paired, choral, guided, and oral reading and content literary instructional practices (Booth, 1998; Canady & Rettig, 1996; Fisher et al., 2009; Morahan & Loftus, 2009; Osceola County School District, 2007; Rasinski, 2003; Rasinski et al., 2005).

Future research should seek to answer questions regarding the amount of time beyond usual practice required for fluency development at the secondary level. In light of the most recent educational reform (USDOE, Office of Elementary and Secondary

Education, 2002), requiring reading remediation in 90-minute reading block for students demonstrating reading deficiencies in decoding and fluency, little research exists showing whether teachers on block scheduling have adopted more instructional strategies in the classrooms than teachers in traditional schools (Jenkins et al., 2002). Future research designs should seek to use random sampling when conducting research on fluency development at the secondary level. Random sampling will assist with identifying fluency development of specific subgroups at the secondary level.

A large body of reading research has been focused primarily on readers at risk for achieving the expected level of reading proficiency by 2013-2014. Hispanic and Black students, English language learners, students with disabilities, and low socioeconomic students with poor literary skills are at greater risks of dropping out of school (Collins, 1996; Fisher et al., 2009; Morahan & Loftus, 2003; Slavin et al., 2008; USDOE, NCES, 2009). Despite impediments, the above mentioned subgroups are expected to show adequate yearly progress (USDOE, Office of Elementary and Secondary Education, 2002).

Research-based reading programs such as Read 180 and CAI programs have proven to be effective in remediating struggling readers at the secondary level (Scholastic, 2010; Slavin et al., 2008). However, the final judgment is pending on the most effective reading programs for secondary learners (Samuels & Farstrup, 2006; Slavin et al., 2008); nevertheless, reading research is making strides with groundbreaking research studies on how children read (National Reading Panel, 2000; NICHD, 2000; Rasinski et al., 2005; USDOE, Office of Elementary and Secondary Education, 2002). A local public high school 90-minute remedial reading intervention for Level 1 tenth-grade

students has less than optimal data available to assess the effect of the reading intervention program on the reading achievement of struggling readers.

### **Research Questions**

The proposed research study will seek answers to the following questions concerning the effectiveness of using remedial research-based instruction in a 90-minute block at the secondary level:

1. Will the placement of Level 1 tenth-grade students in a 90-minute block intensive-reading class affect fluency scores as measured by the FORF?
2. Will the placement of Level 1 tenth-grade students in a 90-minute block intensive-reading class affect students' reading achievement levels as measured by the state-mandated criterion-referenced test?
3. Are the instructional strategies used within diverse remedial settings effective?

### **Chapter 3: Methodology**

This chapter includes discussion of the methods to evaluate the effect of research-based remedial instruction in a 90-minute reading block on the reading achievement of Level 1 tenth-grade students. The researcher collected data from diverse high schools within the host state. The host public high school identified 37% of the 10th-grade population as reading at Level 1. The public high school from which the comparative samples will be taken identified 47% of the 10th-grade population as reading at Level 1. The methodology section include discussions of the research design, limitations to the study, validity and reliability of the instruments, procedures associated with the research study, and ways to minimize potential threats.

#### **Participants**

The target population of the study is Level 1 tenth-grade students participating in a 90-minute reading block during the 2010-2011 academic school year in different high school settings. Participants were selected through convenience sampling. Convenience sampling involves a set of subjects who happen to be available (Black, 1999). Convenience sampling is an inexpensive way to ensure a sufficient number of participants for the study. According to Black, the selection of samples based on convenience can produce highly unrepresentative samples. To avoid the possibility of misleading samples, the researcher selected the samples based on achievement levels used by the host state to identify high school students in need of extended remedial reading intervention.

#### **Research Design**

The researcher conducted a quasi-experimental study using a pretest-posttest

single treatment sample of convenience. Campbell and Stanley (1963) indicated that a quasi-experimental study is appropriate when the researcher lacks the ability to select participants randomly. Traditionally, a single group study offers no comparison and lacks the ability to show the independent variable was the only possible cause of the observed effect (Black, 1999). The researcher selected a comparative group within the local setting receiving the usual treatment of the sample group. The comparative group serves as a parallel authentication and data source to ensure that concluding effects on students' oral reading fluency and state criterion-referenced test is solely attributable to enrollment in 90-minute remedial reading intervention.

The researcher applied the quasi-experimental research design to determine the effectiveness of a research-based remedial reading block designed to meet the needs of Level 1 tenth-grade students within a single group study and comparative group. The sample group and comparative group completed an intensive reading course taught by a highly qualified teacher who is reading endorsed or reading certified (Osceola County School District, 2007; Office of Elementary and Secondary Education, 2002). The researcher administered a pretest-posttest treatment during the same period within the diverse remedial settings.

Two common threats to internal validity exist when conducting a quasi-experimental study with a pretest-posttest design. The first threat is history, which refers to specific events other than the intended treatment occurring between the pretest and posttest that could cause changes in the outcome of interest (Black, 1999). To avoid the threat of extraneous variables influencing results or making findings suspect, both groups participated within a 90-minute, daily remedial reading intervention. The researcher



worked in collaboration within the comparative site to ensure treatment is the only significant variable between groups.

Another threat to the validity of the proposed study is sample stability, which is the problem of keeping group members together and preventing differential and unattributable attrition (Black, 1999). To minimize the threat of sample stability, the researcher selected participants using a sample of convenience in which membership is large enough to be compromised by transiency. The researcher used the discussed procedures to avoid common threats to internal validity when conducting a quasi-experimental study using a pretest-posttest design.

### **Instruments**

Developed in 1996, the state-mandated criterion-referenced test was designed to assess student achievement in grades 3 through 10 in reading and math (FDOE, 2010a). The purpose of the state-mandated criterion-referenced test is to measure student achievement in comprehending a wide variety of texts, either literary or informational. Literary texts focus on the art of language, providing entertainment or inspiration; include fiction and some types of nonfiction; and should address a variety of themes. Informational texts focus on subject matter in which language is used to solve problems, raise questions, provide information, and present new ideas (FDOE, Office of Assessment, 2008).

The reliability of a test refers to the degree to which measurement error is absent from the scores yielded by the test (Gall, Gall, & Borg, 2007). The most common kind of reliability used in relation to the state-mandated criterion-referenced test is internal reliability. Internal reliability defines the consistency of the results delivered in a test,

ensuring that the various items measuring the different constructs deliver consistent scores (Experiment-Resources.com, 2010). The coefficient is expressed as a number from zero to one (0.0-1.00). Internal consistency reliabilities for the Grade 10 Reading Test measured at .89 using Cronbach's Alpha coefficients.

*Validity* refers to the appropriateness, meaningfulness, and usefulness of specific inferences made from test scores (Gall et al., 2007). Content-related evidence was used to determine the validity of the state criterion-referenced test. *Content-related evidence* refers to the degree to which an assessment reflects the content it was designed to assess (FDOE, 2004). The state criterion-referenced test was developed to measure a student's achievement of the skills and content described in the state standards, which are general statements of expected student achievement within a strand or broad category of knowledge at each grade level (FDOE, 2008). Benchmarks tested on the state criterion-referenced test are grade-level specific statements of expected student achievement for each reading standard.

A *reading standard* is a general statement of expected student achievement within a strand at each grade level in the standards. A *strand* is a broad category of knowledge within a content area in the standards. The strands are the same for all grade levels (FDOE, Office of Assessment, 2008). The host state Department of Education designed a criterion for all items on the test to ensure high content validity. The state test was deemed highly valid in content because it assesses the content of the state standards and is developed using credible and trustworthy methods (FDOE, 2004).

The assessment office at the Florida Center for Reading Research (FCRR) developed the Florida Oral Reading Fluency (FORF) probe in 2004. The FORF consists

of two on-grade-level passages averaging 300-360 words that students read aloud one after the other while being timed for one minute. FCRR used the software program called Readability Calculations, developed by Micro Power & Light Company, to obtain readabilities for the texts, using seven different formulae (K. Smith, personal communication, June 2, 2010).

FCCR and Just Read Florida conducted a study in 2004 to establish the reliability of several measures and their relationships to performance on the state-mandated criterion-referenced test and to determine whether one of the measures would be suited for use as a statewide progress monitoring measure. The results of the reliability study revealed the oral reading fluency test had one of the strongest correlations (.75) to 10th-grade students' performance on the state-mandated criterion-referenced test. Although oral reading fluency is a predictor of student success on the state criterion-referenced test, the oral reading fluency assessment provides no information to teachers about the components of reading comprehension that are particularly in need of improvement for specific students (Torgesen et al., 2004).

The Classroom Walk-Through (CWT) model for Grades 6-12 (2007) developed by FCRR and the Center on Instruction is a research-based tool used to gather focused information about instructional strengths and weaknesses at a particular school, with the goal of raising student achievement (Teachscape, 2011). According to the host school district K-12 Comprehensive Reading Plan (Osceola Country School District, 2007), an observation using the CWT model involves an administrator who looks for and notes strategies used successfully in classrooms. Seven steps involved in the Classroom Walkthrough Process are planning with a focus, collecting data, analyzing data, reflecting

on data, identifying an action plan, acting on the plan, and evaluating the action plan (Teachscape, 2011).

The CWT focus for this research study concentrated on the observation of instructional strategies used within a 90-minute remedial reading intervention. The researcher collected data from diverse high school settings during two 90-minute classroom observations per setting using the CWT (Osceola County School District, 2007) tool. The researcher looked for and notated instructional strategies and best practices used successfully in the classrooms. The researcher then examined the instructional strategies used within the classrooms and compared observed instructional strategies to the host school district's recommended high school intensive-reading 90-minute period schedule (Osceola County School District, 2007), designed to guide intensive-reading teachers through the delivery of 90 minutes of uninterrupted reading instructions for Level 1 students. The researcher included a reflection of the classroom walk-through observations with a discussion of observed and not observed instructional strategies in the program evaluation summary at the conclusion of the research study.

### **Procedures**

The quasi-experimental research study evaluated the effect of research-based remedial instruction within a 90-minute mandated reading block on the reading achievement of enrolled students. The researcher examined the use of research-based instructional strategies in a 90-minute research based reading program using the state approved classroom walk through observation tool. The researcher determined the effectiveness of a research based reading program based on two criteria: state-mandated criterion-referenced test and students' oral reading fluency scores. The host state in which

the research study took place assigns Level 1 students to a 90-minute remedial reading block based on test results from the previous school year criterion-referenced test.

Convenience sampling occurred on the first instructional day to determine participants of the study.

The previous school year criterion-referenced test results identified participants' ability to comprehend grade level text prior to enrollment in a 90-minute remedial intervention. The initial FORF pretest took place on the sixth instructional day. The FORF pretest identified students' initial fluency level prior to the intervention of the research-based remedial instruction in the 90-minute block. The researcher followed the administration script provided within the FORF training guide. The researcher determined students' average oral reading fluency based on the responses to the FORF.

The researcher conducted single 90-minute instructional observations in participating reading teachers' classrooms using the state approved classroom walk through observation tool during the second month of the study. Observations of instructional strategies are permissible in the researcher's current role with unlimited frequency. Criteria for continuity of instruction within comparative sections of students were pre-established between classroom teachers. The researcher observed implementation of instructional strategies and best practices during the 90-minute remedial reading intervention to monitor and control variables potentially influencing study outcomes.

Participants completed the state-mandated criterion-referenced test during the eighth month of the research study. The reading section of the 10th-grade state-mandated criterion-referenced test was administered in two 70-minute sessions. The researcher

conducted single 90-minute instructional observations in participating reading teachers' classrooms during the ninth month of the research study using the state approved classroom walk through observation tool. Participants completed the FORF posttest during the 10th month of the study using the same style but a different version of the state-approved reading probe.

During the 11th month, the researcher analyzed the results of students' criterion-referenced test, oral reading fluency, and classroom walk through observations from the sample group and the comparative group to determine the effect of research-based remedial instruction within a 90-minute mandated reading block on the reading achievement of enrolled students. During the 12th month, the researcher developed a program summary based on the findings to influence further action within the local public high school setting and share these findings with similar educational institutions throughout the host state.

### **Statistical Analysis**

The researcher conducted a statistical analysis using paired-samples *t* tests. In a paired-sample design, data are obtained from a pair of subjects matched in some way (Norusis, 2008). Subjects for the research study were matched using achievement levels obtained from the state-mandated criterion-referenced test administered during the previous school year. This design measured the effects a 90-minute remedial reading block had on student achievement as measured by the state-mandated criterion-referenced test and oral reading fluency. The level of statistical significance sought within the research study is .05.

**Limitations**

One limitation involved the local sample of convenience. The demography differed in diverse settings. A second limitation involved the effective use of instructional time in diverse settings. A third limitation involved the difference of instructional strategies used to remediate reading deficiencies for Level 1 students in diverse settings.

## Chapter 4: Results

The researcher proposed to assess the effectiveness of a daily high school 90-minute remedial reading intervention based on the results of 10th grade students at Level 1, as designated by legislated reform through state criterion referenced test scores and oral reading fluency. According to Florida Department of Education (2008), 10th grade students are expected to show success in meeting the state standards by achieving a passing score of 1926 DSS on the reading section of the criterion-referenced test. A Level 1 tenth-grade student has a DSS range of 844-1851 and demonstrates little success with challenging content on the state standards. According to the most recent state educational reform, Level 1 students demonstrating need in the areas of decoding or fluency are required to have an extended block of reading intervention with a highly qualified teacher for the entire 90-minute period of instruction (Just Read Florida, 2009).

The researcher conducted a 12-month research study using a pretest-posttest single treatment sample of convenience. The study included 120 Level 1 tenth-grade students placed in a 90-minute remedial reading program based on the previous school year's state criterion referenced test score and fluency scores. The researcher selected two sample groups, a comparison group and study group, to assess the overall effectiveness of a high school 90-minute remedial reading intervention. To monitor and control variables potentially influencing the study's outcome, the researcher examined the comparison group and study group reading teachers' implementation of research-based instructional strategies using the state approved classroom walk through (CWT; Teachscape, 2011) observation tool during the 2nd and 9th months of the study.



The results of the study revealed a daily 90-minute remedial reading intervention significantly improved students' oral reading fluency scores. On the other hand, the same students' scores did not significantly improve on the state criterion referenced test. The researcher suggests the lack of exposure to grade-level texts with increasing complexity contributed to students' underachievement on the reading subtest. To support student achievement, teachers are advised to increase text complexity with clear and precise instructions (Orange County Public Schools, 2009).

During two single 90-minute CWT observations of research-based instructional strategies, the researcher noted consistent use throughout the comparison and study groups' 90-minute remedial reading intervention. The observations revealed high school reading teachers integrated research-based instructional strategies during a 90-minute remedial reading intervention. The researcher suggests the integration of research-based instructional strategies is the result of a highly qualified teacher. Highly qualified teachers increase student academic achievement using research-based instructional strategies (Just Read Florida, 2001; Osceola County School District, 2007). The results of the comparative study are presented in corresponding sequence to the research questions introduced at the conclusion of Chapter 2.

### **Research Question 1**

Research Question 1 addressed whether the placement of Level 1 tenth-grade students within a 90-minute intensive-reading class yielded a significant increase in students' fluency scores. The comparison group and study group were provided a pretest-posttest single treatment to determine oral reading fluency scores. Because the purpose of Research Question 1 was to measure changes in pretest and posttest scores within groups,

rather than between the two groups, a  $t$  test of dependent samples was used. A  $t$  test of dependent samples and a  $t$  test of paired samples were performed by entering data into SPSS Version 16 (Norusis, 2008). The results of the SPSS data analysis using a  $t$  test of dependent samples and a  $t$  test of paired samples revealed a significant difference in pretest and posttest scores for both the comparison and study groups' oral reading fluency scores.

The descriptive statistics for the comparison and study groups' Florida Oral Reading Fluency (FORF) scores resulting from a  $t$  test of dependent samples and paired-samples  $t$  tests appear in Table 1. Each variable represents a separate administration of the same style but different version *Oral Reading Fluency Probe* (Florida Department of Education, 2003). The possible range of scores on the *Oral Reading Fluency Probes* was 0 to 360.

The FORF pretest was administered prior to the intervention of a daily 90-minute remedial reading program. The comparison group included 40 FORF pretest-posttest scores. The pretest scores of the comparison group were  $M = 113.35$ ,  $SD = 22.56$ . The posttest scores were  $M = 128.18$ ,  $SD = 18.66$ . Paired-sample  $t$  tests were calculated to determine whether the difference between pretest and posttest scores was statistically significant. In a paired-sample design, data were obtained from a pair of subjects matched in some way (Norusis, 2008). The  $t$  test results were statistically significant  $t(39) = -5.41$ ,  $p < .001$ , indicating that a 90-minute remedial reading intervention significantly improved students' oral reading fluency performance.

The study group included 47 FORF pretest-posttest scores. The detection of three outliers reduced the final count to 44 student scores. An outlier is an individual score

drastically different from others with the potential to skew the average score (Creighton, 2007). The outliers in the study were a result of scores not fitting within the general realm of the rest of the distribution. These scores wrongfully skewed the distribution and, thereby leading to different results and conclusions. The removal of outliers from the study group was an appropriate measure.

The pretest scores of the study group were  $M = 107.48$ ,  $SD = 27.59$ . The posttest scores were  $M = 116.64$ ,  $SD = 28.76$ . Paired-sample  $t$  tests were calculated to determine whether the difference between pretest and posttest scores was statistically significant. The  $t$  test results were statistically significant  $t(43) = -3.56$ ,  $p = .001$ , indicating that a 90-minute remedial reading intervention significantly improved students' oral-reading fluency performance.

Table 1

*Descriptive Results for FORF Pretest, Posttest, and Paired Difference*

Group	Pretest		Posttest		Paired Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Comparison ( $n = 40$ )	113.35	22.56	128.18	18.66	-14.83	17.35
Study ( $n = 44$ )	107.48	27.59	116.64	28.76	-9.16	17.07

*Note.* Comparison,  $t(39) = -5.41$ ,  $p < .001$ . Study,  $t(43) = -3.56$ ,  $p = .001$ .

## Research Question 2

Research Question 2 addressed whether the placement of Level 1 tenth-grade students within a 90-minute intensive-reading class yielded a significant increase in students' reading-achievement levels. The comparison group and study group were provided a pretest-posttest single treatment to determine reading achievement levels. Because the purpose of this question was to measure changes in pretest and posttest

scores rather than differences between the two groups, a *t* test of dependent samples was used. A *t* test of dependent samples and a *t* test of paired samples were performed by entering data into SPSS Version 16 (Norusis, 2008). The results of the SPSS data analysis using a *t* test of dependent samples and a *t* test of paired samples showed no significant difference in pretest and posttest scores within both the comparison and study groups' reading-achievement levels.

The descriptive statistics for the comparison and study groups' data from the Florida Comprehensive Assessment Test (FCAT) as results of dependent *t* tests and paired-samples *t* tests are provided in Table 2. Each variable represents a separate administration of the same instrument, the FCAT. The possible range of developmental scale scores on the FCAT was 0 to 3,000.

The FCAT pretest was administered prior to the intervention of a 90-minute remedial reading program. The comparison group included 40 FCAT pretest-posttest scores. The comparison group pretest scores were  $M = 1607.70$ ,  $SD = 159.50$ . Their posttest scores were  $M = 1660.70$ ,  $SD = 202.13$ . Paired-sample *t* tests were calculated to determine whether the difference between pretest and posttest scores was statistically significant. The *t*-test results were not significant  $t(39) = -1.55$ ,  $p = .13$ , thus indicating that a 90-minute remedial reading intervention did not significantly improve students' performance on the FCAT.

The study group included 47 FCAT pretest-posttest scores. The study group pretest scores were  $M = 1550.94$ ,  $SD = 213.42$ . The posttest scores were  $M = 1611.72$ ,  $SD = 237.92$ . Paired-sample *t* tests were calculated to determine whether the difference between pretest and posttest scores was statistically significant. The *t* test results were not

significant  $t(46) = -1.72, p = .09$ , indicating that a 90-minute remedial reading intervention did not significantly improve students' performance on the FCAT.

Table 2

*Descriptive Results for FCAT Pretest, Posttest, and Paired Difference*

Group	Pre-Test		Post-Test		Paired Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Comparison ( $n = 40$ )	1607.70	159.50	1660.70	202.13	-53.00	216.67
Study ( $n = 47$ )	1550.94	213.42	1611.72	237.92	-60.79	241.92

*Note.* Comparison,  $t(39) = -1.55, p = .13$ . Study,  $t(46) = -1.72, p = .09$ .

### Research Question 3

Research Question 3 addressed the use of instructional strategies recommended by the high school intensive reading 90-minute period schedule. Instructional strategies included differentiated instruction and explicit instructions with scaffolded modeling, necessary support for learners during the 90-minute remedial reading intervention. Differentiated instruction ensured instructions met the diverse needs of learners within the classroom (Orange County Public Schools, 2009). Explicit instructions with scaffolding provided necessary support for students through modeling, practice, and eventually, independent learning.

The researcher conducted two single 90-minute instructional observations in the comparison and study group classrooms, using the state-approved CWT (Teachscape, 2011) observation tool. The Walk Through for Grades 6-12 Reading Intervention Form (Florida Department of Education, 2007b) guided in identifying instructional strategies used in reading classrooms. Codes used during the classroom walk-through observations to identify recommended instructional activities are shown in Table 3. Coding is a system

of classification noting what is of interest or significance (Bloomberg & Volpe, 2008). The researcher's training and experience using the classroom walk-through tool contributed to the reliability of instructional strategies identified throughout the observations indicated in Table 4.

Table 3

*Subcodes for the Classroom Walk-Through Observations*

Code	Component
1. I.I.	Initial instructions
2. V.I.	Vocabulary instructions
3. D.I.	Differentiated instructions
4. I.R.	Independent reading
5. C.L.	Closing

During two single 90-minute observations in the comparison group classroom, the teacher delivered initial reading instructions during the first 20 minutes, using a supplemental reading program. The teacher reviewed new vocabulary followed by differentiated instructional strategies, which included small-group instruction (5 to 6 students) using the Edge supplemental reading program, the Empower3000 web-based reading program, and the *USA Today* supplemental reading curriculum. The teacher provided 20 minutes of independent reading practice during small group instructions and concluded with a writing assignment as a closing activity. The results of the two single 90-minute observations indicated that the comparison group teacher's integration of recommended instructional strategies was consistent with the high school intensive-reading 90-minute period schedule.

During two single 90-minute observations in the study-group classroom, the teacher delivered 20 minutes of initial reading instructions, engaging the whole class using a supplemental reading program. The teacher did not provide evidence of daily review of vocabulary instruction. The teacher used differentiated instructional strategies, which included small-group instruction (5 to 6 students) using the Edge supplemental reading program, the Empower3000 web-based reading program, and the *USA Today* supplemental reading curriculum. The teacher included 20 minutes of independent-reading practice and concluded with a writing assignment as a closing activity. The results of the two single 90-minute observations indicated that the study-group teacher did not provide daily review of vocabulary instruction; therefore, the integration of recommended instructional strategies was not consistent with the high school intensive-reading 90-minute period schedule.

Table 4

*Observation of Instructional Strategies, Classroom Walk-Through Visit 1 and Visit 2*

Activity – time	Comparison visit 1	Study visit 1	Comparison visit 2	Study visit 2
I.I. – 10-20 min	✓	✓	✓	✓
V.I. – 5-10 min	✓	—	✓	—
D.I. – 30-60 min	✓	✓	✓	✓
I.R. – 10-20 min	✓	✓	✓	✓
C.L. – 5-10 min	✓	✓	✓	✓

*Note.* ✓ = instructional strategy observed.

## **Chapter 5: Discussion**

The purpose of the study was to evaluate the influence of a daily 90-minute high school remedial reading program on students' reading achievement. Students' oral-reading fluency scores and criterion-referenced test scores were used to measure the affect of a daily 90-minute reading program on students' reading achievement. The study revealed a daily 90-minute reading intervention significantly influenced Level 1 tenth-grade students' fluency scores; however, the criterion-referenced test scores revealed the remedial reading program did not adequately prepare students to demonstrate success on state standards. Successful implementation of instructional strategies in diverse remedial settings was documented and verified using the district-approved classroom walk through tool. This chapter will discuss major implications of the findings and present them within the context of the extended literature. Recommendations for future research and a program summary based on the findings are included to inform educators in the local public high school setting and in similar educational institutions throughout the state.

### **Implications of Findings**

One of the most important finding from the study was that disfluent Level 1 10th-grade reading students' placement in a daily 90-minute intensive reading class did not guarantee greater achievement on the annually administered state criterion-referenced test. The 90-minute high school remedial reading program used the Edge, a research-based core reading-and-language-arts curriculum originally intended for striving readers and ELL students in grades 9-12 reading below grade level (National Geographic School Publishing, 2008). The comparison and study groups' teachers integrated the Edge curriculum during whole-group and small-group instructions. While text presented on the



criterion-referenced test should be grade-level appropriate, 70% of the questions on the 10th-grade criterion-referenced test required higher order thinking skills (Torgesen et al., 2004) and fewer than 40% of students were likely to respond correctly (FDOE Office of Assessment, 2008). Students reading at low levels experience difficulty understanding increasingly complex texts (Slavin et al., 2008), and it is possible students with limited exposure to grade-level texts experienced difficulty comprehending material presented on the criterion-referenced test, resulting in non-remediated criterion-referenced test scores.

Effective implementation of research-based instructional strategies with struggling readers positively influenced students' fluency scores. The 90-minute high school remedial reading program recommended whole-group and small-group instruction, with explicit and scaffolded modeling of strategies in instructional-level text. Independent-reading practice included student-selected titles at the independent-reading level. According to Allington (2001), extensive reading of independent-level material and guided reading of instructional-level material are good ways to develop reading fluency (as cited in Rasinski et al., 2005). In a review of 23 quasi-experimental and experimental studies on the effectiveness of secondary reading programs teaching basic-reading skills, such as word identification, fluency, and comprehension skills, Joseph and Schisler (2009) found that teaching basic reading skills had the greatest impact on reading fluency and moderate influence on comprehension.

The results of this present study revealed that Level 1 tenth-grade students' increased reading-fluency scores did not translate into increased criterion-referenced test scores. Although increased reading fluency heightens comprehension of text (Archer et al., 2003; Joseph and Schisler, 2009; McQuiston et al., 2009; Rasinski et al., 2005),

exposure to material below the reader's level offers little challenge for the reader to improve comprehension. Despite the ability to read with speed and accuracy, students did not demonstrate achievement of comprehending grade-level text on the criterion-referenced test.

Reading teachers who followed a reading schedule during a daily 90-minute reading intervention were more likely to integrate recommended research-based instructional strategies to remediate Level 1 students' reading deficiencies. O'Neil (1995) suggested that committing to a block schedule design is appropriate. The comparison- and study-group reading teachers followed a daily 90-minute reading schedule and integrated recommended research-based instructional strategies to engage students during initial instruction, vocabulary instruction, differentiated instruction, and closing activities. According to Marzano (2007), the presence or absence of instructional strategies does not define effectiveness, but the teacher's expertise in adapting the strategy to the classroom within the context of the lesson can produce gains in student achievement.

### **Limitations**

The intent of the study was to evaluate the influence of a daily 90-minute high school remedial reading intervention on Level 1 tenth-grade students' reading achievement. The study was limited to Level 1 tenth-grade students enrolled in two local high schools in one school district; therefore, generalizations cannot be made based on the findings of the study. The study was limited to the selection of samples based on convenience. The original 120 participants were reduced to 87 because students withdrew from the participating school site or transferred to another reading classroom not included in the study. The reduced population size resulted in a slight distortion in the data

analyses.

### **Recommendation**

The researcher recommends continuation of the existing 90-minute high school remedial reading program with use of grade-level texts with increasing levels of complexity. Instructional- and independent-level texts currently used to supplement the 90-minute remedial reading program's whole-group and small-group instruction offer little-to-no challenge for students reading at or above grade level. Torgesen et al. (2004) suggested that Level 1 tenth-grade students expand general reasoning abilities to accommodate the increasingly complex text encountered on the state-mandated criterion-referenced test.

### **Recommendations for Future Research**

This study did not evaluate the influence of research-based instructional strategies on students' criterion-referenced test scores. Thus, future research should investigate high school students' lack of success on the state criterion-referenced test. Potential research could have a broader perspective than this study had on the effects of a daily 90-minute remedial reading program on the reading achievement of Level 1 high school students by using multiple public high school settings throughout the state. Similar research should include sampling with replacement as part of the sampling strategy to maintain a consistent sample size throughout the study.

### **Conclusions**

The researcher provided a program summary highlighting the results of the 90-minute high school remedial reading program evaluation. The study revealed a daily 90-minute high school remedial reading program influenced Level 1 tenth-grade students'

fluency scores as measured by oral-reading fluency probes. On the other hand, a daily 90-minute high school remedial reading program did not adequately prepare students to demonstrate success in terms of state standards as measured by the state criterion-referenced test.

Specifically, the following findings resulted from this study of the 90-minute remedial reading program:

1. The 90-minute high school remedial reading program significantly influenced Level 1 tenth-grade students' oral-reading fluency scores.
2. The 90-minute high school remedial reading program did not remediate Level 1 tenth-grade students' criterion-referenced test scores.
3. The 90-minute high school remedial reading program provided instructional-level texts for whole-group and small-group instructions.
4. The 90-minute high school remedial reading program provided independent-level texts for independent-reading practice.
5. The 90-minute high school remedial reading program provided core-reading curriculum to support striving readers and ELL students.
6. The 90-minute high school remedial reading program did not provide grade-level texts for whole group and small group instructions.
7. Highly qualified reading teachers followed the high school intensive-reading 90-minute period schedule.
8. Highly qualified reading teachers implemented research-based instructional strategies.

9. Highly qualified reading teachers provided explicit instructions and scaffolded modeling to meet the needs of struggling readers.

10. Highly qualified reading teachers differentiated instructions to meet the diverse needs of learners within the classroom.

Overall, the results of the 90-minute high school remedial reading program confirmed the sustainability of the program. A recommended change to the current reading program includes the use of grade-level texts with increasing levels of complexity during whole-group and small-group instructions. Exposure to grade-level texts heightens students' comprehension proficiency, essential for the increasingly complex texts encountered on the state-mandated criterion-referenced test. The study confirmed a daily 90-minute high school remedial reading program provided supplemental reading materials designed for striving readers, specifically ELL students.

Highly qualified reading teachers followed a 90-minute reading schedule and integrated research-based instructional strategies with explicit instructions and scaffold modeling to meet the needs of struggling readers in the classroom. Differentiated instructions are an essential component of a daily 90-minute reading program and ensure instructions match the needs of diverse learners. The study did not evaluate the influence of research-based instructional strategies on students' criterion-referenced test scores. Future studies should investigate reasons for high school students' lack of success on the state criterion-referenced test.

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