

DIFFERENTIATED READING INSTRUCTION AND
CLASSROOM MANAGEMENT STRUCTURES THAT
PROMOTE READING DEVELOPMENT

By

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For Jed and Maisy
This would not have been possible
without your love and support

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Abstract of Dissertation Presented to the Graduate School
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DIFFERENTIATED READING INSTRUCTION AND CLASSROOM
MANAGEMENT STRUCTURES THAT READING DEVELOPMENT

By

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Chair: Holly Lane
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Teaching reading involves much more than expert knowledge; an effective teacher must teach in such a way as to engage the students' interest, challenge them, and spark their imagination. To meet these pedagogical challenges, teachers must have an awareness of the diverse abilities and backgrounds of students, including those with learning and behavior problems. Teachers who effectively manage their classrooms not only demonstrate an awareness of their students' diverse needs, but also possess a set of skills necessary to meet those needs. There is a lack of research that examines specifically how classroom management techniques can be applied to different instructional contexts, especially to reading instruction. The purpose of my study was to examine the ways effective differentiation of instruction in reading relates to classroom management, and how the two work together to help students develop reading skills in inclusive classroom settings. Classroom observations were conducted using two checklists that measured teachers' use of differentiated reading instruction and classroom management structures identified by the literature as best practices. Data were analyzed using a variety of methods, including correlational and multiple regression analysis.

The results of the correlational analysis revealed that there is a significant negative relationship between teacher's use of differentiated reading instruction and classroom averages on the fall and winters assessments of the DIBELS Oral Reading Fluency subtest. The negative correlation indicated that when teachers differentiate reading instruction, they do so in classrooms with the most struggling readers, and that differentiation is based on student need. Multiple regression analysis revealed that the explanatory variables used in this study, differentiated reading instruction and classroom management structures, were significant indicators of class averages on DIBELS ORF measures. Furthermore, the multiple regression analysis indicated that teachers' use of differentiated reading instruction and classroom management structures enables students to make the same gains in fluency regardless of reading ability. Teachers who implement these strategies are leveling the playing field, and in essence, maintain the gap between struggling and proficient readers.

CHAPTER 1 INTRODUCTION

Teaching reading involves much more than expert knowledge; an effective teacher must teach in such a way as to engage the students' interest, challenge them, and spark their imagination. To meet these pedagogical challenges, teachers must have an awareness of the diverse abilities and backgrounds of students, including those with learning and behavior problems. In addition to being experts in reading instruction, today's teachers must possess classroom management skills that facilitate the learning process. A combination of research-based reading instruction and classroom management skills ensures success for teachers and students.

Status of Reading Achievement in the U.S.

While conducting a longitudinal study at an elementary school in Texas, researcher Connie Juel came to a startling conclusion. Of the fourth graders she interviewed, 40% would choose to clean their room over reading. In fact, one child admitted, "I'd rather clean the mold around the bathtub than read" (Juel, 1988).

Coincidentally, in their 2005 report, a National Assessment of Educational Progress (NAEP) panel (Perie, Grigg, & Donahue, 2005) found that 38% of fourth graders were unable to read basic passages and correctly answer associated comprehension questions. Thirty-eight percent of all fourth graders have reading skills below the "basic" level and students who read below the "basic" level cannot read well enough to complete class work at grade level (U.S. Department of Education, 2001). With only 33% of the nation's fourth graders reading at the "basic" level, and 30% reading at "proficient" or above, we are truly a nation at risk.

The good news is that research clearly demonstrates most reading failure is preventable and students identified as "high risk" can improve their reading and writing achievement with

quality instruction (Adams, 1990). Finding a way to get children to not only want to read, but also become proficient readers is a very complicated process. To get students to read well, they must read frequently, but to get them to read frequently, they must be able to read well (Adams, 1990). *Put Reading First*, a publication based on the work of the National Reading Panel (NRP) (Armbruster, Lehr, and Osborne, 2001) advocates for the use of scientifically-based reading interventions and strategies in the classroom in order to improve children's reading achievement.

Unfortunately, the prognosis for children who experience reading deficits is grim. A child who leaves first grade as a struggling reader will most likely become a poor reader in third grade (Juel, 1988; Torgesen & Burgess, 1998). Even worse, a child who does not learn to read and get meaning from text by fourth grade has a .88 probability of never learning to read despite the implementation of reading interventions (Juel, 1988; Torgesen & Burgess, 1998). To further complicate matters, reading failures bring about negative long-term consequences for children's self-confidence, motivation to learn, and overall school performance, and affect post-school outcomes as well (National Institute of Child Health and Human Development [NICHD], 2000). For students who are unable to read fluently by third grade, it is improbable that they will earn a high school diploma (National Longitudinal Transition Study-2, 200; Slavin, Karweit, Wasik, Madden & Dolan, 1994; U.S. Department of Education, 1998).

Connection between Reading Deficits and Behavior Problems

According to Bos and Vaughn (1998), most students referred for special education services experience reading difficulties. In addition to poor academic achievement, students with reading problems are often at risk for conduct and behavioral disorders (Bennett, Brown, Boyle, Raccine, & Offord, 2003). When coupled with reading deficits, behavior problems manifest themselves in the classroom, resulting in office discipline referrals for noncompliant behavior

during academic tasks (Scott, Nelson, & Liaupsin, 2001). When these academic and behavior deficits persist, interventions become less effective, further resulting in school failure, thus producing a cycle of academic and behavioral failure that leads to negative school and life outcomes.

With the growing number of students who are at risk for academic failure not being identified as eligible for special education services, many students never receive the academic or behavioral interventions necessary for school success (Bos & Vaughn, 1998). Unfortunately, the majority of the students with behavioral and academic problems are not identified as eligible for special education services until third or fourth grade, the unfortunate point at which the probability of successful intervention has substantially diminished. Foorman, Francis, Shaywitz, Shaywitz, and Fletcher (1997) have found that 82% of struggling readers were able to improve their reading ability to within average range when they were provided with interventions in the early grades. This percentage decreased to 42% when remediation was provided in the intermediate grades. When remediation was provided in the middle school grades and beyond, the percentage fell to 15%. It has become increasingly evident that the longer academic failures persist without effective intervention, the less likely it is the interventions can be successful (Snow, Burns, & Griffin, 1998).

Built upon the underlying assumption that early intervention is key to preventing early reading and behavior failure, Scott and Lane (2001) developed a system for combining early reading and behavior prevention that focuses on prevention across students at the school-wide level. Recognizing that some students require more intense and individualized intervention for reading and behavior problems, Scott and Lane (2001) developed a three-tiered model of early prevention based on the work of Sugai and Horner (2000), whose model of positive behavior

supports included those primary, secondary, and tertiary preventions that occur specifically related to behavioral issues. Scott and Lane adapted this model in recognition of the overlap needs for universal prevention efforts in the areas of academics and behavior issues. Primary prevention systems are implemented across all students, with 80-90% of those students expected to maintain academic and behavioral success when provided these universal preventions. Secondary systems are implemented with 5-15% of students for whom primary systems have proven unsuccessful. The third level of prevention occurs at the tertiary level which focuses on interventions that are reserved for the neediest 1-5% of students for whom both primary and secondary systems have been insufficient. With the appropriate classroom supports and effective teaching strategies, early intervention has been shown to provide students at risk for reading and behavior problems an opportunity to maintain a level of academic success comparable to that of their peers (Gunter, Hummel, & Conroy, 1998; Scott et al., 2001).

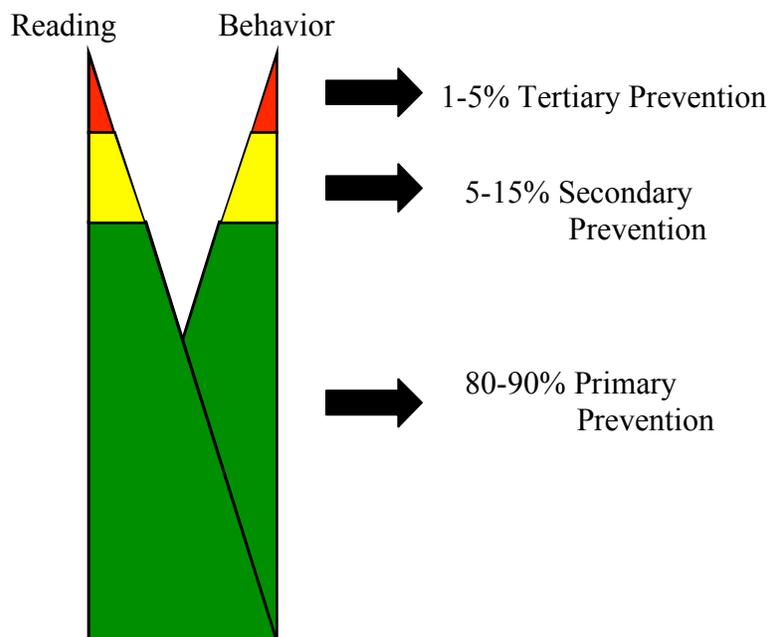


Figure 1-1. Combined reading and behavior prevention

Effective Instruction Requires Effective Classroom Management

There exists an assumption that effective teaching cannot be defined (Darling-Hammond, 1997), but interestingly, recent research on effective teachers demonstrates otherwise. In the search to define effective teaching, researchers began identifying effective teaching processes as early as the 1970s. Brophy (1973), Dunkin and Biddle (1974), and Soar and Soar (1979) began researching the process that effective teachers engage in to promote high student achievement. In classrooms with accomplished teachers, student engagement is high, and occurs as a result of a combination of classroom management skills and effective instructional techniques (Taylor, Pearson, Clark & Walpole, 1998; Pressley, 1998; Taylor, Pressley & Pearson, 2000). Teachers who effectively manage their classrooms not only demonstrate an awareness of their students' diverse needs, but also possess a set of skills necessary to meet those needs (Marzano, 2003).

Effective classroom management skills fall under three categories: (a) environmental factors, (b) instructional variables, and (c) teacher behaviors. Environmental classroom management skills relate to classroom arrangement, student grouping, and the physical attributes of the classroom (Evertson, Emmer & Worsham, 2003). Instructional variables constitute the teaching of rules and procedures, as well as planning, delivery, and methods of instruction. Teacher behaviors are related to use of reinforcement and praise, relationships of teachers and students, and teacher actions (Emmer, Evertson, and Worsham, 2003). When classroom management is implemented effectively, an increase in student engagement occurs, disruptive behaviors decrease, and use of instructional time increases, all resulting in improved academic achievement (Wang, Haertel, and Walberg, 1993). When teachers are able to spend more time on instruction and less time dealing with discipline problems, student achievement improves.

Classroom management is a key element in promoting an environment conducive to student learning (Marzano, Marzano, & Pickering, 2003).

Although there is little debate on the comorbidity of academic and behavior deficits in students (Kauffman, 1997), the causal nature of each deficit is unclear. Many researchers posit that reading deficits result in problem behaviors (Maag, 1999; Walker, Colvin & Ramsey, 1995; Williams & McGee, 1994), while others suggest that it is problem behaviors that lead to deficits in reading (Cornwall & Bawden, 1992; Gunter & Denny, 1998). Regardless of their position, researchers (e.g., Lewis, Sugai, & Colvin, 1998; Nelson, Scott, & Polsgrove, 1999; Skiba & Peterson, 2000) agree that both reading and behavioral deficits interfere with student learning. For students with challenging behaviors, reducing problem behavior is a priority, but academic instruction, specifically reading instruction, need not be overlooked in the process. Research has shown that interventions targeting academic skills may also reduce problem behaviors (Barton-Arwood, Wehby, & Falk, 2005; Coie & Krehbiel, 1984; DuPaul, Ervin, Hook, & McGoey, 1998).

Just as effective classroom management variables could be distinguished into three categories, effective reading instruction can be characterized by similar categories related to (a) environmental, (b) instructional, and (c) teacher related variables. Environmental variables relate to desk arrangement, existence of literacy centers or class libraries, and learning aids found on display (Morrow et al., 1999). Instructional variables concern the manner in which skills are taught and the balance of instructional methods (Pressley, 2002; Pressley, Allington, Wharton-McDonald, Block, & Morrow, 2001). Teacher related variables focus on components such as teacher relationships with students and use of praise or feedback (Pressley, 2002).

According to Wehby, Lane, and Falk (2003), academic instruction for students with challenging behaviors is often deserted in an effort to focus attention on the reduction of problem behaviors. Despite the limited focus on reading instruction for students with behavioral deficits, researchers addressing this issue have found promising improvements in the reading achievement of this population of students (Babyak, Koorland, & Mathes, 2000; Falk & Wehby, 2001; Wehby, Falk, Barton-Arwood, Lane, & Cooley, 2003). With recent research in the area of reading instruction for students demonstrating reading deficits suggesting that early remediation is necessary to improve academic outcomes (Adams, 1990; Snow, Burns & Griffin, 1998; Torgesen & Burgess, 1998), it may be safe to conclude that examining the combined effects of effective classroom management and reading instruction would shed light on the key elements that promote reading achievement for struggling readers.

With teachers in inclusive settings increasingly providing reading instruction to students with academic and behavioral deficits, researchers are finding that effective reading instruction is often being overlooked rather than promoted (McIntosh, Vaughn, Schumm, Haager, & Lee, 1993; Vaughn & Klingner, 1998; Zigmond & Baker, 1995). One explanation is that general education teachers often do not have the knowledge, skills, or desire to provide specialized instruction for students with learning or behavior problems (Denton, Vaughn & Fletcher, 2003). Another reason why reading instruction in these settings fails is that behavior problems in the classroom make it difficult for instruction to occur (Carr, Taylor & Robinson, 1991; Wehby, Symons & Canale, 1998).

In their research of exemplary first grade literacy instruction, Morrow, Tracey, Woo, and Pressley (1999) found that outstanding classroom management systems contributed to student learning and reading achievement. In fact, Wang, Haertel, and Walberg (1993) conducted an

extensive literature review and concluded that student achievement was most affected by classroom management. Learning cannot occur in a classroom that is governed by chaos. With an alarming 12% to 22% of all students experiencing emotional or behavioral disorders (Adelman & Taylor, 2002) and 18% of students with combined academic and behavioral deficits requiring specialized interventions (Dunn & Baker, 2002), classrooms are bursting with students with diverse needs, making a teacher's classroom management skills more important than ever. It is no surprise that many teachers report feeling inundated and deficient in the skills necessary to effectively meet the needs of all their students (Grek, 2000; Vaughn & Schumm, 1995).

Consequently, due to the recent movement toward inclusion and the development of new reading initiatives at the local and national level, reading instruction will be delivered to students with both academic and behavior problems in regular education classrooms (Coleman & Vaughn, 2000). Additionally, the lack of academic performance in reading and other content areas has gained added importance with the high academic standards imposed by the No Child Left Behind Act (2001) and the reauthorization of the Individuals with Disabilities Education Act (1997), which states that students with disabilities must participate in statewide assessments. Students with learning and behavior deficits require effective reading instruction informed by research-based practices if they are to meet the standards imposed by these initiatives.

Differentiated Reading Instruction in Today's Classrooms

To effectively meet the standards imposed by national and statewide initiatives, and to meet the needs of a diverse groups of students in the classroom, many teachers are implementing strategies associated with differentiated instruction. Webster's Ninth Collegiate Dictionary (1984) defines differentiate as "to make something different or specialized by modifying it, or to become different or specialized by being modified" (p. 205). According to Tomlinson (2001),

differentiated instruction allows students to have access to academic content through a variety of instructional approaches, groupings, uses of materials, and presentations. Teachers use a balance of whole class, small group, and individual instruction depending on the needs of the students in the classroom. Differentiated instruction allows teachers to provide access of the same core curriculum to all students so that all children can make academic progress. Tomlinson (1999) defines differentiated instruction not by the “stuff” that kids learn, but the “how” they learn. The content that students learn remains constant; it is how they learn (i.e. level of difficulty, seating arrangements, methods of presentation, and instructional strategies) that varies tremendously. By differentiating reading instruction, teachers are able to promote reading achievement while taking the different ability levels of students into consideration, thus avoiding the “one size fits all” method of instruction that does not work for all students (Schumm, 1999; Tomlinson, 2001). According to Tomlinson, instruction can be differentiated according to three elements: content (the materials or curriculum used), process (the activities or instructional strategies implemented), and product (the manner in which students demonstrate learning).

Two of the basic premises behind differentiated instruction lie within the key elements of student understanding and engagement. For students to understand what they are learning, they have to be engaged. In order to effectively implement differentiated instruction in reading and engage students throughout the learning process, an effective teacher needs to know each child’s skill level and have an idea of where the child *should* be so that he or she can reach the child where they are to move them on (Tomlinson, 1999). Successful differentiated instruction depends greatly on the reciprocal nature of understanding and engagement. To promote equitable reading instruction for all students, Torgesen (2002) supports the use of differentiated reading instruction for students of different abilities within the same classroom.

When done correctly, differentiated reading instruction can be used as a tool for effective early intervention and prevention of reading problems (Foorman & Moats, 2004). Flexible grouping is key to effective differentiation of instruction in reading because groups can be created and modified at any time according to student progress and need. For flexible grouping to be effective, teachers must engage in continuous progress monitoring so that students can be placed in groups based on informal reading assessments or curriculum based measures. Through progress monitoring and flexible grouping, principles of differentiated instruction can be implemented in reading classrooms so that all students have access to the same curriculum (Haager & Klingner, 2005).

In their research of effective differentiated instruction, Vaughn and Schumm (1997, 1998, 2000, 2001) found barriers to successful implementation of differentiated instruction. One of the barriers to successful differentiation of instruction in reading is time, a teacher's enemy. Many teachers report that time for planning activities that differentiate reading instruction for both mainstreamed and general education students is virtually nonexistent (Schumm, Vaughn, & Harris, 1997). In fact, a study conducted by Schumm and Vaughn (1992) found that only 39% of the 60 general education teachers surveyed rated their planning for students in inclusive environments as acceptable. Another barrier reported by teachers was classroom management (Moody & Vaughn, 1997; Vaughn, Hughes, Schumm, & Klingner, 1998). Teachers reported not having the skills or resources necessary to keep the rest of the students engaged while teaching students in small groups. They also reported that teaching students using a whole class format was easier to manage. Finally, teachers reported not having the skills or resources necessary to teach targeted reading skills to enhance the learning of students with varying ability levels (Vaughn, Hughes, Schumm & Klingner, 1998).

Schumm, Vaughn, and Leavell (1994) developed a framework for planning in inclusive classrooms. Their Planning Pyramid enables teachers to focus on what they expect all, most, or some of their students to learn. At the bottom of the pyramid is what all students must learn about a concept; the basics of what is presented universally to students. In the middle section of the pyramid, teachers focus on what they think most students should grasp about the concept presented. These are ideas that extend beyond the basic ideas and may include more complex concepts related to the topic. The top of the pyramid contains information that represents what will be learned by a small number of students and is based on interest and background knowledge that students may have on the topic.

Theoretical Framework

By overlaying the framework created by Schumm, Vaughn, and Leavell (1994) onto that system of prevention posited by Scott and Lane (2001), a Model of Differentiated Reading Instruction is created, taking into consideration components of early reading intervention, classroom management/behavior interventions, and planning. Recognizing that different skills and activities need to be targeted to different groups of students in the classroom, differentiated instruction can be planned for and implemented for students with a diverse group of needs. With the Model of Differentiated Reading Instruction (Figure 1-2), planning, classroom management and effective reading instruction are all work hand in hand; no single entity can stand alone without the other's support. Effective reading instruction and classroom management requires effective planning and student grouping, as evidenced in the literature (Evertson, Emmer & Worsham, 2003; Moody & Vaughn, 1997; Morrow, Tracey, Woo, & Pressley, 1999; Vaughn, Hughes, Schumm, & Klingner, 1998). From this model, however, the question arises: For students with challenging behaviors and academic deficits, can an effective teacher who

differentiates instruction using sound classroom management techniques coupled with effective instruction positively affect reading achievement?

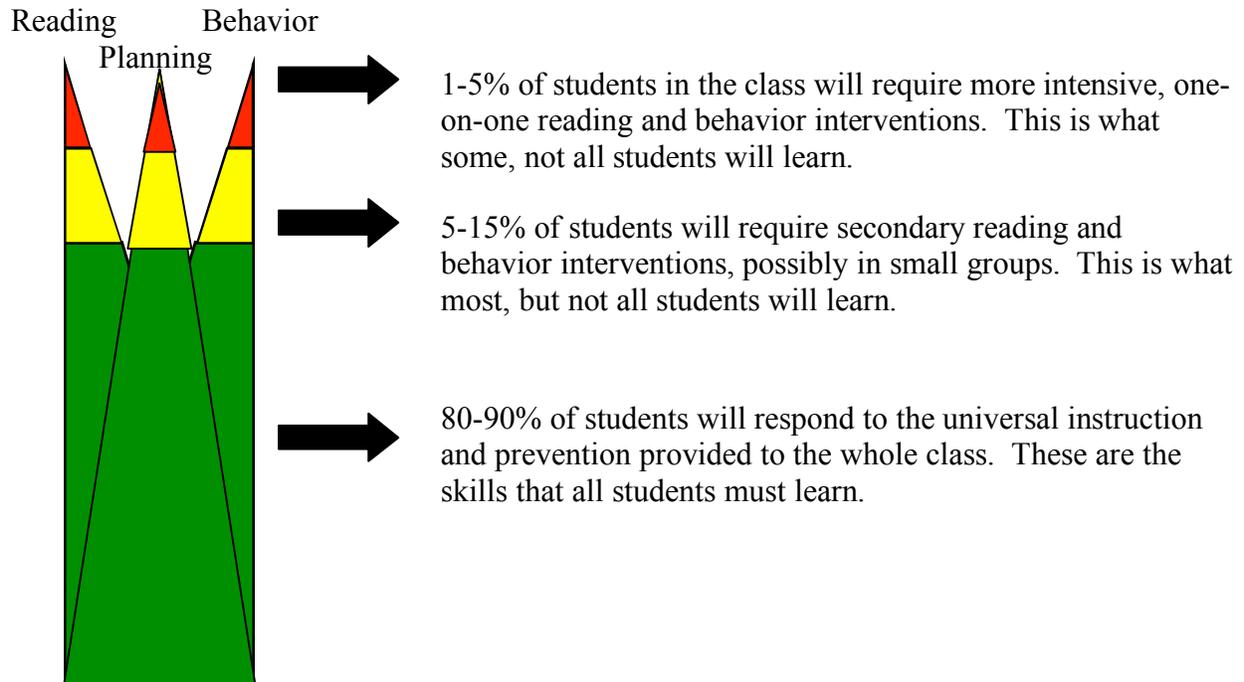


Figure 1-2. Model of differentiated reading instruction (Adapted from Scott & Lane, 2001 and Schumm, Vaughn, & Leavell, 1994)

Purpose of the Study

Research has shown that classroom management is necessary in order for learning to take place but cannot stand on its own. Instruction and classroom management must go hand in hand in order for student achievement to occur (Evertson & Harris, 1992). There is a lack of research that examines specifically how classroom management techniques can be applied to different instructional contexts, especially to reading instruction, and how the two variables affect student reading achievement or growth in reading. The purpose of this study is to examine classroom reading instruction, classroom management practices, which for the purpose of this study, will be represented by students' oral reading fluency. More specifically, the following research questions will be addressed

1. Do teachers differentiate reading instruction, and if so, is differentiation based on students' needs?
2. Is there a relationship between teachers' use of differentiated reading instruction, classroom management structures, and students' oral reading fluency?

In Chapter 2, a review of related literature is presented to provide theoretical and empirical support for differentiating reading instruction and implementing research-based classroom management techniques to promote reading growth in elementary aged students. An overview of the methods used in this study to answer these research questions is provided in Chapter 3. The results from the study are presented in Chapter 4. Finally, Chapter 5, contains a discussion of results for classroom practice and future research.

CHAPTER 2 LITERATURE REVIEW

The purpose of this review is to explore the research-based variables included in the literature on effective classroom management and quality reading instruction as they relate to student reading achievement. By first examining what researchers identify as characteristics of effective reading teachers and their ability to promote student reading achievement, then examining the variables of effective reading instruction, and finally identifying classroom management variables that promote student achievement, strategies can be identified as effective toward successful implementation of differentiated instruction in reading.

Methods to Select Reviewed Studies

A thorough review of publications from 1970 to present was evaluated through electronic databases such as EBSCOHost through Academic Search Premier, FirstSearch, and WilsonWeb. The following descriptors were used for studies on exemplary reading teachers, effective reading instruction and differentiated instruction: *reading instruction, classroom teachers and reading achievement, elementary reading instruction, effective reading teachers, differentiated instruction, and differentiating instruction*. For classroom management studies, descriptors included: *classroom management, classroom environment, classroom context, and classroom management and academics*.

The following criteria were established for inclusion in this literature review: (a) studies were conducted in elementary school settings; (b) studies took place in inclusive classroom settings (with the exception of two studies that were follow-up studies); (c) studies occurred between 1980 and 2005; and (d) literature reviews were conducted between 1970 and 2005. A total of 13 documents that addressed classroom management and reading instruction, including differentiated reading instruction, were electronically retrieved. From these 13 documents, six

additional articles were found through an ancestral search of the electronically retrieved documents. Finally, a hand search of *Elementary School Journal*, *Reading Research Quarterly*, and *Scientific Studies of Reading* dating back to 1990 yielded two articles. A total of 21 research studies were found to represent the literature on classroom management, reading instruction, and differentiated instruction.

Review of the Literature

John Dewey (1960) wrote, “Everything the teacher does, as well as the manner in which he does it, incites the child to respond in some way or another (p. 59).” Teacher effectiveness has been investigated in the continuing debate as to whether it is a reliable indicator of student achievement. Researchers (Brophy, 1986; Porter & Brophy, 1988; Schalock & Schalock, 1993) have identified characteristics of effective teachers based on student achievement data and nominations from school administrators. Effective teachers perform three functions: (a) they use effective instructional strategies, (b) they use effective classroom management techniques, and (c) they design curriculum that facilitates student learning (Marzano, Marzano, & Pickering, 2003). For the purposes of this literature review, the focus will be on the identified instructional and classroom management variables that make differentiated instruction successful. With the accountability measures imposed by the No Child Left Behind Act (2001), curriculum is mandated at the state or local level, leaving teachers little room to design curriculum that meets the needs of their diverse classrooms. To deal with the demands of student diversity and state testing mandates, teachers adapt or modify required curricular materials and rely on strategies such as differentiation of instruction to meet their students’ needs. Despite this limitation, effective teachers still have long reaching effects on student behavior and achievement. In fact,

an effective teacher influences student achievement twice as much as curriculum policies or assessment guidelines (Marzano, 2003).

Effective Teachers are Critical to Student Achievement

In a study conducted by Wright, Horn, and Sanders (1997), researchers found that effective teachers were effective with students regardless of whether those students demonstrated low or high ability levels, and that classroom teachers had the greatest impact on student achievement. Using the Tennessee Value-Added Assessment System (TVAAS) to measure the effects of teachers on student achievement across grades 2-8, over 60,000 Tennessee students' achievement test score data were analyzed. Although a variance in teacher effectiveness was found (ranging from least effective to most effective) teachers played a significant role in student achievement in mathematics, reading, language arts, social studies, and science. After analyzing student achievement test scores compiled from 1990 to 1996 and correlating those data with school principals' ratings of teachers on a scale of low, average, to high in effectiveness, Wright et al. found that the most effective teachers were able to raise student achievement scores during one academic school year. Additionally, they discovered that regardless of whether students were ranked low, average, and high in ability level, highly effective teachers could still affect student achievement. One limitation of this study was that the researchers relied solely on student achievement data to identify effective teachers. Direct observations of teacher quality were not used to determine how quality instruction affected student achievement. Teacher observations, along with student data, would allow for a more thorough understanding of how teachers affect student achievement.

Haycock (1998) compared the Tennessee student data compiled by Wright et al. (1997) with similar findings from independent researchers in the Dallas Independent School District and

the Boston Public School System. When she examined the student achievement data compiled on teachers classified as most effective or highly effective, Haycock found that students classified as low achieving increased their achievement level by as much as 53 percentile points when taught by a highly effective teacher over a one year period. In contrast, students in classrooms with less effective teachers gained approximately 14 percentile points over a period of one year. These results are remarkable when considering that students naturally gain an average of six percentile points due to maturation alone over a period of one year (Hattie, 1992; Cohen & Davis, 1987). Additionally, the study addressed the importance of having an effective teacher over a period of three years. Haycock's examination of the data revealed that for a group of low achieving students assigned to highly effective teachers in grades four through six, average reading scores from the 59th percentile to the 76th percentile over the course of three years. Conversely, a group of low achieving students assigned to less effective teachers for the same three year period experienced a drop in reading scores, falling from the 60th percentile in reading to the 42nd over a period of three years. From the research conducted on teacher effectiveness, Haycock (1998) points out that researchers need to go one step beyond making the link between teacher effectiveness and student achievement. Specific teacher qualities and characteristics need to be identified so that they may be addressed in teacher preparation and professional development programs. Although Haycock identifies the standards for raising teacher quality (accountability in teacher preparation programs, qualified teachers for minority students, parent education, and better recruitment), specific methods for achieving these standards while still meeting the teacher shortage are not addressed.

One of the barriers to identifying these teacher qualities is the variation of "effective" classroom variables that can be found in classrooms across the country. Pianta, LaParo, Payne,

Cox, and Bradley (2002) conducted research with 223 Kindergarten classrooms in three states. One child was observed in each classroom using the Classroom Observation System for Kindergarten (COS-K), which screened for such variables as management of time, teacher-student interactions, and classroom climate. Additionally, teachers rated their students' social and academic outcomes and provided descriptive information regarding their own educational and teaching backgrounds. Demographic information on the classroom and school was also collected.

Findings suggest that there is significant variability in the quality of instruction students receive in Kindergarten classrooms. The average Kindergarten student was involved in teacher directed activities during 44% of the observed interval, center time during 18% of intervals, seatwork during 17%, transition time during 11% of intervals, and free time during 8% of the intervals observed (Pianta et al., 2002). Even more disturbing, these researchers found that in the 223 classrooms observed, the average Kindergarten child was exposed to academic teaching during 21% of the intervals observed, with whole group instruction taking up 44% of the intervals and only 18% reserved for small group and individual instruction. Alarming, 71 of the Kindergarteners observed were never read aloud to during the intervals observed, teaching of social rules occurred during only 1% of the intervals observed, and 140 of the children observed were never exposed to the teaching of social rules. It should be noted, however, that although these findings are startling, direct observations lasted only 3 hours in each of the 223 kindergarten classrooms observed. The fact that this limited amount of time could sample "typical" instruction is debatable.

Variations in what constitutes "effective instruction" were also found in a national study conducted by the National Institute of Child Health and Human Development Early Child Care

Research Network (NICHD ECCRN, 2005), wherein 780 third graders from more than 250 school districts in cities located around 10 data collection sites were observed. Observers used the Classroom Observation System for Third Grade (COS-3) to identify specific experiences of children in these classrooms and features such as the setting, activities, teacher behavior, and student engagement. Observations began with the start of the school day and lasted for about 6 hours, broken down into eight 25-minute intervals. Teachers also completed a questionnaire about their teaching experience, education, and professional development experiences. The Teacher Self-Efficacy Scale was also used to measure teacher beliefs and self-efficacy.

Based on their observations, the NICHD ECCRN (2005) researchers found that the average classroom was engaged in whole class instruction for 53% of intervals observed while independent seatwork activities made up 39% of intervals observed. The students were exposed to varied instructional activities, with 48% of the intervals observed spent on subject matter relating to literacy, 24% spent on math, and transitions or management taking up 18% of intervals observed. In examining teacher behaviors during the observations, the researchers found that teachers interacted with students during 10% of the intervals and engaged in basic skills instruction during 37% of the intervals. Although students were engaged for nearly 67% of the intervals observed, engaged time often occurred during basic skills instruction. During only 5% of the intervals observed did students have the opportunity to collaborate with peers, and in only 7% of the intervals were students engaged in activities that promoted higher order thinking skills such as analysis or inference.

These data suggest that there is variation not only in the implementation of effective practices, but also the quality of instruction for children in elementary school across the United States, and that children are not assured a high-quality education during these years (NICHD

ECCRN, 2005). The finding that typical third graders are not offered a variety of instructional experiences throughout the day and that instruction appears to focus on basic skills instruction indicates the need for more detailed discussions of what constitutes quality teaching and instruction in the elementary grades. Despite the fact that researchers found limited academic engagement in classroom observed, quality of instruction was not noted, thereby limited the ability to make comparisons between type and quality of instruction versus student engagement.

Effective teachers provide exemplary classroom instruction and demonstrate classroom management skills that contribute to student learning. Wright et al., (1997) and Haycock (1998) found that effective teachers affect student achievement regardless of student ability level and highly effective teachers can raise student achievement by as many as 53 percentile points over a period of one year. In contrast, Pianta et al. (2002) and the NICHD ECCRN (2005) found that teacher use of exemplary practices varies and that most teachers focus on basic skills practice as a result of federal and state testing mandates. A summary of these studies is included in Appendix A.

Effective Teachers are Exemplary Reading Instructors

Michael Pressley and his colleagues conducted a series of studies to identify teacher qualities that contribute to student achievement (Morrow, Tracey, Woo, & Pressley, 1999; Pressley, Rankin & Yokoi, 1996; Pressley, Wharton-McDonald, Allington, et al., 2001; Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998; Pressley, Yokoi, Rankin, Wharton-McDonald, & Mistretta-Hampston, 1997; Wharton-McDonald, Pressley & Mistretta-Hampston, 1998). These studies yield practices that related to specific instructional strategies, classroom management techniques, and teacher-student interactions. These studies focus on specific characteristics of teachers from classrooms with high reading achievement. Several of

these studies not only identified qualities of exemplary reading teachers, but also focused on instructional characteristics that contributed to student reading achievement.

In this series of studies conducted, Pressley and his colleagues examined elementary teachers' literacy instruction to identify those elements that were consistent across classrooms with high student achievement. In their 1996 and 1997 studies, the researchers initiated questionnaires of 83 K-2 and 33 fifth grade teachers to learn how teachers themselves characterize their literacy instruction. In both studies, teachers were nominated by their supervisors as excellent being reading teachers, and were asked to respond to two questionnaires. The first questionnaire was designed to elicit responses based on what the teachers considered to be essential components of literacy instruction for average and struggling readers (Pressley, Rankin & Yokoi, 1996; Pressley, Yokoi, Rankin, Wharton-McDonald, & Mistretta-Hampston, 1997). From this list, researchers generated a second questionnaire that asked respondents to rate the literacy practices on a seven-point Likert scale, ranging from "never" to "several times daily."

Both primary and intermediate elementary teachers indicated that their practices included print rich environments, diverse instructional methods, a balance of whole language and skills instruction, mixed grouping practices (whole and small group instruction as well as individualized instruction), and integration of reading into other content areas (Pressley, Rankin & Yokoi, 1996; Pressley, Yokoi, Rankin, Wharton-McDonald, & Mistretta-Hampston, 1997). Contrary to the watered down academic approach often taken with students who experience academic difficulties (Allington, 1991), these exemplary reading teachers reported that they provided the same instruction for struggling readers, but adapted methods to meet the needs of students with special needs. These studies have limitations in that their sample included only

exemplary reading teachers nominated by supervisors who are members of the International Reading Association. The researchers acknowledge that their selection criteria was biased and that most students do not receive reading instruction from teachers deemed as “exemplary.” .

Wharton-McDonald et al. (1998) studied nine first grade teachers who were nominated by language arts coordinators as being either outstanding or typical literacy instructors. Observations and interviews conducted in the classrooms of the most effective teachers revealed that student reading achievement was highest when the teacher provided a balanced approach to reading and writing with basic skills instruction. Specifically, teachers blended direct skills instruction with whole language activities, provided a literature rich environment for students with a variety of book genres present, and used different instructional groupings according to the lessons taught. Additionally, teachers in classrooms with high achievement were able to minimize problem behaviors by using systems of behavior management. Teachers’ use of classroom behavior systems and effective time management led to increased student engaged time, which is linked to high rates of achievement. One explanation of these effects, and coincidentally one limitation of this study, is that the sample of teachers included in this study all taught in suburban school districts with similar populations. This would limit this study’s generalizability to more diverse populations of students. The researchers acknowledged that including teachers that teach students with diverse backgrounds may yield different results.

Pressley et al. (1998) continued their research of exemplary reading teachers by observing and interviewing fourth and fifth grade teachers from four school districts in Upstate New York. A total of 10 teachers were nominated by language arts coordinators based on their students’ achievement test results, enthusiasm for teaching, sampling of students’ work products, use of current trends in the field of reading, and professional development activities. Each

teacher was observed for 90 minutes twice per month during his or her scheduled language arts block. Observers gathered field notes on instructional procedures, teacher-student interactions, and the layout of the classroom. Interviews took place twice during the study and lasted for 60 to 90 minutes each, with interviewers clarifying instructional practices observed in the classroom.

Data from the observations and interviews was analyzed and coded to determine if there were common themes in the classrooms studied. Pressley et al. (1998) found that these exemplary teachers balanced reading instruction with skills practice and authentic literacy experiences. Further, they provided literature rich environments with many opportunities to collaborate with peers and managed classrooms using a variety of grouping methods. Classrooms varied in relation to the extent to which students were encouraged to self regulate their time and assignments, as well as the teacher's use of behavior management plans. Teachers were also varied in the way that students were motivated to learn. In some classrooms, students' learning was encouraged as a means to excel on standardized tests, while in other classrooms the focus of learning was promoted as an intrinsic reward. Throughout their findings Pressley et al. stressed that fourth and fifth grade classrooms offer complicated literacy environments, and that teachers are faced with the challenges of not only managing a diverse group of learners with varying backgrounds, but also keeping up with the current trends in reading research and applying those methods in their classroom practice. Although the study's sample size was small (only ten teachers were included), the researchers included teachers from schools in districts that were characterized as low, middle, and upper middle class to improve on their previous study.

In an effort to identify exemplary reading teacher qualities, Morrow et al., (1999) conducted similar research in first grade classrooms in New Jersey. Six first grade classrooms

were observed across three school districts. School administrators nominated teachers based on students' reading achievement, sound educational philosophy, student engagement, and positive feedback from colleagues. Each classroom was observed for 25 hours over eight separate visits during the teachers' language arts blocks. The observers recorded information regarding literacy instruction that was taking place, paying close attention to features such as instructional methods and groupings, social interactions of teachers and students, assessment, classroom management, student engagement, and the classroom environment. Additionally, each of the teachers was interviewed regarding their literacy practices and philosophies.

The observations and interviews conducted yielded valuable information about what exemplary reading teachers do during reading instruction. Each of the classrooms focused on literacy rich environments, a variety of reading experiences ranging from independent reading to whole class reading instruction, multiple opportunities to engage in writing, explicit skills instruction, cross-curricular reading connections, and effective classroom management (Morrow et al., 1999). Overall, teachers who demonstrate exemplary literacy practices engage in balanced reading instruction to meet the diverse needs of the children in their classrooms. The researchers also found that without implementing successful classroom management techniques, reading instruction cannot occur. This study identified specific teacher characteristics that supported student reading achievement, and described how teachers meet the needs of the diverse population of the students served. In order to generalize this study's results, additional information is needed to determine school district characteristics and variability of the student population at the schools observed.

Pressley and associates (2001) continued their study of first grade literacy instruction by extending the research from two of their previous studies: Pressley et al. (1996) and Wharton-

McDonald et al. (1998). Researchers extended their research beyond Upstate New York to include New Jersey, Wisconsin, Texas, and California. Additionally, the newer study included pairs of teachers nominated by administrators with one identified as effective at providing high quality reading instruction and the other selected as a typical reading teacher. Both teachers taught students of diverse backgrounds and ability levels. Teachers were observed during reading instruction for 15 to 30 hours at each site, with observers paying close attention to methods of instruction, student groupings, teacher-student interactions, and management practices.

Formal interviews took place with each pair of teachers, with the focus being on clarification of practices observed during reading instruction. Based on the observations, teachers were ranked in order from most effective to least effective. Researchers then compiled a list of teaching behaviors observed from the five most effective teachers, resulting in 221 teaching behaviors that characterized effective instruction (Pressley et al., 2001). The most effective classrooms were managed effectively, provided a positive environment, included balanced skills and whole language instruction, provided scaffolded instruction, encouraged self-regulation in students, and connected reading to other content areas (Pressley et al., 2001). Excellent classroom management was the most commonly observed teacher characteristic in the most effective classrooms. Researchers stressed that this study did not place emphasis or support the use of any one type of literacy instruction over another and that balanced literacy instruction is supported by this and previous studies. Although researchers identify quality literacy instruction, information is not provided on how these teachers became exemplary classroom teachers. If there continues to be a focus on how to create effective teachers, research needs to

include information about how these teachers were prepared and what they do to become “exemplary.”

In a case study conducted by Walpole, Justice, and Invernizzi (2004), a small elementary school of 320 students was the focus of research for its ability to implement research based literacy practices with its diverse group of students. The teachers at this school were identified as exemplary based on their ability to integrate curricular mandates with authentic literacy experiences, make instructional decisions based on student achievement data, and make effective use of small group instruction. These researchers found that teachers were successful when they differentiated instruction to address the many skill levels of their diverse students. Small group and individual instruction was provided in addition to whole group instruction so that each student’s needs could be met. Efficient provision of support in small group and individual instructional settings, along with effective management were viewed as essential ingredients of teacher success. Although effective management was addressed as key to differentiation of instruction, specific techniques were not addressed along with methods for how teachers manage their classrooms during small group reading instruction.

In the studies reviewed by Pressley and colleagues and Walpole et al., researchers consistently found that effective reading instructors differentiated instruction by providing a variety of instructional methods and grouping methods. Pressley et al. (1996) and Wharton-McDonald et al. (1998) found that exemplary reading instructors also consistently used classroom management practices that supported instruction and resulted in higher student achievement. Additionally, researchers found that in classrooms where reading instruction was engaging and classroom management practices were used, problem behaviors were reduced

(Pressley, 1998; Wharton-McDonald et al., 1998). See Appendix A for a summary of these studies.

Effective Teachers Differentiate Reading Instruction

Children enter school with a variety of background experiences and a range of ability levels. Students who have limited access to books or other literacy activities at home are often at risk for reading difficulties when they enter school. Although all classrooms contain some range of student ability, the gap in at-risk students' reading ability does not disappear even after the first year in school (Ornstein, 1995). If not diagnosed through early assessment or addressed through appropriate instruction in the first years at school, this gap in reading knowledge widens, resulting in what has been called the "Matthew Effect" in reading (Rayner, Foorman, Perfetti, Pesesky, & Seidenberg, 2002; Stanovich, 1986). Without early intervention, the "Matthew Effect" continues to cause additional reading deficits until these struggling readers reach an age where the odds of ever developing literacy skills are shockingly low. Eventually, this can lead to a gap in achievement on state and local standardized tests (McGill-Franzen, Zmach, Solic, & Zeig, 2006).

This gap in the reading abilities of students from diverse backgrounds has been the focus of many researchers and educators, especially with the passing of the No Child Left Behind Act (U.S. Department of Education, 2001), the latest national reform effort to address literacy instruction and the gap in achievement levels between high and low performing students. Studies have been conducted examining exemplary literacy teachers' practices that helped researchers identify evidence-based practices, including small-group differentiated reading instruction. Researchers found that the most effective reading teachers focused more on small-group than whole-group instruction (Taylor, Pearson, Clark, & Walpole, 2000; Taylor, Peterson,

Pearson, & Rodriguez, 2002b). The research of Pressley and his colleagues demonstrated that outstanding teachers of literacy used a combination of whole-group, small-group, and individualized instruction. These teachers also adapted reading instruction to meet individual student needs. In other words, these teachers differentiated instruction based on the needs of their students (Pressley et al., 1998; Pressley, Rankin, & Yokoi, 1996).

According to Tomlinson (1999), an effective teacher who differentiates instruction knows where each student in the classroom is on levels of knowledge, skill, and understanding as well as where each child needs to progress. Differentiating instruction is not a method or a strategy but a way of thinking about instruction in the classroom. When thought of as a philosophy of teaching (how) rather than a prescribed method for doing things (what), differentiated instruction can provide a way for every student to have access to the core reading curriculum in every classroom. Differentiation includes a variety of teaching methods, including whole class, small-group, and individual instruction, but it does not require individualizing instruction for every student in the class. Although students can work individually in the classroom, differentiated instruction should not be thought of as individualizing instruction. Rather, it embodies a set of beliefs that enables the teacher to address the unique skills and challenges of diverse student populations. Differentiated instruction does not promote a one size fits all instruction, nor does it require individualized planning. Instead, differentiation requires that teachers plan and account for both the differences and the commonalities of students.

In their 1993 study of 60 general education teachers, McIntosh, Vaughn, Schumm, Haager, and Lee examined the way in which teachers accommodated students with disabilities in general education classrooms. Participants were 60 general education teachers of grades K-12 from a large southeastern school district. There were 20 teachers from each of three grade level

groupings: elementary, middle, and high school levels. Each teacher identified one student with learning disabilities from their classrooms to participate and parental permission was obtained for inclusion in the study. Teachers were observed for 50 minutes during each of the three classroom observations that took place using the *Classroom Climate Scale*, an observation tool that was developed by the researchers for this study. The tool was created to measure teacher behaviors, student behaviors, student participation, and overall classroom climate (McIntosh et al., 1993). Additionally the *Classroom Climate Scale* (CCS) was piloted in three stages throughout the study so that interrater reliability could be established.

In addition to teacher and student behaviors, researchers were interested in the way teachers modified assignments, arrangements, grouping, and other classroom related elements for students with disabilities. Overall, the researchers found that mainstreamed students received the same attention, assignments, seating, materials, and activities as the general education students (McIntosh et al, 1993). The troublesome part of this finding, however, is that no modifications were made for the students with disabilities. Whole-class instruction was the norm, and mainstreamed students were rarely engaged or participated in the activities or lessons being provided by the teacher. Because the primary mode of instruction was large-group and the material was not adapted to meet the needs of different students, most of the students with learning disabilities were not engaged in the learning process in these classrooms.

Although these findings spurred future research in the area of student grouping and differentiation of instruction by Vaughn, Schumm, and associates, limitations and unanswered questions contributed to studies that informed the field in this area of research. For example, the observations that took place occurred during social studies and science content area instruction. Additionally, researchers did not examine student learning gains throughout the study. Future

research would focus on how much students are learning in general education classrooms where differentiation of instruction is not occurring and how teachers embark on differentiating instruction in the area of reading for students with learning difficulties.

Teachers' perception of student grouping during reading instruction was the topic of a study conducted by Moody and Vaughn (1997). Additionally, researchers were interested in the way in which teachers differentiated reading instruction for students in inclusive classroom settings. Participants were 29 3rd grade general education teachers and the 20 special education teachers who provide support for them on a daily basis. The study took place in a large urban school district located in the southeastern United States. Researchers conducted 60 minute individual interviews and held 75 minute focus groups discussions with the participating teachers. Researchers served as the moderators of the interviews and focus group discussions, and both were audio-taped for transcription.

Through the interviews and focus group discussions, the researchers found that (a) most teachers reported using whole class-grouping for reading in general education settings, (b) general education and special education teachers were divided on whether to use homogeneous or heterogeneous grouping practices, and (c) teachers reported that classroom management played a role in their decision to use whole-class rather than small-group reading instruction. When discussing ability grouping, teachers felt that high achievers benefited more from heterogeneous ability grouping, and that homogeneous grouping did not make the low performing students feel as inadequate (Moody & Vaughn, 1997). Additional significant findings revealed that the teachers interviewed reported that they should be the ones to decide how to group students, and that they would benefit from research that focuses on instructional

strategies for working with small groups, as well as strategies to manage the rest of their students when implementing small group reading instruction.

This study yielded important information regarding what teachers need to successfully differentiate reading instruction in inclusive settings. One important piece missing, however, was teacher observations. It is with extreme caution that researchers should rely purely on teacher reports and discussions to inform educational research. In a subsequent study, Schumm, Moody and Vaughn (2000), found that although teachers reported using small-group reading instruction, observations revealed that was not the case. Students' desks were arranged in groups of four, but small group instruction did not take place in the classroom. Although teachers recognized that small-group instruction was better than whole-class instruction, they reported using small-group instruction simply based on how students' desks were organized. Teachers identified important elements to address in future research studies, one of which including providing teachers with professional development activities that would involve teaching elements of small-group reading instruction.

In response to their previous studies, Vaughn, Hughes, Schumm, and Klingner (1998), implemented a two-year study in which teachers were taught four instructional practices to assist them in the teaching of reading and writing in their elementary inclusive classrooms. Participants were seven general education teachers who taught in two public elementary schools in a large urban southeastern school district. The schools had recently adopted a consultation/collaboration model of inclusion in which certified special education teachers were assigned to general education teachers for 60 to 90 minutes per day during reading and mathematics instruction. Teachers identified specific reading and writing strategies that would help them with instruction. Teachers were trained on the use of these strategies through professional

development seminars that were offered once per nine-week block. During each nine-week block, teachers attended a day-long workshop regarding each topic (The Writing Process, Collaborative Strategic Reading, Class Wide Peer Tutoring, and Making Words) and then received two follow-up meetings that lasted three hours each. Teachers used that time to ask questions regarding the intervention and provide encouragement to other teachers by discussing successful implementation procedures.

Through teacher interviews, validity checklists, implementation barrier checklists, and researcher logs of teacher observations for data collection, researchers found the participating teachers (a) wanted instructional practices that could be used in whole class instruction for easy implementation and planning, (b) learned about the instructional practices but did not know how to effectively differentiate those practices with struggling readers or writers, (c) modified their instructional practices to include those skills deemed as important for success on upcoming standardized tests, (d) continued to use whole class instructional grouping even with the support of an additional teacher (the special education resource teacher) in the classroom and (e) reported lack of time as main cause for not implementing the instructional practices learned because they spend too much time with transitions and classroom management issues (Vaughn et al., 1998).

The most important finding that came from this study was that, even though teachers report knowing very few instructional practices to enhance the skills of struggling readers, once taught and provided those strategies, they still do not know what it “looks like” to implement those strategies. Teachers were unable to make modifications, alter grouping practices, or provide additional support to diverse learners after being taught the strategies. Of additional importance was the finding that time and classroom management were reported as barriers to successful implementation of the strategies taught to differentiate reading and writing instruction,

even with the support of the special education teacher in the classroom. No discussion was made on how to use the collaboration of these two teachers as a tool to help teachers differentiate reading and writing instruction, or of the grouping practices of teachers with who are trained to work with students with reading difficulties. The next two articles focus on the prevalence of small group differentiated reading instruction by teachers who are certified in special education.

In a series of studies, Vaughn, Moody, and Schumm (1998) and Moody, Vaughn, Hughes, and Fischer (2000), examined the ways that special education teachers differentiate reading instruction in elementary resource room settings. Participants in first study were 14 special education resource room teachers and their students who attended an elementary school in a large urban school district in the southeastern United States. A total of 82 students participated in the study and qualified for special education services according to their district's protocol. Stanford Achievement Test scores were collected on each of the participating students, both from the previous school year and at the end of the year during which the study took place. Teacher interviews, observations using the CCS, and teacher self-reports were used to determine what reading instruction looked like in the special education resource room.

From the previous three studies, the researchers expected reading instruction to look much different than what was observed in general education classrooms. General education teachers reported not having the skills or training to implement instructional or classroom management strategies for students with special needs (Moody & Vaughn, 1997; Vaughn et al., 1998). Considering that teachers who are certified to teach students with special needs must have training that focuses on differentiating instruction for diverse learners and managing students with special needs, results were quite disheartening. First, 11 of the 14 teachers used whole class instruction followed by independent seatwork during reading instruction. Second,

despite the fact that teachers discussed the importance of attending to the learning styles of students and providing them with different modes of instruction, differentiation took place in only a few cases in which different materials were provided for students during independent seat work activities. Additionally, after reporting on the importance of decoding and phonics instruction few teachers were reported explicitly teaching the skills. Not only was phonics and decoding instruction nonexistent, from the 41 teacher observations that took place, comprehension strategy instruction was only observed once. Finally, when comparing student SAT scores from the end of the previous school year to the end of the study year, students in the study made very little or no growth in reading.

As a follow up, Moody, Vaughn, Hughes, and Fischer (2000), researchers recruited six of the 14 teachers from their previous study to participate in a study that examined their instructional and grouping practices in reading, as well as the reading achievement of the students in their classrooms. They sought to discover how these teachers' practices changed since the previous study and what their perspectives were on special education for students with reading difficulties. Teacher interviews, observations using the CCS, and self-reports were once again used in the same manner as the previous study. Additionally, students were administered the Test of Reading Fluency (TORF) and subtests of the Woodcock Johnson Tests of Achievement Revised (WJ-R) in place of the Stanford Achievement Test scores.

Through four teacher observations and the checklists that teachers completed prior to each observation, as well as the interviews, researchers found that only half of the teachers in the follow-up study used less whole class instruction and relied more on small group and peer tutoring during reading. These teachers differentiated reading materials and instruction to match students' needs. Those teachers who continued to rely on whole class instruction reported that

small group and individualized instruction made it too difficult to manage the rest of the class. Instruction was not differentiated because they reported that it should be embedded within the context of whole class instruction. Sadly, the inconsistency in instruction at these two schools was reflected in student achievement scores. Students in these classrooms made very little reading gains in fluency on the passage comprehension subtest of the WJ-R, despite a average gain of 19.36 words per minute during the study. These students should have made gains of 30 or more words per minute, indicating they made little growth in fluency. One limitation to the findings of these students scores, however, is that the scores were averaged together, making it difficult to compare the achievement of students from classrooms in which teachers differentiated instruction with those that did not. Future research would benefit the field if achievement scores could be compared between classrooms in which reading instruction is differentiated and those that it is not.

In both of these studies, researchers expected to find something different in reading classrooms where teachers are expected to be fully trained to meet the needs of students with diverse learning needs. What they found reiterates research findings of Baker and Zigmond (1990) and Good and Brophy (1994) in which differentiation of instruction was virtually nonexistent in both regular and special education classrooms, and teachers reported the same issues as barriers to implementation: lack of time, little knowledge of strategy instruction, and limited classroom management skills.

Schumm, Moody, and Vaughn (2000) report data from two studies, in which they examined first the reading instruction practices of 29 third grade teachers and second, the academic and social outcomes of their students. Study 1 consisted of a series of interviews, observations using the CCS, and teacher self-report checklists. Findings indicate that despite the

fact that teachers reported using small groups (mixed-ability and ability), observations revealed that 21 of the teachers used whole class instruction during reading. Materials were not differentiated for students and all students were expected to use the same basal regardless of level. In three classrooms where small group instruction took place, materials were differentiated. In four of the classrooms where small groups were used, differentiation of materials did not occur as grouping was used only as a means of lowering the student-to-teacher ratio. In classrooms where whole class instruction dominated, an additional adult (resource teacher or paraprofessional) was in the room during more than half of the observations (Schumm et al., 2000). In interviews, teachers reported they continued to use whole-class instruction because of (a) school/district policy, (b) lack of resources, (c) convenience of whole-class instruction in planning and classroom management.

With only four of the 29 teachers using differentiated reading materials, researchers sought to find the implications of this practice on their students. Each teacher was asked to identify two children from each of the following identifying categories: high achiever (HA), average achiever (AA), low achiever (LA), and learning disabled (LD). Using the Kaufman Test of Educational Achievement (KTEA) decoding and comprehension subtests to measure reading achievement, the Piers-Harris Children's Self-Concept Scale to measure self-concept, and the Elementary Reading Attitude Survey (ERAS), researchers obtained interesting results. High achieving students made substantial progress in both decoding and comprehension while average achievers made gains only in decoding. Low achievers and students with learning disabilities made little or no gains on both measures. On the self-concept scale, none of the students in any of the achievement groups made significant changes in self-concept from fall to spring during the study. Finally, overall, students from all achievement groups demonstrated a

decline in their attitudes toward reading at school and at home from fall to spring (Schumm et al., 2000).

In summary, the research articles reviewed on differentiation of reading instruction yielded important findings and implications for future research. Although the findings were significant to informing the field of research in the area of reading instruction for students with diverse abilities in inclusive classroom settings, the researchers consistently failed to make comparisons between the students in the classrooms where reading instruction was differentiated consistently and those where whole class instruction was the norm. Research needs to focus on providing classroom teachers with a better understanding of differentiated instruction methods, classroom management techniques, and instructional practices for different grouping methods. Additionally, teachers continue to voice their opinions and need for reading practices that are informed by research but are easy to implement outside the research setting (Schumm et al., 2000). Teachers report that they know what is good for their students, but do not know how to provide it. See Appendix A for a summary of these studies.

Effective Teachers are Classroom Managers

Duke (1979) defined classroom management as "...the provisions and procedures necessary to establish and maintain an environment in which instruction and learning can occur (p. xii)." In classrooms with effective teachers who positively affect student achievement, researchers (e.g., Morrow et al., 1999; Pressley et al., 1996, 1997; Wharton-McDonald et al., 1998) found that classroom management was a necessary component of effective reading instruction. In addition to the array of instructional strategies they employ, effective teachers differentiate instruction not only by providing a balance of basic skills instruction and authentic literacy experiences, but also by using whole group, small group, and individual instructional

methods to increase student achievement (Morrow et al., 1999; Pressley et al., 2001; Pressley et al., 1996, 1997; Walpole et al., 2004; Wharton-McDonald et al., 1998). Those teachers identified as effective also provided literature-rich classroom environments, interacted with students positively, and provided a balanced approach to grouping students through differentiation of instruction. In order for differentiation of instruction to take place, the elements of effective teaching must be present along with the parallel components of efficient classroom management that facilitates instruction and student achievement. The following review of research on classroom management addresses studies that identify effective classroom practices that teachers use to facilitate the success of differentiation of instruction in reading. Practices such as teaching rules and procedures, establishing clear expectations and consequences, arranging the classroom environment, and maintaining student engagement are discussed.

Teachers have been using elements of classroom management since the days of the one room schoolhouse. The 1970s brought about a trend toward more systematic research of classroom management practices. Kounin (1970) conducted the first large-scale study of classroom management. Using 49 videotapes of first and second grade classrooms, Kounin (1970) examined differences between effective and ineffective teachers and their ability to deal with discipline problems in the classroom. What he discovered was, effective teachers did more to *prevent* problem behaviors *before they occurred* and that effective and ineffective teachers did not differ in the skills they used once problem behaviors occurred (Kounin, 1970). Additionally, he identified four critical elements of effective classroom management. First, “withitness” was observed in classrooms with the most effective teachers. “Withitness” refers to teachers’ awareness of problem behavior and the immediate attention the teacher pays to that behavior (Kounin, 1970). Second, effective teachers were able to deliver instructional lessons smoothly,

while keeping the momentum of the lesson going to maintain student engagement. Third, students were aware of behavioral expectations at all times. Finally, effective classroom managers provided challenging independent tasks for students, and varied tasks to keep students motivated.

Kounin's (1970) findings indicate that there exist a set of management variables that can highly predict student behavior in the classroom. Importantly, these conclusions are correlational in nature, and it cannot be said for sure that these teacher variables solely affected student behavior. Student characteristics were not considered in this study, making it difficult to determine if this study's results can be generalized to other classrooms, teachers, or students. Despite these limitations, Kounin's (1970) study set the stage for future research in the area of classroom management.

Carolyn Evertson began studying elements of effective classroom management in 1976 with Jere Brophy. They compared effective teachers with average teachers in their study of 30 elementary teachers whose students demonstrated consistent academic achievement, and 38 teachers of students with atypical academic performance. The results of their study were published in a book, *Learning from Teaching: A Developmental Perspective*, in which they concluded that classroom management skills were significant to measuring teacher effectiveness and are necessary contributors to student learning (Brophy & Evertson, 1976). This research was just the first of many studies conducted by Evertson and her colleagues, who eventually laid the groundwork for many of the research based classroom management practices employed by teachers across the country.

In a series of studies conducted at the Research and Development Center for Teacher Education at the University of Texas at Austin, Evertson and her colleagues began researching

how critical elements of classroom management affect student achievement. In their 1980 study, Emmer, Evertson, and Anderson observed 27 elementary teachers in eight schools. Using the *Classroom Narrative Record*, a form used to record observations in narrative form, observers focused on characteristics such as class rules, room arrangement, use of materials, transitions, behavioral consequences, grouping patterns, procedures, feedback, and teacher responses. In addition to narrative records, observers measured student engagement using the *Student Engagement Rating* (SER). This tool measured student engagement in 15 minute intervals and allowed observers to record the number of students who were off task during a particular activity. A final measure, the *Component Ratings* was used to compare groups of teachers on a list of classroom management variables developed by researchers.

Using student achievement test data from the previous year and the data collected during the observations, Emmer et al. (1980) separated the teachers into two groups: more effective and less effective. These two groups exhibited striking differences in both management styles and student achievement. From the first day of school, the more effective managers (a) had a system of rules and procedures in place and taught those rules and procedures explicitly, (b) addressed problem behaviors as soon as they occurred, and (c) provided initial academic activities that ensured student success. These practices resulted high rates of student engagement coupled with low rates of off-task behavior in these classrooms. Beyond the first days of school, the more effective teachers (a) had well-arranged classrooms to facilitate movement and access to materials and had procedures in place for dealing with unplanned situations. The study's findings demonstrate the importance of having a system of classroom management in place at the beginning of the school year, but researchers acknowledged that additional research should be

conducted to determine how teachers maintain a precise system of classroom management throughout the school year.

As a follow up, Evertson, Emmer, Sanford, and Clements (1983) conducted research in two urban school districts located in the southwestern U.S. as part of the Classroom Management Improvement Study (CMIS) to determine if teachers who received a classroom management manual and workshops would demonstrate characteristics of effective classroom managers more so than those who did not receive the intervention. Teachers were assigned to experimental (n=23) and control (n=18) groups, and observed at the onset of the study to determine their level of classroom management expertise. It was determined that several teachers in the control group demonstrated characteristics of effective classroom managers. The intervention received by the experimental group consisted of a management manual organized around 11 classroom management practices: (1) preparing the classroom, (2) planning for rules and procedures, (3) dealing with consequences, (4) teaching rules and procedures, (5) initial activities for the beginning of school, (6) dealing with potential problems, (7) monitoring students, (8) dealing with inappropriate behavior, (9) instructional organization, (10) holding students accountable, and (11) providing clear directions during instruction. Additionally, teachers in the experimental group attended two three-hour workshops at the beginning of the year and one follow-up six weeks later. Teachers in the control group received the manual and workshops during the middle of the school year.

As in the previous study, student engagement was measured using the Student Engagement Rates (SER) instrument, in which on-task rates were recorded in 15-minute intervals. Additionally, teachers were rated using a component rating system that consisted of a series of management variables in checklist form. Results indicated that (a) teachers who

participated in the experimental group used the recommended practices more than those in the control group, (b) classrooms taught by teachers in the experimental group had higher rates of student engagement and low rates of student misbehavior, and (c) teachers who received the intervention were better able to manage their classrooms than those in the control group (Evertson et al., 1983). One limitation to this study is that it may be difficult to generalize its results due to the specific characteristics of the school district at the time of the study.

Mandatory busing was implemented at the beginning of the school year, bringing diverse student populations to classrooms that were previously heterogeneous in nature. Teachers began using homogeneous grouping methods to place students with similar academic abilities in the same classrooms. As a result, teachers were exposed to training workshops designed to make them more aware of management and discipline issues. Despite this limitation, the variables identified in this study as essential to classroom management, are currently part of the curriculum designed by Evertson, Emmer and Worsham (2003), and used to prepare pre-service teachers across the country.

Evertson's (1989) study replicated a similar study conducted in 1985 with secondary teachers, only this time the participants were 29 teachers from first through sixth grades. In this randomized study, the treatment group (n=15) received a classroom management manual that was organized around the 11 practices described in the Evertson et al. (1983) study, as well as information included in a manual published by the Research and Development Center for Teacher Education, based on the previous research of Evertson and colleagues (e.g. Evertson, Emmer, Clements, Sanford & Worsham, 1981; Emmer et al., 1980). Before the school year began, the treatment group participated in a one-day workshop where they received the manual and other related materials. The researchers trained district personnel to conduct the workshops,

and a follow-up workshop took place in October for teachers in the treatment group. Teachers in the control group received the manual and workshop at the end of the school year.

Teachers in both groups were observed for 30 to 50 minutes six times throughout the year. Observers used narrative records to record instructional activities, teacher-student interactions, and length of instruction. Observations that took place in the beginning of the year focused on teachers' instruction of rules and procedures, monitoring, and feedback. Student engagement data were collected in ten-minute intervals to determine if students were on task during instructional periods. Observers provided a summary rating of each teacher after the sixth observation, which included comparisons in student engaged time from the beginning to end of the school year, improvements in transition times, and strategies students used to get help from the teacher (Evertson, 1989).

From this study, Evertson (1989) found that teachers in the treatment group (a) provided better instructional management through clear directions and explanations at the onset of lessons, elicited student feedback to ensure understanding; (b) taught rules and procedures more explicitly from the beginning of the school year which resulted in increased academic engaged time; (c) implemented routines more efficiently than teachers in the control group; (d) were more in tune with students needs, attention levels, and abilities; and (e) did more to prevent problem behavior before it occurred and dealt with misbehavior immediately. One of the limitations found in this study relates to its external validity. The participants in the treatment and control groups knew each other well and often visited each other's classrooms, creating the perfect environment for treatment diffusion. Although participants in the control group claimed they did not share information provided in the workshops or materials, control group teachers began to take and implement ideas found in classrooms of teachers from the treatment group, making it

difficult to determine if changes in the control group were due to exposure to the treatment. Regardless of this limitation, these findings support findings from previous studies concluding that establishing rules and procedures at the beginning of the school year results in increased instructional time and student time on-task (Emmer et al., 1980; Evertson et al., 1983, Evertson, Emmer, Clements, Sanford & Worsham, 1981). See Appendix A for a summary of these studies.

Summary and Conclusions

In the first section of this review, teacher effectiveness with respect to student achievement was discussed. Studies by Wright et al. (1997), Haycock (1998), Pianta et al. (2002), and the NICHD ECCRN (2005) revealed that teacher effectiveness varies across teachers and classrooms, and that there is a gap between what effective and typical teachers do in the classroom. Consistently, however, the reviewed studies showed that effective teachers have a significant effect on student achievement for students of all ability levels, backgrounds, and needs. Exemplary teachers were identified as effective literacy instructors and outstanding classroom managers. Researchers stressed the importance of improving teacher preparation programs so that quality teachers become the mainstay in classrooms across the country.

In an effort to describe how effective teachers provide exemplary reading instruction, several studies conducted by Pressley and his colleagues from 1997 to 2001 were presented. The cumulative findings of these studies indicate that effective reading teachers provide instruction that is balanced with explicit skills instruction and authentic literature experiences. Additionally, effective reading teachers demonstrated classroom management practices that facilitated student engagement. A variety of student groupings and the use of classroom management techniques also were found to support successful differentiation of instruction in reading, which in turn contributes to student achievement in reading.

When exploring how teachers differentiate instruction in reading, McIntosh et al. (1993), Moody and Vaughn (1997), Vaughn et al. (1998), Moody et al. (2000), Vaughn et al. (1998), and Schumm et al. (2000) explored how teachers differentiate instruction in reading. Teachers continued to identify time, resources, and classroom management as barriers to successful implementation of differentiated reading instruction. Additionally, reading achievement of students with reading difficulties is low compared to their peers when taught using whole class instructional formats in inclusive settings. Furthermore, even when teachers are given the strategies and resources to implement flexible grouping and differentiated reading instruction, they consistently rely on whole-class instruction due to convenience and management considerations. It is apparent that classroom management continues to be a concern of teachers as they try to meet the needs of students with diverse learning abilities and behavior problems in inclusive settings.

Finally, effective classroom management practices were identified through a series of studies conducted by Evertson and colleagues (Emmer et al., 1980; Evertson et al., 1983; Evertson, 1989). Successful classroom managers teach rules and procedures and provided clear expectations with consequences for students at the beginning of the school year. Classroom management practices that are associated with high student engagement included providing clear directions during instructional tasks and eliciting student feedback to check for understanding. Just as early intervention in reading has been stressed by reading researchers (Adams, 1990; Snow, Burns & Griffin, 1998; Torgesen & Burgess, 1998), classroom management strategies implemented at the beginning of the year contribute to increased academic engaged time for students and a reduction in disruptive behaviors throughout the school year (Emmer et al., 1980; Evertson et al., 1983; Evertson, 1989).

Rationale for the Study

Given that we now know that instruction and classroom management must go hand in hand in order for student achievement to occur (Evertson & Harris, 1992), we are ready to examine specifically how classroom management techniques can be applied to different instructional contexts, especially to reading instruction. To address the limited research in this area, this study addresses two questions. First, do teachers differentiate reading instruction, and if so, is it based on student need? Second, how are teachers' use of differentiated reading instruction and classroom management practices related to improving the reading skills of elementary students? Specifically, this study will address if and how teachers can improve reading fluency, and if instructional practices are supported by classroom management structures. To answer these questions, it will be necessary to observe classrooms in which differentiated instruction in reading occurs, and then identify those classroom management practices that facilitate successful implementation. By addressing these questions, and identifying important variables that promote reading development, perhaps classroom instruction in reading will no longer be plagued with the inconsistency with that was observed in the various classrooms involved in the studies included in this literature review. Additionally, providing teachers with a research-based framework would level the playing field for all students to receive quality instruction in reading.

CHAPTER 3 METHODOLOGY

Introduction

Researchers have shown that classroom management is necessary in order for learning to take place but cannot stand on its own. Instruction and classroom management must coexist in order for student achievement to occur (Evertson & Harris, 1992). Very little research exists that examines specifically how classroom management techniques are applied in various instructional contexts, especially to reading instruction, and how the two variables affect growth in reading. The purpose of this study was to answer the following questions regarding differentiated reading instruction and classroom management practices in inclusive classroom settings:

- 1 Do teachers differentiate reading instruction, and if so, is differentiation based on students' needs?
- 2 Is there a relationship between teachers' use of differentiated reading instruction, classroom management structures, and students' oral reading fluency?

Hypotheses

Based on the statement of the problem that exists with reading instruction in the United States and the research questions formulated to address these problems, five null hypotheses were generated for this study:

- | | |
|--------------|---|
| Hypothesis 1 | Teachers' use of differentiated reading instruction is not significantly associated with outcomes on the DIBELS ORF measure. |
| Hypothesis 2 | Teachers' use of differentiated reading instruction is not significantly associated with their use of classroom management structures. |
| Hypothesis 3 | Teachers' use of classroom management structures is not significantly associated with outcomes on the DIBELS ORF measure. |
| Hypothesis 4 | Teachers' use of differentiated reading instruction and classroom management structures is not strongly associated with outcomes on the DIBELS ORF measure. |

Hypothesis 5 Teachers' use of differentiated reading instruction and best practices in classroom management structures will not result in an increase in fluency between the fall and winter DIBELS assessment periods.

Inferential statistics were used to address Hypotheses 1 through 3, while multiple regression analysis was used to answer Hypotheses 4 and 5. The methods employed to answer each null hypothesis, as well as Research Questions 1 and 2 will be further described in detail. In the remainder of Chapter 3, the research methods are described, including the setting, participants, measures, data collection procedures, and methods of data analysis used in the study.

Methods

Setting

Nine school sites in two north central Florida school districts were selected for this study. The schools were selected using purposive sampling procedures (Miles & Huberman, 1994) to identify schools participating in the Reading First Initiative, a state grant program created to ensure the use of scientifically based research as the foundation for reading instruction in Kindergarten through third grades. The goal of Reading First is to ensure that all students are proficient readers by third grade, thereby focusing reading intervention efforts on the primary grades. Research suggests that students need approximately 90 minutes of teacher-directed reading instruction to facilitate student success and skill mastery (Cooper, Slavin, & Madden, 1997; Slavin et al., 1994). One of the integral parts of Reading First is a dedicated 90-minute reading block that promotes systematic, explicit reading instruction using combined whole and small group formats. Schools and teachers at participating Reading First schools were selected on the basis that participation in this initiative requires them to differentiate reading instruction through the use of small group instruction and literacy center activities (Gumm & Turner, 2004)

in order to meet the needs of their students, therefore exemplary use of differentiated reading instruction should be observed in their classrooms. Based on teacher reports and school data, the demographic and socioeconomic status of each school was recorded as follows (Table 3-1).

Table 3-1. Demographic data of participating schools

School	Student Enrollment	White*	African American*	Hispanic*	Asian*	Other*	Free/Reduced Lunch*
1	853	66	11	16	.3	6	60
2	752	43	44	7	.4	5	69
3	451	40	38	17	.2	4	78
4	468	60	29	6	1	4	72
5	1037	34	17	38	2	8	70
6	559	52	28	16	1	4	71
7	310	53	35	4	1	5	66
8	506	13	77	3	1	6	89
9	359	3	92	1	1	3	89

*Percentages

Participants

Participants were 32 second-grade teachers from two school districts in north central Florida. Second-grade teachers were chosen due to the nature of instruction that takes place prior to administration for Florida’s Comprehensive Assessment Test (FCAT), which is administered to students in grades 3-11 and aligned to the state’s Sunshine State Standards, a criterion used for measuring student benchmarks in mathematics, reading, science, and writing (Florida Department of Education, 2003).

Initial contact with principals at the identified *Reading First* schools in each of the two school districts enabled the researcher to identify 32 second-grade teachers who were willing to participate in the study and who were responsible for conducting reading instruction. A power analysis was conducted to determine sample size for this study based on effect size of the variables, statistical test being proposed, and significance level of the study (Rudestam & Newton, 2001). According to Cohen (1988), the accepted power should be no less than .80

because the probability of making a Type II Error should be no greater than .20 (Welkowitz, Ewen & Cohen, 1991). Using the computer program *G*Power* (Buchner, Faul & Erdfelder, 1997), it was determined that a power of .80, alpha level of .05, and effect size of .35, the total sample size needed was 31. To account for participant attrition, 32 second-grade teachers were recruited for participation in the study (Table 3-2).

Table 3-2. Demographic data for participants

Variables (n=32)	Frequency	Percentage
Gender		
Male	1	3.1
Female	31	96.9
Race		
White	16	50.0
African American	12	37.5
Asian/Pacific Islander	0	0.0
Hispanic	4	12.5
Degree Held		
Bachelor's	22	68.8
Master's	10	31.3
Special Certification		
Reading	3	9.4
Special Education	1	3.1
Other	3	9.4
Teaching Experience		
1-5	10	31.3
6-10	7	21.9
11-15	6	18.8
16-20	3	9.4
21+	6	18.9

Measures

Data were collected beginning in August 2006 and ending in January 2007. The doctoral student researcher assumed the responsibility of conducting observations and compiling teacher data. Two undergraduate students were recruited to assist with teacher observations over the course of the study, and also helped to establish interobserver agreement for using the study-related checklists: Checklist for Differentiated Instruction and Classroom Management Checklist

(Appendix B). Observers recruited by the doctoral student researcher were trained on the use and completion of each checklist by assisting with piloting the instrument prior to the study's initial collection period.

Teacher data

Nominated teachers were asked to complete a checklist designed to provide identifying and demographic information about themselves as participants (Appendix C). Information gathered included gender, race, degrees, certifications, and years of teaching experience. Additionally, the questionnaire asked teachers to categorize their school as urban, suburban, or rural, identify how many students in their class have been identified with a range of disabilities, and identify the reading program currently in use in the classroom.

Prior to each observation, teachers had the option of completing a Pre-Observation Checklist prior to their scheduled observation. This checklist addressed potential instructional activities that could not be identified by the observation tools, such as basis for grouping during the reading lesson, method of grouping (heterogeneous or homogeneous), basis for reading material selection, and types of instructional materials selected for different groups (Appendix B). Information provided in this checklist was incorporated into the observation tools listed in the *Observation Data* section of this chapter.

Observation data

Differentiated reading instruction measure. Three 60 to 90 minute classroom observations per teacher occurred between August 2006 and January 2007. Data collectors were scheduled to observe in each classroom for the duration of the reading block, which was typically a dedicated 90-minute reading block. Due to changes in scheduling or teacher planning, most observations of reading instruction occurred between 60-90 minutes in each

classroom. The three observations were conducted over the course of the semester (McIntosh, Vaughn, Schumm, Haager, & Lee, 1993; Moody, Vaughn, Hughes, & Fischer, 2000; Vaughn, Hughes, Schumm, & Klingner, 1998) using the Checklist for Differentiated Instruction (CDI), a checklist created by the doctoral student researcher and adapted from the following measures: *Classroom Climate Scale* () and *Evaluation of Center Environment* (McIntosh et al., 1993; Owocki, 2005). The *Classroom Climate Checklist* was selected for use as part of the observation tool because it was developed to provide a method for which teacher and student behaviors could be observed during academic instruction (McIntosh et al., 1993). Consisting of four components (Teacher initiated behaviors, student initiated behaviors, student participation and interaction, and overall classroom climate), the *Classroom Climate Scale* provides a way in which researchers can measure the extent to which teachers differentiate instruction. The *Evaluation of Center Environment* form was created so that teachers who differentiate reading instruction could evaluate the use of centers in their classroom.

By adapting and combining these two instruments to form the Checklist for Differentiated Instruction (CDI), the doctoral student researcher was able to evaluate the manner in which differentiated instruction occurs during reading. Additionally, the CDI was designed to provide information regarding how teachers carry out reading instruction to meet the needs of a diverse population of students during reading instruction. The CDI contains four specific domains: teacher behaviors, student behaviors, materials, and literacy center use. Each domain contains observable indicators related to the domain that can be answered with a “Yes,” “No,” or “Unclear” response by the observer. See Table C-1 in Appendix C for indicator definitions.

According to Tomlinson (2001), differentiated instruction allows students to have access to academic content through a variety of instructional approaches, groupings, use of materials, and

presentations. Teachers use a balance of whole-class, small-group, and individual instruction depending on the needs of the students in the classroom. Differentiated instruction allows teachers to provide the access to the same curriculum to all students so that all children can make academic progress. The CDI checklist allows the observer to examine teachers' use of these instructional characteristics, including instructional approaches, groupings, and material use.

Classroom management measure. Duke (1979) defined classroom management as "...the provisions and procedures necessary to establish and maintain an environment in which instruction and learning can occur (p. xii)." In classrooms with effective teachers who positively affect student achievement, researchers (e.g., Morrow et al., 1999; Pressley et al., 1996; Wharton-McDonald et al, 1998) found that classroom management was a necessary component of effective reading instruction. To address the question regarding the relationship between classroom management and reading growth, observers used an adaptation of the *Best Practices Classroom Management Checklist*, created by Florida's Positive Behavior Supports Project for the Center for Positive Behavior Interventions and Supports at the University of South Florida. The Classroom Management Checklist (CMC) was designed for this proposed study to assist observers in identifying best practices in classroom management. The CMC covers four domains of best practices, including classroom arrangement, scheduling, instructional planning and delivery, and classroom discipline plan. Each domain contains observable indicators related to the domain that can be answered with a "Yes," "No," or "Unclear" response by the observer. See Table C-2 in Appendix C for operational definitions of each indicator.

The CDI and CMC were combined into one checklist that was completed by each observer in each classroom throughout the course of the study. These instruments were piloted in the

classroom of ten teachers not participating in the study and all observers were taught to use the CDI and CMC during practice sessions in these same classrooms. Observer training is described in detail in the *Procedures* section of this chapter. Additionally, interobserver agreement will be established on this measure.

Reading measure

Students' oral reading fluency was measured by analyzing each classroom scores on the *Dynamic Indicators of Basic Early Literacy Skills* (DIBELS, Good & Kaminski, 2002). DIBELS is a progress monitoring tool designed to assist schools in determining which students are meeting benchmarks in development of specific early reading skills. The measures were developed based on research reviewed by both the National Research Council (1998) and the National Reading Panel (2000), and includes assessment of phonological awareness, alphabetic principle, and fluency. DIBELS is used as an evaluative tool that informs instructional practice for students who do not demonstrate proficiency of the early reading skills and yields scores and individual student reports that indicate whether a student is performing at benchmark, strategic, or intensive status. At benchmark, students scoring in this range are considered to be low risk and are at grade level for initial core reading program instruction. In the strategic range, students are considered in the moderate risk range and are classified as needing strategic or additional interventions in reading in addition to the core reading program. Students scoring in the intensive category are deemed high risk and considered eligible for reading interventions that focus on one-on-one interventions beyond the core reading program (Good, Simmons, Kame'enui, Kaminski, & Wallin, 2002).

The DIBELS Oral Reading Fluency (ORF) measure was selected for use in this study because it is a standardized test of accuracy and fluency that uses connected text. Additionally,

DIBELS ORF was designed to (a) identify children with reading difficulties who may require additional instructional supports in reading and (b) monitor progress toward reading instructional goals. Each reading passage is calibrated for the grade level reading goal. Furthermore, student performance is measured by having students read three specified passages aloud for one minute. Words that are not read correctly are scored as errors. The number of correct words read per minute minus errors (words omitted, substituted, and hesitations of more than three seconds) from the passage is considered the oral reading fluency rate. According to Osborn, Lehr, and Hiebert (2003) fluency can be thought of as a bridge between word recognition and comprehension. When fluent readers are able to identify words accurately and automatically, they are able to not only concentrate and focus their attention on comprehending text, but also make connections to the text based on their background knowledge. Fluent readers have the ability to recognize words and comprehend at the same time while less fluent readers must focus much of their attention on word recognition resulting in poor comprehension.

DIBELS assessments occur three times per year, in the Fall, Winter and Spring. Reading First schools are required to use DIBELS as an ongoing progress-monitoring tool and to assist teachers in implementing instructional strategies that will move students from intensive or strategic to benchmark status. Reading First guidelines suggest reading interventions that should be implemented for students at each risk level. For example, students scoring at the intensive or strategic level in second grade on the ORF would benefit from reading instruction that includes fluency building activities such as repeated readings with an adult, paired reading with a more proficient reader or tape-assisted reading could improve reading fluency. Teachers who use DIBELS reports to inform classroom reading instruction and skill review also provide students with practice opportunities during center work and independent reading activities.

DIBELS scores were reviewed using the Class Status Report to calculate mean scores on ORF measures that are reported for each teacher during the assessment periods. Teachers received class reports following each assessment of DIBELS, and provided the researcher with copies with a Class Status Report so that a class average could be calculated. Class averages were recorded for both DIBELS assessments, changes in oral reading fluency were recorded, and average scores on each checklist were recorded. Class averages of DIBELS assessments were obtained because they represent a whole class measure of reading fluency. Because the CDI and CMC are whole class measures of reading instruction and classroom management, an equal measure of whole class reading fluency had to be calculated for correlational analysis.

Procedures

Consent

The doctoral student researcher obtained Institutional Review Board (IRB) approval to conduct research in the two North Central Florida school districts (Appendix E). After schools were identified as Reading First participants, principals received letters delineating the nature of the research to be conducted and requesting participation in the research study (Appendix E). Consent to participate in the study was obtained from each of the teachers recruited (Appendix E). After consent was obtained, the doctoral student researcher began creating a schedule for observations so that each teacher was notified of their respective observation period.

Observations

Pilot phase. The researcher, along with several data collectors conducted all classroom observations. Data collectors were trained on the use of the CDI and CMC instrument during the pilot phase of this study. Data collectors accompanied the researcher on each of ten observations in randomly selected elementary schools in one school district in North Central Florida. Prior to

each classroom observation, data collectors reviewed the operational definitions associated with the checklist indicators, and asked clarifying questions regarding indicators that were unclear. The checklists were completed separately by the student researcher and the data collector during the pilot phase. The data collector was encouraged to make note of any checklist indicator that was unclear or confusing to them during the observation. After the classroom observation was complete, the researcher and data collector conducted a meeting to compare checklist items and items that were deemed as unclear. The researcher pointed out specific examples of the indicator if it was observed during the observation.

Data collection phase. Observations were conducted using the combined Checklist for Differentiated Instruction (CDI) and the Classroom Management Checklist (CMC), as described in the previous section. Classroom observations took place during the 90-minute reading block in each teacher's classroom. Each teacher was observed for 60-90 minutes during each of three observations throughout the study period. Although the reading block was scheduled for 90 minutes in each classroom, the amount of time spent on reading instruction ranged between 60 and 90 minutes in most participating classrooms. The first round of observations began two weeks after school started in each school district. Observations were staggered approximately six weeks apart, with all observations completed by the end of January 2007.

When using the CDI and CMC as a measurement tool during the classroom observations, observers marked "Yes" when an indicator on the checklist is observed, "No" when it was not observed, or "Unclear" when the observer was not sure the indicator was accurately represented during the observation. Additionally, the observers were encouraged to take anecdotal notes of lessons they observed, making note of specific classroom rules posted, strategies implemented, or other procedures that occurred during the observation.

Prior to each observation, participating teachers were given the option of completing a Pre-Observation Checklist, which provided insights into indicators that could not be directly observed by the data collectors. The information the teachers provided was incorporated into the answers on the checklists. After each observation, the researcher totaled the “Yes” responses for each indicator and assigned each classroom observation for each teacher a numerical score. At the conclusion of the study, the median score for the three observations was used as the teachers’ total score for the CDI and the CMC. Additionally, median scores were obtained on each checklist, separately, so that the researcher could determine if differentiated instruction or classroom management practices had unique influences on students’ oral reading fluency scores.

Interobserver Agreement

To determine the consistency of observers during classroom observations using the CDI and CMS, interobserver agreement data were collected (Kennedy, 2005). Prior to the observation period, the doctoral student researcher recruited assistance from undergraduate students to aid in data collection procedures. Each observer was trained on the use of each observation tool, and participated in observations to establish interobserver agreement in the classrooms of non-participating teachers. The checklists were piloted over a period of 10 sessions during the pilot phase of this study. A reliability of .80 or higher was deemed acceptable (Kazdin, 1982, Kennedy, 2005). Reliabilities were calculated using the occurrence/non-occurrence method of estimating. Each time an indicator was observed by both the primary and secondary observer as a “Yes” response, an occurrence was tallied. Reliability was calculated by dividing the total number of “Yes” responses tallied by the total number of occurrences possible. Additionally, interobserver reliability was obtained on 25 out of 96, or 20% of the total observations.

Student Reading Assessment Data

The researcher collected classroom data on students' DIBELS scores for the Fall (DIBELS 1) and Winter (DIBELS 2) assessment periods. Using the *Class Status Report* created at the conclusion of each assessment period, the doctoral student researcher compiled scores for each participating teacher based on the mean DIBELS score in ORF for all students. DIBELS 1 and DIBELS 2 assessments were compared to determine overall increase in words per minute for all students, and each teacher was assigned a numerical score representing their class average, and a separate score representing the change in ORF between DIBELS 1 and DIBELS 2 assessments.

Design and Data Analysis

The *Statistical Package for the Social Sciences, Version 11.0* (SPSS) was used for all data analysis. To answer the first research question, (Do teachers differentiate reading instruction, and if so, is differentiation based on students' needs?) bivariate correlational analysis was used to determine if correlations existed between classroom DIBELS oral reading fluency (ORF) scores and teachers' ratings on the CDI and CMC. Each teacher's score on the CDI and CMC was entered into the SPSS database, along with their respective classroom averages on the DIBELS ORF measure. To answer the second research question (Is there a relationship between teachers' use of differentiated reading instruction, classroom management structures, and oral reading fluency?), the relationship between differentiated reading instruction, classroom management methods and their ability to predict oral reading fluency scores in second grade students, was determined using simultaneous multiple regression analysis. Two models were used to test Hypotheses 4 and 5. The first model represents the full multiple regression model with all variables present, while the second model represents the adjusted model with the post-test removed from the equation (Table 3-3). Multiple regression was used to establish or predict

the portion of the variance in the dependent variable, student reading performance on the DIBELS ORF measure, by the set of independent variables, differentiated reading instruction and classroom management, at a pre-determined significance level. Using simultaneous multiple regression, all the independent variables were considered at the same time (Huck, 2004). Additionally, a second model was introduced, removing the post-test DIBELS 2 ORF (winter) scores to determine the effects of the combined CDI and CMC on the DIBELS 1 ORF (fall) assessment.

Table 3-3. Regression models

Model	Equation	Variable Definitions
Model 1	$Y=a+b_1X_1+b_2X_2+b_3X_3+e$	<p>Y=student reading scores pre-DIBELS</p> <p>a= the constant, where the regression line intercepts the y axis and represents the amount the dependent y will be when all the independent variables are 0.</p> <p>b= regression coefficients, representing the amount the dependent variable (y) changes when the corresponding independent variable (x) changes one unit;</p> <p>X₁= student reading scores post-DIBELS;</p> <p>X₂=score on Checklist for Differentiated Instruction;</p> <p>X₃=Score on Classroom Management Checklist; and</p> <p>e= the error term.</p>
Model 2	$Y=a+b_1X_1+b_2X_2+e$	<p>Y=student reading scores pre-DIBELS</p> <p>a= the constant, where the regression line intercepts the y axis and represents the amount the dependent y will be when all the independent variables are 0</p> <p>b= regression coefficients, representing the amount the dependent variable (y) changes when the corresponding independent variable (x) changes one unit</p> <p>X₁= score on Checklist for Differentiated Instruction</p> <p>X₂=score on Classroom Management Checklist</p> <p>e= the error term.</p>

Student reading scores on the DIBELS ORF measures were collected as pre- and post-test scores for the Fall (DIBELS 1) and Winter (DIBELS 2) assessment periods, respectively. The post-test data were entered in first as the dependent variable. Secondly, the scores for the independent variables of the Checklist for Differentiated Instruction and Classroom Management Checklist were entered into the regression equation. Correlation coefficients were reported as multiple correlations, or R^2 , which is the percent of shared variance in the dependent, or outcome variable, explained collectively by all the independent, or explanatory variables. Using *SPSS* software, the researcher hoped to demonstrate that the scores obtained on the CDI and CMC (explanatory variables) can predict reading fluency scores for students in classrooms where differentiated reading instruction occurs.

Limitations

Internal Threats to Validity

This study employed a pre-test/post-test design, which makes it subject to threats to internal validity, specifically time and history effects. There were no observed events external to the classroom observations or student assessment periods that might have had an effect on either the checklist scores, or student reading outcomes. The study lasted approximately four months, which is half the school year, which introduced the possibility that the students in each of the participating classrooms would not demonstrate significant reading growth over the course of this study, therefore making it difficult to demonstrate the predictive nature of differentiated reading and classroom management practices on reading growth. Mortality rates were not a concern in this study due to the stability of the teacher populations at the schools selected, as well as the constricted time frame of the study. All teachers remained involved throughout the duration of the study, and none were transferred.

External Threats to Validity

Although the sample contained only one male participant, there was valid representation by race and years of teaching experience. More teachers possessed a bachelor's degree than any other degree, and only 22% of teacher participants possessed special certification of some kind. All attempts were made to control for the interaction of selection and treatment effects by ensuring that participation in the study was voluntary, and that teachers were not aware of the checklist items prior to any observations. Without knowledge of the checklist items, there was not threat that teachers would discuss the classroom behaviors to be observed and recorded on the checklists.

Despite these limitations, any correlations made between reading achievement/growth in classrooms where differentiated reading instruction occurs along with the implementation of effective classroom management techniques could provide future researchers with the research needed to create new interventions. Teachers cry out for opportunities to learn new strategies and interventions that help them promote students' reading achievement and help them manage their classrooms (Moody et al., 2000; Vaughn et al., 1998). Additionally, Teachers often report that small group reading instruction is effective and important to student reading achievement (Pressley et al., 1998; Wharton-McDonald et al., 1998) but state that time, lack knowledge of instructional skills, and classroom management issues prevent them from adequately meeting the needs of all their students through differentiated reading instruction (Schumm et al., 2000; Vaughn et al., 1998). This proposed study has the potential to demonstrate the correlation between those pivotal classroom characteristics and their ability to predict students' reading achievement.

CHAPTER 4 RESULTS

Introduction

This study was conducted to address the following research questions:

1. Do teachers differentiate reading instruction, and if so, is differentiation based on students' needs?
2. Is there a relationship between teachers' use of differentiated reading instruction, classroom management structures, and students' oral reading fluency?

The following null hypotheses were tested in this study:

- | | |
|--------------|--|
| Hypothesis 1 | Teachers' use of differentiated reading instruction is not significantly associated with outcomes on the DIBELS ORF measure. |
| Hypothesis 2 | Teachers' use of differentiated reading instruction is not significantly associated with their use of classroom management structures. |
| Hypothesis 3 | Teachers' use of classroom management structures is not significantly associated with outcomes on the DIBELS ORF measure. |
| Hypothesis 4 | Teachers' use of differentiated reading instruction and classroom management structures is not strongly associated with outcomes on the DIBELS ORF measure. |
| Hypothesis 5 | Teachers' use of differentiated reading instruction and best practices in classroom management structures will not result in an increase in fluency between the fall and winter DIBELS assessment periods. |

The research findings in this chapter are presented in four sections. The first section presents descriptive statistics on the sample. The second section of this chapter presents the inferential statistics. Data from the correlational analyses conducted to answer Research Question 1 and Hypotheses 1, 2, and 3 will be presented. Third, the results of the multiple regression analyses are presented to answer Research Questions 2 and Hypotheses 4 and 5.

Finally, descriptive statistics are presented on the item analysis conducted on the checklists of the participating teachers, as well as interobserver agreement data that were compiled.

Descriptive and Inferential Statistics

Sample Description

The sample in this study consisted of 32 second-grade teachers in nine elementary schools in two north central Florida school districts. All participating schools were Reading First schools, were reported as either suburban or rural, and considered high poverty schools. Demographic data for all teacher participants is shown in Table 3-3. Of the 32 participants, nearly 97% were female, with only one male teacher participating. The participants were evenly distributed with regard to race, with 50% responding as white and 50% reporting being either African American or Hispanic. Most teachers in the sample held a bachelor's degree, and only 22% possessed some kind of additional certification in either reading, special education, or some other category. Years of teaching experience yielded widely distributed results, as well, with 31% reporting 1-5 years of experience, nearly 20% reporting 6-10 and 11-15 years of experience, 10% reporting 16-20 years of teaching experience, and almost 20% with over 21 years of teaching experience.

Descriptive Statistics of All Variables

Table 4-1 represents the means, standard deviations, and minimum/maximum scores on each variable measured for all 32 participating teachers. Teachers received total scores on each of three observations using the CDI and CMC. The scores for all three observations were then averaged and represented by the Observation Average. The total average score was further broken down by checklist, represented by CDI Average and CMC average. Class averages were reported for each DIBELS ORF score for each teacher, representing the fall (DIBELS 1) and

winter (DIBELS 2) assessments. Additionally, average ORF scores were reported, as well as the change or increase in words per minute from the fall assessment to the winter assessment.

The mean scores for the checklists were 38.63 for the average scores, 18.72 for the CDI average alone, and 19.97 for the CMC average. According to these results, teachers scored about the same on the differentiation of instruction checklist as they did on the classroom management checklist. When examining the means of the outcome variable, DIBELS ORF, class averages were about 54 words per minute (WPM) on the fall assessment and increased to approximately 77 WPM at the winter assessment. These data indicate that classes averaged approximately 23 WPM increase between the two assessment periods.

Table 4-1. Descriptive data of explanatory and outcome variables

Measure (n=32)	Mean	SD	Minimum	Maximum
Explanatory Variables				
Observation Average	38.63	6.45	22	49
CDI Average	18.72	4.24	9	25
CMC Average	19.97	3.02	13	25
Outcome Variables				
DIBELS 1	54.53	11.95	32	84
DIBELS 2	77.75	14.55	46	108
DIBELS Average	66.38	12.66	39	96
DIBELS Change	23.22	8.27	4	42

Inferential Statistics

Table 4-2 represents statistical analysis used to answer the following research question and address the listed hypotheses:

Question 1	Do teachers differentiate reading instruction, and if so, is differentiation based on student need?
Hypothesis 1	Teachers' use of differentiated reading instruction is not significantly associated with outcomes on the DIBELS ORF measure.
Hypothesis 2	Teachers' use of differentiated reading instruction is not significantly associated with their use of classroom management structures.

Hypothesis 3

Teachers’ use of classroom management structures is not significantly associated with outcomes on the DIBELS ORF measure.

Table 4-2. Correlational statistics

Measure (n=32)	CDI Average	CMC Average	DIBELS 1	DIBELS 2	DIBELS Change
CDI Average	1.000	0.601 <i>p</i> <.001	-0.720 <i>p</i> <.001	-0.532 <i>p</i> =.002	0.104 <i>p</i> =.572
CMC Average	0.601 <i>p</i> <.001	1.000	-0.300 <i>p</i> =.096	-0.047 <i>p</i> =.798	0.350 <i>p</i> =.049
DIBELS 1	-0.720 <i>p</i> =.<001	-0.300 <i>p</i> =.096	1.000	0.823 <i>p</i> <.001	0.002 <i>p</i> =.990
DIBELS 2	-0.532 <i>p</i> =.002	-0.047 <i>p</i> =.798	0.823 <i>p</i> <.001	1.000	0.570 <i>p</i> =.001
DIBELS Change	0.104 <i>p</i> =.572	0.350 <i>p</i> =.049	0.002 <i>p</i> =.990	0.570 <i>p</i> =.001	1.000

Correlation is significant at the 0.01 level (2-Tailed)

Correlations were computed to test the relationship of the checklists used in the study with the outcomes assessed on the DIBELS ORF measure. An examination of the correlations reveals that when teachers do differentiate reading instruction, it is in classrooms with lower measures on DIBELS ORF, as reflected in the strong negative correlation between the differentiated instruction checklist (CDI) and both DIBELS 1 and 2 classroom averages ($r = -0.720, p < .01$; $r = -0.532, p < .01$). Conversely, in classrooms where the differentiation does not take place as consistently, DIBELS scores were higher. This means that there is a strong possibility that teachers differentiate reading instruction the most when they have struggling readers in their classrooms and that these teachers are differentiating reading instruction based on student need, which answers research question one. At the 0.01 level of significance, teachers’ use of differentiated reading instruction, as measured by the CDI, yielded a negative correlation ($r = -0.720, p < .01$; $r = -0.532, p < .01$), leading to a rejection of Hypothesis 1. It can be concluded that differentiation of reading instruction is significantly associated with DIBELS ORF measures.

In testing Hypothesis 2, that the CDI and CMC scores were not associated, correlational data revealed that scores on the CDI and CMC were strongly related ($r= 0.601, p<.01$). This indicates that when teachers scored high on the differentiated instruction checklist (CDI), their use of best practices in classroom management was high, as well. Due to the statistical significance of this data, Hypothesis 2 was rejected, indicating that differentiated reading instruction is significantly associated with the use of classroom management structures.

Despite the fact that the checklists were strongly associated, and the CDI was strongly associated with DIBELS ORF fall and winter measures, the association between the CMC and DIBELS was not strong ($r= -0.300, p=.096$; $r= -0.047, p=.798$). Although there is a moderate association between the CMC and DIBELS 1, there appears to be no correlation between the CMC and DIBELS 2 scores. Based on this data, the researcher failed to reject Hypothesis 3, indicating that it cannot be concluded that there is statistical significance between teachers' use of best practices in classroom management and students' scores on the DIBELS assessments.

Multiple Regression Analysis

A multiple regression analysis was conducted to examine the degree of association between the explanatory variables (teachers' use of differentiated reading instruction as measured by the CDI, and teachers' use of classroom management structures, as measured by the CMC) and the outcome variables (DIBELS ORF measures on the fall and winter assessments). The multiple regression analysis was also conducted to test the following research question and hypotheses:

Question 2: Is there a relationship between teachers' use of differentiated reading instruction, use of classroom management structures, and oral reading fluency?

- Hypothesis 4 Teachers' use of differentiated reading instruction and best practices in classroom management structures will not result in an increase in fluency between the fall and winter DIBELS assessment periods.
- Hypothesis 5 Teachers' use of differentiated reading instruction and classroom management structures is not strongly associated with outcomes on the DIBELS ORF pre-test measure.

Two regression models were tested to investigate the influence of the CDI and CMC on the increase in DIBELS ORF measures from the fall to winter assessments. The data in the study were analyzed using the class average on the DIBELS ORF Winter assessment, CDI average scores, and CMC average scores as explanatory variables for the first model, and the CDI average scores and CMC average scores alone as explanatory variables for the second model. The second model was introduced to remove the effects of the DIBELS pre-test scores on the post-test scores so that the influence of the practices measured by the checklists could be determined.

Using SPSS REGRESSION the first regression model was analyzed with all variables present (Table 4-3). Results indicated that an R^2 of .722 was statistically significant, $F(3,28)=24.298, p<.001$. The full regression model indicates that the explanatory variables are jointly associated with 72% of the shared variance in DIBELS ORF scores. When examining the influence of each variable on DIBELS ORF scores, the greatest predictor of the post-test score (DIBELS 2) was the pre-test score on DIBELS 1. This is indicated by the large standardized beta coefficient ($\beta=.843$) because a unit of change (one word per minute) on the DIBELS 1 pre-test would have a large effect on the DIBELS 2 post-test score. Additionally, DIBELS 1 has the largest absolute t value and smallest significance ($t=5.713, p<.001$), which suggests that DIBELS 1 has a large impact on the scores predicted for DIBELS 2. It would seem that with the DIBELS 1 score in the equation, teachers' use of differentiated reading and classroom management

practices did not have predictive value on the DIBELS ORF post-test scores, with significance levels of $p=.669$ and $p=.060$ (at the .05 level of significance), making DIBELS 1 appear to be the stronger of the explanatory variables in the model.

Table 4-3. Full regression model

Outcome Variable	Explanatory Variable	<i>b</i>	β	<i>t</i>	Significance	Zero-Order Correlations
DIBELS 2 (Post-Test)	DIBELS 1	1.027	.843	5.713	$p<.001$.823
	CDI	-.261	-.076	-.433	$p=.669$	-.532
	CMC	1.210	.251	1.961	$p=.060$	-.047

Again using SPSS REGRESSION, the second regression model was analyzed.

Consisting of two explanatory variables (CDI and CMC) and one outcome variable (DIBELS 1), the researcher demonstrated the predictive value of the checklists on students oral reading fluency scores, with the absence of reading instruction as a variable. By eliminating the post-test data, the predictive value of the checklists can better be evaluated. Results indicated that an R^2 of .545 was statistically significant, $F(2,29)=17.374$, $p<.001$.

Table 4-4. Adjusted regression model

Outcome Variable	Explanatory Variable	<i>b</i>	β	<i>t</i>	Significance	Zero-Order Correlations
DIBELS 1 (Pre-Test)	CDI	-2.375	-.844	-5.387	$p<.001$	-.720
	CMC	.818	.207	1.321	$p=.197$	-.300

This adjusted model indicates that the explanatory variables are jointly associated with 55% of the shared variance in DIBELS 1 ORF scores. When examining the influence of each variable on DIBELS 1 ORF scores, the greatest predictor of students' pre-test scores (DIBELS 1) was CDI (differentiated reading instruction checklist). This is indicated by the large standardized beta coefficient ($\beta= -.844$) because a unit of change on the CDI would have a large effect on the DIBELS 1 pre-test score. Additionally, the CDI had the largest absolute *t* value and smallest significance ($t= -5.387$, $p<.001$), which suggests that the CDI is a better predictor of students' DIBELS ORF scores for the fall assessment. As explanatory variables, the CDI and

CMC are good predictors of students' reading scores on DIBELS ORF measures, but the CDI accounted for more of the variance in these scores than did the CMC.

Based on the multiple regression analysis conducted to answer Research Questions 2, it is apparent that the CDI is strongly associated with the scores on both DIBELS 1 and DIBELS 2 assessments, and that scores on the CDI are highly predictive of scores on DIBELS ORF measures (Table 4-5).

Table 4-5. Summary of models

	R	R Square	Adjusted R Square
Model 1:			
Predictors (DIB2), DIB 1	.823	.677	.666
Predictors (DIB2), DIB 1, CDIAVG	.827	.684	.663
Predictors (DIB2), DIB1, CDIAVG, CMCAVG	.850	.722	.693
Model 2:			
Predictors (DIB1), CDIAVG	.720	.518	.502
Predictors (DIB1), CDIAVG, CMCAVG	.738	.545	.514

Despite the fact that the CDI and CMC are highly correlated, the CMC is not associated with scores on DIBELS ORF measures, and accounts for approximately 3% of the variance when added to the regression equation in both models. The results of the regression analysis also indicate that the model used was a good fit for the outcome variable (DIBELS 2) in the study, with a range of $R^2_{adj} = .666$ to $R^2_{adj} = .693$ for the model.

Hypotheses 4 was rejected because the correlations between the CDI, CMC, and DIBELS 1 yielded statistically significant results with an R^2 of .722 and $F(3,28)=24.298, p<.001$. With the rejection of the null for Hypothesis 4, it can be concluded that the CDI and CMC, when taking into account the pre-test scores on DIBELS 1, are highly associated with the DIBELS 2 post-test

scores. Hypothesis 5 was rejected since the association between the CDI and CMC accounted for 54% of the shared variance in the DIBELS 1 scores. With the absence of reading instruction as a variable and by eliminating the post-test data, the predictive value of the checklists were specifically evaluated. Results indicated that an R^2 of .545 was statistically significant, $F(2,29)=17.374, p<.001$. It can be concluded that the CDI and CMC will contribute to an increase in DIBELS ORF pre-test scores.

Descriptive Statistics on Checklist Indicators

Trends in best practices were compiled in Table 4-6.

Table 4-6 CDI and CMC indicator analysis

Item #	High Performers CDI*	High Performers CMC*	Item #	Low Performers CDI*	Low Performers CMC*
1	100	100	1	88	100
2	100	88	2	63	31
3	75	100	3	25	100
4	100	100	4	81	100
5	100	94	5	88	88
6	100	94	6	94	94
7	100	81	7	94	13
8	94	100	8	75	69
9	100	100	9	94	94
10	100	75	10	63	25
11	100	100	11	69	75
12	100	88	12	88	94
13	81	100	13	13	94
14	81	100	14	25	100
15	88	94	15	44	94
16	31	100	16	0	100
17	100	100	17	94	100
18	100	94	18	100	25
19	100	69	19	50	31
20	100	88	20	50	25
21	81	100	21	0	81
22	94	81	22	38	63
23	94	38	23	50	0
24	100	100	24	38	100
25	75	94	25	25	94

*Percentages

After the observations were completed, the checklists were analyzed for any trends in best practices that were recorded during the observations. This included recording responses on each of the checklist items. The researcher selected the checklist that contained the median score for each teacher and recorded the occurrence of a “Yes” for each of the checklist items. The checklists were divided into two categories: high performers (40/50 or higher on the checklist) or low performers (39/50 or below on the checklist). Item numbers were then matched with the indicators listed on the checklist, the analysis revealed that all teachers (a) place instructional materials on walls or bulletin boards, (b) maintain the physical arrangement of the classroom environment, (c) remove distracting items from view or reach of students, (d) provide students with adequate space for storage, (e) provide instructional assignments that are relevant to students, (f) provide non-punitive provisions for students needing more time to finish work, (g) teach skills in the natural setting, and (h) deliver consequences in a consistent and timely manner.

Teachers who were considered high implementers on the differentiation checklist scored low on two indicators: they did not make collaboration or independent work dependent on student choice, and they inconsistently posted consequences to rule violations. Low performing teachers demonstrated problems with (a) implementing student pairing, (b) using individualized assignments or activities, (c) providing different assignments to students, (d) providing a different sequence of activities based on student need, (e) providing students with the choice to collaborate or work independently, (f) implementing all aspects of centers including materials, posting rules and directions at centers, creating a rotation plan for centers, providing adequate time and materials for centers, and allowing choice at centers, (g) posting rules and procedures in the classroom, (h) posting student work prominently, (i) reviewing transitions regularly, (j)

aspects of class rules including stating rules positively, limiting rules to five or less, and providing rules that are observable/measurable, and (k) posting consequences for rule violations in the classroom. For a complete listing of checklist indicators by item number, see Appendix B.

In addition to examining each checklist indicator, anecdotal notes recorded by the data collectors were analyzed to determine if there were consistent frequent practices employed by both the high and low performing groups (Table 4-7). Most teachers implemented a variation of choral reading when introducing a new story to students and incorporated small group instruction into their reading program. Many teachers used technology during their reading instruction, which included the use of audio cassette tapes and players for books on tape, Leap Pad story systems, microphones with classroom amplification systems, and My Reading Coach or Read Naturally computer software. The highest performing teachers implemented practices such as reciprocal teaching, small group instruction formats, literacy centers, and varied grouping formats for students.

Table 4-7. Frequent practices observed during reading instruction

Practice Observed	Percentage of Teachers
Reciprocal Teaching	38
My Reading Coach	59
Variety of Grouping Formats	63
Round Robin Reading	66
Read Naturally	75
Literacy Centers	75
Small Group Instruction	81
Leap Pad Reading	84
Choral Reading	91

Interobserver Agreement

Data on interobserver agreement (IOA) were collected throughout this study. First, IOA was calculated during the piloting phase of the study, in which the differentiated reading instruction checklist (CDI) was used in ten classrooms that were randomly selected from a

sample of 10 elementary schools in a north central Florida school district. IOA scores ranged between 88 and 100, with a mean of 94.8. While data were being collected during the classroom observations, IOA data were collected for 25 sessions, or 26% of the total observations conducted. IOA ranged from 86 to 100, with a mean of 94.8 and a standard deviation of 3.786 (Table 4-8).

Table 4-8. Descriptive statistics for interobserver agreement

	Range	Minimum	Maximum	Mean	Std. Deviation
IOA	14	86	100	94.80	3.786

Chapter 4 contained the results of the data analyses, presented in five sections. First, descriptive statistics on the sample were presented. The second section of this chapter presented the inferential statistics used to answer the first research question, along with Hypotheses one, two, and, three. To answer these questions, the results of the correlational analyses were presented. Third, the results of the multiple regression analyses were presented to answer research questions two and three, and Hypotheses 4 and 5. Finally, descriptive statistics were presented on the item analysis conducted on the checklists of the participating teachers. Trends in best practices of high scoring teachers were analyzed. Additionally, this section included a description of the data on interobserver agreement that was compiled during this study.

CHAPTER 5 DISCUSSION

Introduction

Researchers have found that of the 20% of children in the United States who experience serious reading difficulties, a majority tend to struggle with those difficulties over time and that students in early elementary grades who struggle with reading are more likely to have reading difficulties well into their secondary years (Grossen, 1997; Juel, 1988; Torgesen & Burgess, 1998). As a result, many initiatives have been made at the local, state, and national levels to not only identify reliable indicators of students at risk for early reading failure, but also to develop evidence based practices that will help students develop the skills they need to learn to read (Snow et al., 1998; Torgesen and Burgess, 1998).

Results of this study yielded similar conclusions to those reviewed in the literature on reading instruction and classroom management practices in Chapter 2 of this study. First, this study found that reading instruction and classroom management were related as postulated by Pressley, Rankin and Yokoi (1996), Pressley, Yokoi, Rankin, Wharton-McDonald, and Mistretta (1997), and Walpole, Justice, and Invernizzi (2004). Teachers who employed best practices in classroom management were highly effective reading instructors who were able to improve the reading fluency of even the lowest of readers. Second, this study found that the highest performing teachers taught classroom rules and procedures, and used routines to facilitate successful use of differentiated instruction, which was also found by Emmer and Worsham (2003), Evertson, (1989), and Evertson, Emmer, Sanford and Clements (1983). Finally, this study yielded findings similar to those of Moody, Vaughn, and Fischer (2000), Vaughn, Hughes, Schumm, and Klingner (1998), and Vaughn, Moody, and Schumm (1998) in that teachers relied on whole-group instruction for a majority of reading instruction; however, this study found that

high performing teachers also incorporated small-group instruction, student pairing, and collaborative group work more often than low performing teachers. Additionally, this study found that students did make gains in fluency in classrooms where differentiated reading instruction occurred most often.

Recognizing that different skills and activities need to be targeted to different groups of students in the classroom, differentiated instruction can be planned for and implemented for students with a diverse group of needs. With the Model of Differentiated Reading Instruction (Figure 5-1), planning, classroom management and effective reading instruction all work hand in hand; no single entity can stand alone without the other's support. Effective reading instruction and classroom management requires effective planning and student grouping, as evidenced in the literature (Evertson, Emmer & Worsham, 2003; Moody & Vaughn, 1997; Morrow, Tracey, Woo, & Pressley, 1999; Vaughn, Hughes, Schumm, & Klingner, 1998).

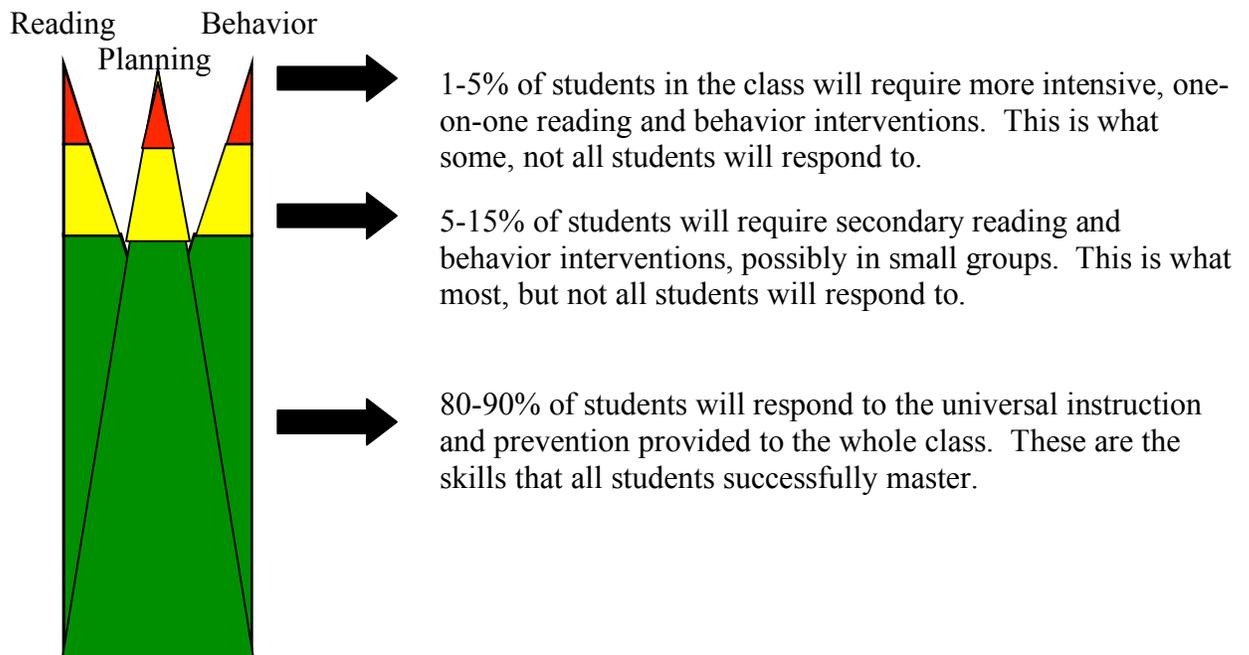


Figure 5-1. Model of differentiated reading instruction

This study used classroom observations of 32 second-grade teachers to examine the relationship between differentiated reading instruction, classroom management structures, and students' reading progress. The study took place in nine reading first schools found in two school districts in North Central Florida. Two checklists were used to identify key indicators of teachers' use of best practices in differentiated reading instruction and classroom management. These checklists contained instructional and management domains that represent best practices as identified in the literature on effective teaching (Evertson et al., 2003; Pressley et al, 1999; Vaughn et al., 1998). Teachers' scores on the checklists were then compared with class averages of DIBELS Oral Reading Fluency scores from the fall and winter assessment periods. Data from the checklists and DIBELS ORF measures were analyzed using both correlational and multiple regression analysis to test five null hypotheses.

This chapter provides an overview of the current study and summarizes the results found in Chapter 4. First, conclusions related to the research questions and null hypotheses are discussed. Next, conclusions of this study are discussed in relation to each of the research questions posed in this study. A discussion of the limitations of this study is presented followed by implications for future research and practice based on the research findings.

Summary of Results

Two checklists, the Checklist for Differentiated Instruction (CDI) and the Classroom Management Checklist (CMC), were completed during three classroom observations of 32 teachers. The explanatory variables in this study were the teachers' average of three scores on the CDI and the CMC, as well as classroom averages on the DIBELS ORF fall assessment. The DIBELS ORF winter assessment was the outcome variable in this study. First, correlations were analyzed to determine which variables had the strongest relationships with the DIBELS ORF

measures, both DIBELS 1 (fall assessment) and DIBELS 2 (winter assessment). Then, two regression models were used to examine the relationship between teachers' use of differentiated reading instruction and classroom management practices, and their ability to predict students' fluency measures using DIBELS as the assessment tool.

The correlations (Table 4-2) analyzed in this study indicated that teachers' use of differentiated reading instruction, as measured by the CDI, yielded a strong negative correlation with both DIBELS 1 and DIBELS 2 ($r = -0.720, p < .001$; $r = -0.532, p < .001$). In the first regression model (Table 4-3), the full model, the F statistic revealed that the model was statistically significant for DIBELS 2 in this study, with $R^2 = .722, F(3,28) = 24.298, p < .001$. The full regression model indicates that the explanatory variables are jointly associated with 72% of the variance in DIBELS ORF scores for the winter assessment period. In the second regression model (Table 4-4), results indicate that an $R^2 = .545, F(2,29) = 17.374, p < .001$ is statistically significant, with the CDI and CMC being jointly associated with 55% of the variance in the DIBELS 1 ORF scores (fall assessment). Regression coefficients for all variables are displayed in Table 4-5. The results of this study are presented in relation to each of the null hypotheses formulated in the previous chapter.

Hypothesis 1

Hypothesis 1: Teachers' use of differentiated reading instruction is not significantly associated with outcomes on DIBELS ORF measures.

This hypothesis was formulated to examine the relationship between both DIBELS 1 and DIBELS 2 (fall and winter assessments, respectively) and the CDI as the explanatory variable. Hypothesis 1 was rejected. There is a statistically significant relationship between teachers' use of differentiated reading instruction practices and students' oral reading fluency scores, both at

the fall and winter assessments. The results revealed a negative relationship ($r = -0.720, p < .001$; $r = -0.532, p < .001$), meaning that when teachers scored high on the differentiation checklist, classroom scores on DIBELS were low. One interpretation of this is that teachers who have struggling readers in their classroom tend to use more differentiated reading instruction practices than teachers who have readers who are more proficient. When teachers use DIBELS as a progress monitoring tool to assist in determining which students are in need of explicit instruction to develop early reading skills, instructional practices can be incorporated to include best practices in differentiated reading instruction that focus on reading interventions that support the core reading program (Good et al., 2002). Teachers who implement these practices frequently do so in classrooms with the lowest of readers, as evidenced by the results found in this study. In answer to Research Question 1, teachers do differentiate reading instruction based on student need. Correlations are reported in Table 4-2.

Hypothesis 2

Hypothesis 2: Teachers' use of differentiated reading instruction is not significantly associated with their use of classroom management structures.

This hypothesis enabled the researcher to determine if teachers' scores on the differentiated instruction checklist (CDI) were associated with their score on the checklist that evaluated classroom management structures (CMC). Research conducted by Pressley (1998) and Wharton-McDonald et al. (1998) found that exemplary reading teachers consistently used classroom management practices that supported instruction, resulted in higher student achievement, and reduced problem behaviors. Based on the analysis conducted, the correlation was computed at $r = .601, p < .001$, indicating a strong positive correlation between the two variables. Hypothesis 2 was rejected. Teachers' use of differentiated reading instruction

practices and classroom management structures is strongly associated. This means that teachers who implement differentiated reading instruction practices in the classroom rely on best practices in classroom management to support instruction. This was further supported by the data from the checklist indicators that were analyzed for commonalities across teachers. Teachers who scored highest on both checklists used classroom management practices such as transition instruction, posting rules and consequences in the classroom, and structuring the classroom environment so that students have access to all areas of the classroom. Correlations are reported in Table 4-2.

Hypothesis 3

Hypothesis 3: Teachers' use of classroom management structures is not significantly associated with student outcomes on DIBELS ORF measures.

This hypothesis was formulated to determine the relative strength of the classroom management variable on both DIBELS 1 and DIBELS 2 assessments. Based on the research of Evertson et al. (1980, 1989, 2003), teachers who implemented classroom management practices learned through a series of professional development activities were better able to provide instructional management during lessons, which resulted in improved academic engaged time and increased attention to student needs. It was not determined, however, if the use of these practices resulted in improved student achievement. To test this theory, correlational analysis was conducted to determine if teachers' use of classroom management practices were associated with scores on DIBELS ORF measures. Based on the correlations computed at the .01 significance level, Hypothesis 3 failed to be rejected because with weak correlations ($r = -0.300$, $p = .096$ for DIBELS 1 and $r = -.047$, $p = .798$ for DIBELS 2), no statistical significance was found. Although there was a weak negative correlation with DIBELS 1, it cannot be concluded that

teachers' use of classroom management structures is associated with DIBELS ORF measures. Correlations are reported in Table 4-2.

Hypothesis 4

Hypothesis 4: Teachers' use of differentiated reading instruction and best practices in classroom management structures will not result in an increase in fluency between the fall and winter DIBELS assessment periods.

This hypothesis allowed the researcher to determine the effects of DIBELS 1 (fall assessment pre-test), the CDI, and the CMC as explanatory variables on DIBELS 2 (winter assessment post-test). Using the full multiple regression model, the analysis revealed that R^2 is significant at $p < .001$, and substantial at .722. This full model indicates that the explanatory variables (DIBELS 1, CDI, and CMC) are jointly associated with 72% of the variance in DIBELS 2 post-test scores. Upon further examination, it is apparent that DIBELS 1 has the greatest influence on DIBELS 2 scores. This is consistent with the correlation found in Table 4-2, in which DIBELS 1 and DIBELS 2 were significantly correlated at $r = .823$, $p < .001$.

Hypothesis 4 was rejected. It can be concluded that differentiated instruction practices and classroom management structures, in conjunction with students' scores on the DIBELS 1 pre-test, are strongly associated with DIBELS 2 post-test data.

It is important to note that the full regression model takes into consideration student learning that occurs between the fall and winter assessments. Typically, pre-testing is used to factor out the initial level of knowledge that students possess in the absence of instruction so that comparisons can be made to determine the amount of student learning and differences between groups. The problem with this, according to Bonate (2000), is that ceiling effects can cause post-test scores to appear higher for students with high pre-test scores. Further examination of the

regression coefficients (Table 4-5) for Model 1 allow for analysis of the contribution that each variable makes to the equation when added to the model. DIBELS 1 alone accounts for almost 67.7% of the variance in the DIBELS 2 post-test scores. When the CDI is added to the equation, it contributes less than 1% to the variance. When the CMC is entered into the regression model, it contributes 3.8% of the variance in DIBELS 2 scores. There are two interpretations of this data that can be hypothesized.

First, it may be dangerous to interpret that the change in student's DIBELS scores between the fall and winter assessment periods is not based on teacher's differentiation of instruction or use of classroom management structures. Without jumping to this conclusion first, it is necessary to examine the data on the change in the class averages between DIBELS 1 and 2 collected during this study. Analysis of the changes between DIBELS 1 and DIBELS 2 (Table 4-2) reveals that the only variable that was correlated with increased oral reading fluency scores was the classroom management checklist, which was statistically significant at the .05 level, with $r=.350, p=.049$. The CDI was not statistically significant and had a very weak correlation with the change in DIBELS scores.

Secondly, analysis of the multiple regression data reveals that, although the CDI and CMC contribute very little to the variance in the DIBELS 2 post-test, an interesting conclusion may be drawn. Recall that teachers' use of differentiated instruction was strongly correlated with both DIBELS 1 and DIBELS 2 scores individually. This suggests that students' ORF scores increased, regardless of the differences in performance on DIBELS 1. In other words, students made about the same gains in fluency across classrooms, regardless of initial level. In fact, the correlation between DIBELS 1 and the change in DIBELS scores was .002, indicating a

very weak relationship. Teachers' scores on the CDI had very little correlation with increases in fluency because the ORF scores were similar across classrooms.

Hypothesis 5

Hypothesis 5: Teachers' use of differentiated reading instruction and classroom management structures are not strongly associated with outcomes on the DIBELS 1 ORF measure.

This hypothesis enabled the researcher to isolate scores on the CDI and CMC to determine their ability to predict classroom averages on the DIBELS ORF pre-test measure, or DIBELS 1. Using the adjusted model, the multiple regression analysis revealed that the CDI and CMC account for 55% of the variance in the DIBELS 1 scores, and that the CDI alone contributes 52% of the variance alone. The adjusted model was created to examine the association between teachers' use of differentiated reading instruction and classroom management practices on students' oral reading fluency, prior to beginning instruction. By examining this association, it may be possible to predict a teachers' ability to improve reading fluency in classrooms with struggling readers. Figure 5-2 examines the relationships between the variables examined in Hypotheses 4 and 5.

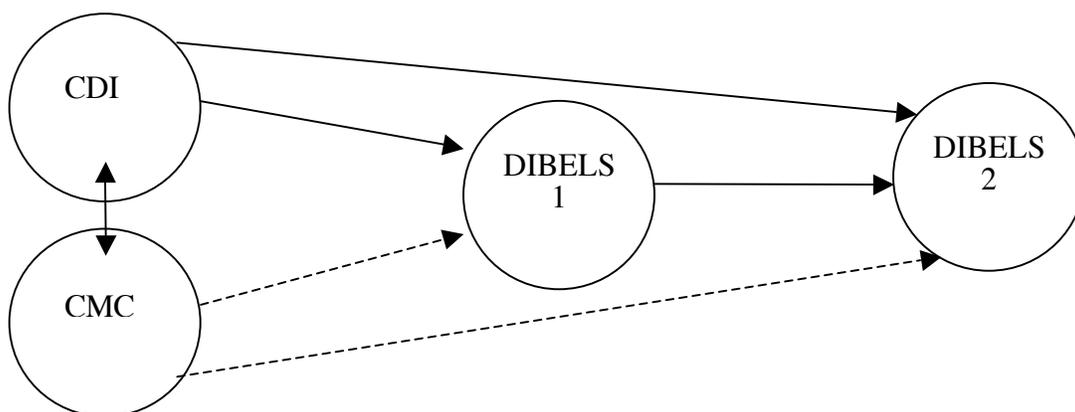


Figure 5-2. Summary of regression models

The solid-line arrows indicate variables with significant relationships, while dashed lines indicate that no statistical significance was found.

Interpretation of Findings

This study yielded promising outcomes in three important ways, each related to the research questions posed in this study. First of all, Research Question 1 asked, “Do teachers differentiate reading instruction, and if so, is differentiation based on student need?” Based on the results found in this study, teachers who were high implementers did differentiate reading instruction, and most importantly, differentiation was based on student need. This was evidenced first by the negative correlation between the Checklist for Differentiated Instruction (CDI) scores and scores on both DIBELS ORF measures. Teachers in classrooms with the lowest readers differentiated the most because their students would benefit from the myriad of instructional strategies and interventions used when differentiation takes place. Teachers in these classrooms consistently used evidenced-based practices like reciprocal teaching, in which the teacher engages in a dialogue with students during reading and uses four strategies: summarizing, question generating, clarifying, and predicting (Palincsar, 1986). Reciprocal teaching provides teachers with a strategy that helps students get meaning from text by making sure they understand what they read.

Another common practice among teachers who differentiated reading instruction the most was the use of literacy centers in the classroom. Literacy centers focus on reading specific content and are related to specific reading skills that were addressed during reading instruction. Literacy centers provide a means of differentiating materials and activities based on various levels of student knowledge (Florida Center for Reading Research, 2005; Tomlinson, 1999). Additionally, the use of literacy centers in the differentiated classroom provides the teacher with

an opportunity to use small-group instruction to work with groups of students on focused interventions. Coincidentally, teachers who implemented literacy centers, also used small group, teacher-guided instruction more than teachers who did not differentiate.

This finding is significant in that it demonstrated the power of differentiated instruction when applied in classrooms with struggling readers. In classrooms with struggling readers, teachers who implement the research based practices that were observed during this study were able to maintain the gap in reading fluency, rather than allowing the gap to continue to widen. Researchers (e.g. McIntosh, Vaughn, Schumm, Haager, & Lee, 1993; Moody, Vaughn, Hughes, & Fischer, 2000; Pressley, Wharton-McDonald, Allington, Block, Morrow, Tracey, et al., 2001) have examined the effects of exemplary reading instruction and differentiated reading instruction in elementary classrooms without examining the connection between instruction and the reading progress in classrooms with struggling readers. Knowing that differentiated reading instruction can positively influence students' oral reading fluency, teachers may begin to implement those strategies in classrooms with the lowest of readers.

Secondly, Research Question 2 asked, "Is there a relationship between teachers' use of differentiated reading instruction, classroom management structures, and oral reading fluency?" Analysis of the data revealed that teachers' scores on the CDI were strongly correlated with both DIBELS measures, and the multiple regression analysis yielded results that indicated that students' ORF scores increased regardless of the differences in performance on the DIBELS 1 pre-test. Interestingly, students made about the same gains in fluency across classrooms, regardless of their initial level. Teachers' scores on the CDI had very little correlation with increases in fluency because the ORF scores were similar across classrooms. Could it be that teachers' use of differentiated reading practices is leveling the playing field for students who

struggle the most? Stanovich (1986) would argue that with the “Matthew Effect” in reading, in which the gap between struggling readers and proficient readers widens as a result of poor instruction, these struggling readers typically would not be receiving the instruction necessary for gains in reading to be similar to those of proficient readers. The teachers in this study, however, seem to be providing instruction in classrooms with struggling students that enables them to make gains that are equal to those made by proficient readers. This is probably the most significant finding of this study, since it demonstrates that when done correctly, differentiated instruction can maintain the gap in reading fluency between proficient and struggling readers, rather than allowing the “Matthew Effect” to cause the gap to widen.

Fuchs and Fuchs (1993) suggest that students in second grade should make oral reading fluency gains of between 1.5 to 2.0 words per week. With this standard for weekly growth, classes in this study should have averaged an increase of at least 23 words on the DIBELS ORF measure between the fall and winter assessments, which are separated by approximately 15 weeks of instruction. Of the 32 teachers in the study, 17 had class averages on DIBELS 2 that demonstrated a 23 word per minute increase from DIBELS 1, with increases ranging from 23 to 42 words. Of those 17 teachers, 10 were teachers who scored highest on the differentiated instruction checklist. This provides additional evidence that teachers who differentiate reading instruction can maintain the gap between struggling and proficient readers.

Research Question 2 also examined the relationship between classroom management structures and oral reading fluency. This part of the answer to Question 2 proved to be complicated. Although scores on the CMC were not statistically significant when correlated with oral reading fluency measures, teachers who scored highest on the differentiated instruction checklist also scored high on the classroom management checklist, which were highly correlated.

Alternately, even when teachers scored low on the differentiated instruction checklist, they did not always score low on the classroom management checklist. The minimum and maximum scores on the CDI were 9 and 24, respectively, while the minimum and maximum scores on the CMC were 15 and 25, respectively. Teachers tend to consistently implement best practices in classroom management regardless of instructional delivery. For many teachers, classroom management provides the structure for instruction and without it effective instruction cannot take place (Evertson, 2003).

Classroom structures that were commonly implemented across many of the classrooms in the study were posting of rules/consequences, explicit instruction of procedures and transitions, and the use of a variety of reinforcers in the classroom. Pressley et al. (2001) and Wharton-McDonald et al. (1998) found that effective reading teachers provide literature rich classroom environments, interacted with students in a positive manner, and provided a balanced approach to reading instruction through varied grouping formats. Most importantly, they found that these elements could not be in place without the parallel components of efficient classroom management structures. Effective instruction and classroom management must go hand in hand in order for learning to occur, as evidenced by the results of this study.

Limitations

In this section, the limitations of the study will be addressed, specifically related to instrumentation and time limitations, and generalizability of the study.

Instrumentation

One of the first limitations of this study relates to the observation tool used to score teachers on their use of both differentiated reading instruction and classroom management structures. Although these checklists were piloted to provide for clear operational definitions of

each indicator, the indicators were not tested for reliability and validity on a large sample of classrooms. Some of the indicators on each checklist overlapped across checklists, so the number of test items used could be adjusted to improve the construct validity of the indicators. Additionally, use of anecdotal notes varied among data collectors as to recording of observed practices, making it difficult to determine which practices were being used consistently across classrooms and teachers. A more standardized format for recording anecdotal notes would have made analysis of best practices more effective.

Another limitation of the checklists was their inability to capture specific aspects of instruction. It was difficult to determine if rules and procedures had been taught from the beginning since observations did not begin from the first days of school. The nature of teacher/student interactions were not measured by the checklist, making it difficult to determine the frequency of questions asked to specific students, the opportunities for students to respond to the teachers' questions, and whether students are actively engaged in learning versus passively taking in the information provided by the teacher. By including ways to measure the nature and frequency of questioning that goes on in the classroom, as well as the manner in which the teacher imparts knowledge onto his/her students, the checklist would better be able to capture specific instructional components that have been proven as effective in helping students retain knowledge (Kirschner, Sweller, and Clark, 2006).

Time

This study took place over the course of 16 weeks, making time one of the limitations of this study. This created an issue with observed reading growth for students on the DIBELS ORF measure. Results may have been more significant if increases in words per minute on the oral reading fluency measure could have been analyzed over the course of an entire school year.

Additionally, teacher observations took place only one month apart, making it clear that significant change in classroom structures or modifications in instruction may not be observed at all, or may be so negligible that variation from one observation to the other would not be observed. Furthermore, the length of the observations, 90 minutes, did not always allow for entire reading blocks to be observed, especially when teachers adjusted their reading schedules according to school functions or classroom events.

Generalizability of the Study

Another limitation of the study relates to generalizability of the results to other populations. Because purposive sampling techniques were used, only Reading First schools were selected for participation in the study, making it difficult to draw conclusions about what typical teachers do during reading instruction. Although the schools were diverse in race and socioeconomic status (SES), selecting schools within only two school districts in north central Florida may have an influence on student reading scores on DIBELS ORF. Furthermore, Reading First targets schools identified as having populations of students with low SES, making it difficult to determine if schools not participating in the Reading First model would yield similar results to those found in this study. Additionally, only second grade teachers were recruited as participants for the study, and teachers volunteered for the study based on recommendations from their principals. Because participants were not selected randomly, the teachers in the sample are not reflective of the variance that would be found in typical elementary classrooms across Florida, or across the United States. This poses a threat to the external validity of the study in that the sample does not accurately represent the population to which the researcher intended to generalize the study's results. The results of this study may only be generalizable to other Reading First schools.

Implications for Future Research

The results of this study provide several implications for future research. Reasonable steps for future research will be presented in this section including conducting teacher interviews, increasing study duration, and including additional reading assessments.

Conducting Teacher Interviews

Although this study shed light on what teachers do and do not do to differentiate instruction, it is unclear why they chose the practices they did. Structured teacher interviews or focus group interviews would have helped determine the basis for teachers' selection of interventions used to differentiate reading instruction. Interviews would also provide background knowledge into the kinds of professional development activities that teachers receive to prepare them to differentiate reading instruction in Reading First classrooms. Reading First provides opportunities for professional development activities such as K-3 Reading Academies that target effective early reading instruction strategies for all K-3 students, particularly those who are having difficulty learning to read. These academics provide teachers with practical opportunities to interact with the student books and reading programs that are adopted by their school districts, and teach them how to apply the materials to their specific student populations. Knowing the extent to which teachers have participated in these academics would be beneficial in determining how these experiences help them develop activities in their classrooms.

Furthermore, structured interviews would assist researchers in determining teachers' specific knowledge of evidence based practices in reading instruction, knowledge of interventions to assist struggling readers, the use of these interventions in the classroom, and barriers to differentiation. Moody and Vaughn (1997) used focus group interviews to determine prevalence of grouping formats, teachers' knowledge of the benefits of a variety of grouping

formats, and barriers to the use of differentiated instruction. Conducting interviews with teachers could provide valuable information regarding what teachers need to successfully differentiate reading instruction for diverse learners.

Increasing Study Duration

Although students' demonstrated fluency gains regardless of reading ability (both proficient and struggling readers made average gains of 20 words per minute or more), the differences in scores were calculated after only half the school year had progressed. Increasing the duration of the study to last the entire school year would allow more opportunity to observe growth in student reading scores after one year of instruction. Scores could be evaluated pre- and post-test based on the first DIBELS assessment, which takes place in the beginning of the school year, and the third assessment, which takes place at the end of the school year. This would not only take into consideration the effects of an entire year of instruction on students' oral reading fluency, but also would allow researchers to determine if students who receive differentiated instruction over the course of the school year are able to catch up with more proficient readers. Longitudinally, students could also be followed beginning in Kindergarten and then through third grade to determine the effects of several years of differentiated instruction on oral reading fluency.

Increasing the study duration to include one school year would also be more beneficial for teacher observations in that changes in teacher behavior and classroom structures may be more evident over the course of one school year as opposed to one semester. In their research of teachers' differentiated instruction practices, Vaughn et al. (1998) implemented a two year study that included observations, professional development in instructional practices, and teacher

interviews. Extending the length of the study would allow for additional time to assess teachers' knowledge and provide support to help them differentiate successfully in the classroom.

Including Additional Reading Assessments

This study relied on the use of DIBELS Oral Reading Fluency scores to determine if students made reading gains. Incorporating additional reading assessments to evaluate students' reading skills would provide a more comprehensive picture of the skill deficits students face beyond fluency measures. In a related study, Moody et al. (2000) used the Tests of Oral Reading Fluency (TORF) and specific subtests of the Woodcock Johnson Tests of Achievement Revised (WJ-R) to determine if interventions taught to teachers had any effects on student achievement scores. Including assessments that measure each area of reading addressed by the Reading First Initiative (phonological awareness, phonics, fluency, vocabulary, and comprehension) would assist teachers in developing center activities that concentrate on skill development. Using these instruments as pre- and post-test measures would help researchers determine the nature of reading instruction that takes place in the classroom, and its ability to meet students' needs. As previously mentioned, teachers who scored highest on the differentiation checklist incorporated the use of reciprocal teaching in their reading instruction. Including a comprehension measure would provide an opportunity to examine the effects of this strategy on students' reading comprehension.

Furthermore, a variety of assessments would assist researchers in developing effective interventions to implement in classrooms so that experimental research can be done to determine if evidence based practices directly influence development of reading skills. Finally, examining student scores on the Stanford Achievement Test-10 (SAT-10) would also allow researchers to

determine how students fare on achievement tests as a result of differentiated reading instruction, which also supports the need to increase the duration of the study.

Conducting Additional Data Analysis

This study used whole class observations and averages to analyze the relationships between the variables of differentiated instruction, classroom management structures, and students' oral reading fluency. Future data analysis should focus on examining the effects of differentiated instruction on individual students. Employing data analysis such as multilevel modeling or hierarchical linear modeling allow the researcher to examine variation at the different student levels within a classroom. For example, variation in the lowest or highest readers over the repeated DIBELS measures could be analyzed. Researchers such as Bryk and Raudenbush (1992) and Longford (1987), found that examining the hierarchical structures of data allowed for examining the variation between groups nested within a study. The advantage of examining the data to compare groups in this study would allow the researcher to determine gains in fluency for targeted groups of readers, such as the lowest group, so that relationships between instruction and reading fluency could be determined for that specific group of students.

Implications for Future Practice

Several implications for future practice arose as a result of this study. Key areas for development address the areas of pre-service and in-service teacher education, and for teacher practices.

Pre-Service Teacher education

Teachers who participated in this study varied in their in-service teacher preparation and certification. While participants completed the Teacher Information Form that was collected when participants were recruited for the study, informal conversations occurred wherein teachers

discussed their level of preparation in reading. Many commented that they had little experience with reading coursework while in college, and that many courses were not required or offered. One teacher stated, “I had to get my reading endorsement through the county to get more reading courses.” A beginning teacher reported that she was able to take several courses, but she attended a program that required a Master’s degree for graduation. Of the 32 participating teachers, 22 held bachelor’s degrees, 10 held master’s degrees, and three received special certifications or endorsements in reading. This variability in teacher preparations is similar to that found in the research on teacher preparation in many ways. First, the coursework required of many pre-service teachers varies from program to program (Hoffman & Roller, 2001). Beginning teachers report having as few as six credit hours in reading or language arts coursework, while others report having 15 or more hours of reading related coursework (Maloch, Fine, & Seely-Flint, 2002). Implementing a differentiated curriculum in requires in-depth knowledge of the reading process, as well as knowledge of assessment so that teachers can make informed decisions regarding reading instruction for all students. Teachers who graduated from programs deemed by the National Commission and Sites of Excellence in Reading Teacher Education (SERTE) as exemplary at preparing pre-service teachers to teach reading all felt they were better able to respond to the needs of their students, and more importantly felt they were able to help struggling readers that no one had been able to help before (Maloch et al., 2002). By providing extensive coursework that includes at least 15 hours of classes related to reading instruction, pre-service teachers would most likely be armed with the knowledge necessary to make instructional decisions based on student need.

Secondly, teachers in this study varied in their implementation of both reading practices and classroom management structures. As evidenced by classroom observations, a majority of

the teachers used class rules and routines to set expectations in the classroom. Teachers who scored highest instructed students regularly on making smooth transitions between activities and made consequences for rule infractions clear to all students. These practices were observed by veteran teachers, as well as by beginning teachers, with one remarking that she “used what her supervising teacher used at first, but then made my own game plan.” Consequently, Maloch, Flint, Eldridge, Harmon, Loven, Fine, Bryant-Shanklin, and Martinez (2003) found that when field experiences provide pre-service teachers with extensive classroom contact it ensures that they have first hand knowledge of what reading instruction and classroom management “looks like.” Many beginning teachers experience difficulty transferring what they learned in university courses to real-life, practical classroom situations once they enter their own classrooms. Teacher education programs that focus on extensive apprenticeship opportunities produce teachers that are better able to transfer research into practice. By providing pre-service teachers with multiple opportunities to gain real-life classroom experience, beginning teachers can use the interventions they learned in university courses in their own classrooms, especially when they have seen the practice performed successfully during several of their field experiences.

Next, many of the teachers in this study were beginning teachers, with fewer than five years of experience. Of the 10 who reported having fewer than five years of experience, six were high performers on the differentiation and classroom management checklists. In light of the fact that research shows that new teachers are often preoccupied with issues related to classroom management so they rely on using curricular materials to help them establish standards in the classroom (Veenman, 1984), the beginning teachers in this study were able to utilize several instructional resources to allow students to be successful both behaviorally and academically. This was evidenced not only through their use of the resources provided with their

textbooks, but also by their clever use of materials provided at Reading First academies. When asked where they got their center ideas, six of the beginning teachers reported using the binders given to them through the Florida Center for Reading Research at a summer academy.

Finally, several studies have shown that new teachers want materials and ideas that they can implement easily so many rely on textbooks and teacher's guides even though they have negative ideas about them (Ball & Feiman-Nemser, 1988; Grossman & Thompson, 2004). This was also found throughout many classrooms in this study when teachers relied on activities and technologies that facilitated greater ease of classroom management structures. For example, several teachers implemented the use of Leap Pad story systems or Accelerated Reader centers because they required little to no teacher monitoring, but were not connected to skills being taught during small-group reading instruction. Teacher education programs could better prepare pre-service teachers on ways to supplement or interact with the curricular materials in such a way that they are able to insert their own knowledge about the content while still adhering to their pedagogical beliefs (Grossman & Thompson, 2004).

In-Service Teacher Preparation

Many teachers who participated in this study seemed to constantly seek guidance and ideas as to how to help their struggling readers. During the informal recruitment meetings, teachers discussed feeling "frustrated by the combination of academic and behavior problems" in their classrooms. Several important similarities were found between the participants' experiences and the research on professional development for in-service teachers. First of all, these teachers reported having access to many materials provided through Reading First academies, which are typically attended during summer breaks or on teacher workdays. Many teachers felt that the Reading First program requirements were "dropped on us with very little guidance as to how to

use the materials.” This is supported by the fact that much is known about high quality professional development for teachers (Danielson, 1996), but little is known about how to translate it into best practices for reading teachers (Mazzoni & Gambrell, 2003).

Secondly, classroom observations revealed that teachers seemed to be aware of student reading abilities based on DIBELS scores, but many demonstrated problems creating content specific activities for struggling readers. With the prevalent use of progress monitoring tools such as DIBELS, teachers are becoming aware of how to use data to inform instruction. What is missing, however, is ways in which teachers can use the data from year to year to determine the areas of professional development where they experience or perceive that there is a weakness. Making professional development activities available based not only on interest, but on student need may be more effective, especially when teachers, like the ones who participated in this study, are so attuned to students’ needs (Anders, Hoffman, & Duffy, 2000).

One additional suggestion for professional development that arose from these research findings relates to classroom management issues. During several observations, teachers approached the data collectors to remark about the student behavior in the classroom and how it impeded their ability to conduct the reading lesson. Teachers, especially those involved in this study, continue to identify student behavior and classroom management issues as a barrier to effective instruction. Professional development activities related to best practices in classroom management can help teachers renew their philosophies regarding student behavior through teacher-led discussions and networking opportunities, which have proven to be effective in helping teachers reflect on individual classroom practices (Putnam & Borko, 2000).

Teachers also expressed concerns about the lack of support provided in implementing strategies and using curricular materials presented at past professional development

opportunities. Similarly, Vaughn et al. (1998) encountered the same problem with teachers who participated in day-long workshops that included follow-up meetings to discuss implementation of the interventions they learned. Teachers identified four practices that they knew little about, but wanted to implement in their classrooms (Writing Process, Collaborative Strategic Reading, Class Wide Peer Tutoring, and Making Words). Participants received workbooks and materials to implement the strategies learned, but did not implement the strategies when they returned to the classroom. The most commonly identified barrier to implementation was not knowing what the strategy “looked like” when it was used with students, and being unable to modify the strategy to meet the needs of diverse groups of students. This is consistent with the findings of Foorman and Moats (2004) in that professional development in reading is most effective when a continuous presence is provided to teachers through monthly visits, demonstration lessons in the classroom, and regular informal meetings with teachers to discuss program implementation issues. Teachers require ongoing support after professional development activities have been conducted, otherwise implementation becomes bothersome to the point that they return to the tried and true methods that worked before.

Teacher Practices

The Reading First Initiative focuses on reading instruction in the five components of reading identified by the National Reading Panel (2000): phonemic awareness, phonics, fluency, vocabulary, and comprehension. These components have been identified as essential to the process of learning to read in young children. The teachers who scored high on the differentiated instruction checklist consistently implemented the same strategies or practices that contributed to student learning. These strategies were broken down into the five components of reading, describing the strategies observed or not observed within each component.

Phonemic awareness

Phonemic awareness is the ability to attend to the individual sounds in spoken words (Adams, 1990). Phonemic awareness is a good predictor of early reading ability (Stanovich, 1994), and is an early predictor of future reading difficulty (Adams, 1990; Ball & Blachman, 1991). Research has shown that teaching phonemic awareness to young children increases reading achievement (Cunningham, 1990; Foorman Francis, Fletcher, Schatschneider, & Mehta, 1998), and that some children require systematic, explicit instruction in phonemic awareness in order to make the connection between individual sounds and words (Snow, Burns & Griffin, 1998).

Practices observed that support phonemic awareness instruction included activities that focused on segmenting and blending sounds. Although phonemic awareness instruction typically occurs for beginning readers, it was observed during small group instruction in four classrooms that had high numbers of struggling readers. These teachers used strategies such as oral language activities that involved singing rhyming poems or chants. Additionally, teachers used strategies suggested by researchers such as Yopp (1992) that included (a) explicit instruction of sounds through segmenting, (b) sound isolation using words that have the same beginning, middle, or ending sounds, or (c) segmenting words into onsets and rimes, and then into individual sounds. These activities were presented during small-group reading instruction where students received immediate feedback from the teacher and observed others performing the same tasks.

Phonics

Phonics instruction focuses on a child's ability to understand the alphabetic principle, or letter-sound knowledge. A child who understands the alphabetic principle demonstrates an

awareness of the relationship between a written letter or word and the sound(s) it represents (Foorman et al, 1998). Researchers (Adams, 1990; Chall, 1967; Foorman et al., 1998) found that systematic instruction in phonics that occurred during beginning reading instruction lead to significant reading achievement. Evidence-based practices observed by high performing teachers included the use word work and invented spelling.

Teachers used word work by using manipulative letters to improve children's understanding of the alphabetic principle (Pinnell & Fountas, 1998). During a word work activity, students typically engaged in encoding and decoding of words, manipulating the sounds to form new words and working with onsets and rimes in word families. This activity typically occurred during literacy center activities, with students working either individually or in pairs to form words. Teachers also encouraged the use of invented spelling in writing center activities. Invented spelling allows students to use their knowledge of letters and sounds to invent their own spellings of words. When implementing invented spelling with children, phonemic awareness is reinforced while phonics knowledge and word recognition is developed (Clarke, 1989; Stahl & Murray, 1998).

Fluency

Another practice that deserves more attention in classrooms is the use of various repeated oral reading methods that are implemented during whole class reading instruction. Fluency is defined as the ability to read with accuracy, speed, and prosody (Adams, 1990). Research has shown that repeated oral reading is effective at improving fluency (National Reading Panel, 2000). Each of the classrooms observed, over approximately 97% of 96 observations, incorporated group reading formats into their whole class reading instruction. Choral reading, team reading, and round-robin reading were the most observed practices. During choral reading,

the entire class read the text together aloud. In some instances, the teacher read first and students read after. Some teachers read aloud with students, while others simply walked around the room, monitoring student's within their proximity. Many teachers (both high and low performing on the differentiated instruction checklist), incorporated round robin reading into their whole class reading instruction. During round-robin reading, students take turns reading parts of a text aloud. According to the National Reading Panel (2000) and Ash, Kuhn, and Walpole (2003), many teachers rely solely on round-robin reading to develop oral fluency; unfortunately round-robin reading does not increase fluency because students typically have the opportunity to read small amounts of text, usually only get to read that limited amount, and are forced to read the same text as the rest of the class regardless of their reading level. In fact, Ash et al. (2003) found that despite knowing that round-robin reading does not promote fluency, teachers still use it as their primary whole-class reading activity. Teachers need to be informed of the many other forms of repeated oral reading that have strong evidence to support their ability to improve students' reading fluency. These include re-reading text at least four times using audiotapes, paired reading, mentor reading, or team reading.

Vocabulary

One practice that was observed very little was systematic vocabulary instruction. Research has shown that vocabulary knowledge contributes to students' ability to comprehend text (Baumann, Kame'enui, & Ash, 2003). According to Stahl (2005), to place a word into their long-term memory, students have to see a word more than once, but not as mere repetition in the sense of drill and practice of the word. Instead, they must see the word embedded in different contexts. For this reason, it is important that vocabulary instruction provides students with several opportunities to encounter words repeatedly and in multiple contexts. Stanovich (1986)

describes the “Matthew Effect” and how it applies to vocabulary knowledge. Students who have extensive vocabulary knowledge tend to read more, continuously developing their word knowledge, while those who have very limited vocabulary knowledge find reading difficult (Snow, 2002). Teachers need to incorporate vocabulary instruction into reading lessons and can do so using activities that maintain student engagement, increasing student motivation to learn more and more words. Within the state of Florida, where this study took place, researchers found that students who had more verbal knowledge and reasoning skills (vocabulary knowledge) demonstrated increased scores on the Florida Comprehensive Assessment Test (FCAT) across three grade levels (Schatshneider, Buck, Torgesen, Wagner, Hassler, Hecht, & Powell-Smith, 2004). Some practices that have been proven to improve students’ vocabulary knowledge are Text Talk (Beck & McKeown, 2001), Word Wizard (Beck, Perfetti, & McKeown, 1982), semantic maps or other graphic organizers, and Shared Storybook Readings (Coyne, Simmons, & Kame’enui, 2003).

It is important for teachers to not only know what words to teach, but how to select strategies that result in effective vocabulary instruction. According to Graves (2000), there are four components of an effective vocabulary program: (a) extensive independent reading to expand word knowledge, (b) targeted word instruction to enhance comprehension of texts containing those words, (c) instruction in independent word-learning strategies, and (d) word consciousness or word-play activities that motivate and enhance vocabulary development.

Comprehension

Another practice that was impressively implemented by participating teachers was reciprocal teaching. Comprehension is the goal of reading; without it, students could not gain meaning from text (Adams, 1990; Block & Pressley, 2002). Phonemic awareness, phonics,

fluency, and vocabulary development all contribute to comprehension of text. Research has shown that good readers who comprehend what they read are active in that they think about what they read by using metacognitive strategies to correct problems with understanding (Block & Pressley, 2002). Teachers were observed using cue cards provided with materials from the Florida Center for Reading Research (FCRR), and from their basal reading programs to facilitate student comprehension using reciprocal teaching strategies. Research shows that reciprocal teaching is effective at helping students get meaning from text by engaging them in ongoing dialogue with the teacher by using summarizing, question generating, clarifying, and predicting (Palincsar, 1986). Despite the fact that implementation of reciprocal teaching was inconsistent across teachers, students were engaged in the reading process and were able to answer comprehension questions from the story after using this strategy.

Conclusions

Teaching reading involves much more than expert knowledge; an effective teacher must teach in such a way as to engage the students' interest, challenge them, and spark their imagination. To meet these pedagogical challenges, teachers must have an awareness of the diverse abilities and backgrounds of students, including those with learning and behavior problems. In addition to being experts in reading instruction, today's teachers must possess classroom management skills that facilitate the learning process. This is no easy task with 38% of all fourth graders possessing reading skills below the "basic" level, unable to read well enough to complete class work at grade level (U.S. Department of Education, 2001). To get students to read well, they must read frequently, but to get them to read frequently, they must be able to read well (Adams, 1990).

Without early intervention in reading, the prognosis for children who experience reading deficits is grim. Research has found that persistent reading failures bring about negative long-term consequences for children's self-confidence, motivation to learn, and overall school performance, and affect post-school outcomes as well (National Institute of Child Health and Human Development [NICHD], 2000). To further complicate matters, students with reading problems often display inappropriate behaviors to escape the daunting task of reading (Bennett, Brown, Boyle, Raccine, & Offord, 2003).

A review of the literature on classroom instruction and management practices revealed first, that effective teachers employ a combination of research-based reading instruction and classroom management skills to ensure success for students. Second, exemplary reading teachers provide balanced instruction that includes a variety of grouping formats facilitated by effective classroom management. Next, research on differentiated instruction revealed that teachers frequently struggle with implementing differentiated reading instruction practices due to classroom management problems. Finally, effective classroom managers teach rules and routines frequently, but these classroom management practices are often implemented inconsistently.

Based on the review of the literature, it became clear that instruction and classroom management must go hand in hand in order for student achievement to occur; therefore, this study sought to examine the ways classroom management techniques can be applied to different instructional contexts, especially to reading instruction. Specifically, this study addressed how teachers improved reading fluency, and if instructional practices were supported by classroom management structures. For this study, observations of 32 teachers occurred using two checklists as measures of differentiated reading instruction and classroom management

structures. These checklists were correlated with students' DIBELS oral reading fluency scores to examine their predictive value. Data were analyzed using descriptive and inferential statistics, as well as multiple regression analysis to determine the relationship between differentiated reading instruction, classroom management structures, and reading fluency. This study provides important conclusions regarding the effects of differentiated instruction on students' oral reading fluency and information regarding best practices in reading instruction and classroom management that jointly contribute to student reading progress.

Teachers Differentiate Instruction Based on Student Need

Children enter school with a variety of background experiences and a range of ability levels. Although all classrooms contain some range of student ability, the gap in at-risk students' reading ability does not disappear even after the first year in school (Ornstein, 1995). Without assessment, early diagnosis, or appropriate instruction during the first years at school, this gap in reading knowledge widens, resulting in what has been called the "Matthew Effect" in reading (Rayner, Foorman, Perfetti, Pesesky, & Seidenberg, 2002; Stanovich, 1986). Without early intervention, the "Matthew Effect" continues to cause additional reading deficits until these struggling readers reach an age where the odds of ever developing literacy skills are shockingly low. Eventually, this can lead to a gap in achievement on state and local standardized tests (McGill-Franzen, Zmach, Solic, & Zeig, 2006).

This gap in the reading abilities of students from diverse backgrounds has been the focus of many researchers and educators, especially with the passing of the No Child Left Behind Act (U.S. Department of Education, 2001). Studies have been conducted examining exemplary literacy teachers' practices that helped researchers identify evidence-based practices, including small-group differentiated reading instruction. Researchers have demonstrated that outstanding

teachers of literacy used a combination of grouping methods and individualized instruction and adapted reading instruction by using differentiated instruction based on the needs of their students (Pressley, Rankin, & Yokoi, 1996; Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998). According to Tomlinson (1999), an effective teacher who differentiates instruction knows where each student in the classroom is on levels of knowledge, skill, and understanding as well as where each child needs to progress.

Consistent with this research, the current study also revealed that (a) there is a gap between struggling readers and proficient readers, as measured by students' oral reading fluency scores, (b) teachers who scored high on the differentiated instruction checklist were in classrooms with the most struggling readers, and (c) high performing teachers were able to raise oral reading fluency scores of struggling students as much as teachers with proficient readers. A multiple regression analysis revealed a strong relationship between differentiated reading instruction and oral reading fluency (ORF), and that students' ORF scores increased regardless of their difference in performance between the pre- and post-test scores. Taking into consideration the "Matthew Effects" in reading, it would be expected that struggling students, with little or no differentiated instruction would maintain the same low fluency scores while their peers with proficient reading skills increase oral reading fluency by a rate of 1.5 words per week (Fuchs & Fuchs, 1993). In this study, the teachers who differentiated reading instruction the most used strategies that increased oral reading fluency of struggling readers by the same rate as proficient readers (approximately 1.5 words per week). The problem, however, is that the struggling readers still had fluency rates that were below that of their more proficient peers. With improved differentiated instruction, it is suggested that the gap between struggling and proficient readers would disappear (Stanovich, 1986).

Practices that Contribute to Progress in Reading

Despite the fact that the connection between academics and behavior has long been established (Scott, Nelson, & Liaupsin, 2001), educators struggle with ways to implement both instructional and behavioral interventions in the classroom. In this study, teachers who were high implementers on the differentiated instruction checklist used a number of reading and classroom management practices that contributed to students' growth in reading; more specifically oral reading fluency. Not only did these teachers use these practices with the lowest of readers who needed the interventions most, but they also were able to make the same gains in oral reading fluency as those made in classrooms with more proficient readers. Research conducted by Pressley (1998) and Wharton-McDonald et al. (1998) found that exemplary reading teachers consistently used classroom management practices that supported instruction, resulted in higher student achievement, and reduced problem behaviors. Based on the research of Emmer, Evertson, and Anderson (1980), Evertson, Emmer, Sanford, and Clements (1983), and Evertson (1989), teachers who implemented classroom management practices learned through a series of professional development activities were better able to provide instructional management during lessons, which resulted in improved academic engaged time and increased attention to student needs.

Researchers have been searching for a set of indicators that can predict success in reading so that early intervention and prevention of reading difficulties will result. Consistent with prior research, correlational analysis revealed that differentiated instruction is significantly related to classroom management, and that these two variables are significant indicators of oral reading fluency. These results particularly demonstrate that a combination of best practices in differentiated reading instruction, coupled with effective use of classroom management

structures, results in increasing the reading fluency rates of struggling readers at a rate comparable to that of proficient readers. Surprisingly, differentiated reading was more predictive of reading fluency than use of classroom management structures, but it is important to note that the two, when working hand in hand, produced the strongest results.

An analysis of checklist indicators used in this study revealed that a majority of participating teachers (a) placed instructional materials on walls or bulletin boards, (b) maintained the physical arrangement of the classroom environment, (c) removed distracting items from view or reach of students, (d) provided students with adequate space for storage, (e) provided instructional assignments that are relevant to students, (f) provided non-punitive provisions for students needing more time to finish work, (g) taught skills in the natural setting, and (h) delivered consequences in a consistent and timely manner. Additionally, high performing teachers scored low on two indicators: they did not make collaboration or independent work dependent on student choice, and they inconsistently posted consequences to rule violations. Consequently, low performing teachers demonstrated problems with (a) implementing student pairing, (b) using individualized assignments or activities, (c) providing different assignments to students, (d) providing a different sequence of activities based on student need, (e) providing students with the choice to collaborate or work independently, (f) implementing all aspects of centers including materials, posting rules and directions at centers, creating a rotation plan for centers, providing adequate time and materials for centers, and allowing choice at centers, (g) posting rules and procedures in the classroom, (h) posting student work prominently, (i) reviewing transitions regularly, (j) aspects of class rules including stating rules positively, limiting rules to five or less, and providing rules that are observable/measurable, and (k) posting consequences for rule violations in the classroom.

In addition to examining each checklist indicator, anecdotal notes recorded by the data collectors were analyzed to determine if there were consistent frequent practices employed by both the high and low performing groups. Most teachers implemented a variation of choral reading when introducing a new story to students and incorporated small group instruction into their reading program. Many teachers used technology during their reading instruction, which included the use of audiocassette tapes and players for books on tape, Leap Pad story systems, microphones with classroom amplification systems, and My Reading Coach or Read Naturally computer software. The highest performing teachers implemented practices such as reciprocal teaching, small-group instruction, literacy centers, and varied grouping formats for students.

This study yielded important findings in both the fields of reading research and classroom management instruction. By creating a comprehensive set of indicators that includes many of the practices listed above, as well as those provided in the Implications for Future Practices section of this chapter, a framework can be designed to improve both in-service and pre-service teacher education. The most promising findings focused on the students' gains in fluency across classrooms, regardless of their initial level. Teachers' use of differentiated reading practices seems to be leveling the playing field for students who struggle the most. Despite the fact that Stanovich (1986) would argue that the gap between struggling readers and proficient readers will continue to widen as a result of poor instruction (the "Matthew Effect"), and that struggling readers typically do not receive the instruction necessary to make gains in reading similar to those of proficient readers, the teachers in this study seem to be providing instruction to struggling students that enables them to make gains that are equal to those made by proficient readers.

Appendix A
Summary of Reviewed Studies

A-1. Effective Teachers

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Wright, Horn & Sanders, 1997	60,000 + students in 2 nd - 8 th grades in Tennessee school districts	Correlation	N/A	Tennessee Value-Added Assessment System (TVASS) was used to measure the effects of teacher effectiveness on student achievement	Regardless of student ability, highly effective teachers were able to raise student achievement.
Haycock, 1998	2 nd – 8 th graders in Tennessee, Boston, and Dallas (unspecified number)	Correlation	N/A	Compared data from Wright et al. (1997) with student achievement data in Boston and Dallas	Highly effective teachers can raise student achievement an average of 53 percentile points over a period of one year, compared with less effective teachers who raise scores only 14 percentile points
Pianta, La Paro, Payne, Cox & Bradley, 2002	223 Kindergartners and their teachers across the states of Virginia, North Carolina, and Arizona	Correlation Observation	N/A	Classroom Observation System for Kindergarten (COS-K) used to determine classroom variables that correlate with quality of instruction	There is marked variability in the quality of instruction provided to Kindergarten students across the country.

A-1. Continued

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
National Institute of Childhood Health and Development Early Child Care Research Network (NICHD ECCRN), 2005	780 3 rd graders from 250 school districts in 10 cities across the United States	Observation	N/A	Classroom Observation System for Third Grade (COS-3) was used to describe experiences of third graders in “typical” classroom across the country	67% of observed intervals included students engaged in basic skills instruction. There is variability in both implementation of effective practices and quality of instruction for children in third grade.

A-2 Effective Reading Instruction

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Pressley, Rankin & Yokoi, 1996	83 Kindergarten through 2 nd grade teachers, identified as outstanding by their supervisors, from 23 states across the United States	Survey	N/A	Teachers responded to a series of questionnaires designed to identify quality literacy practices	Practices of exemplary K-2 teachers were: providing print rich environments, balanced instruction, mixed grouping practices, and integrating reading into other content areas
Pressley, Yokoi, Rankin, Wharton-McDonald, & Mistretta, 1997	33 teachers nominated as outstanding by their supervisors	Survey	N/A	Teachers responded to a series of questionnaires designed to identify quality literacy practices	Practices of exemplary 5 th grade teachers were: providing print rich environments, balanced instruction, mixed grouping practices, and integrating reading into other content areas
Walpole, Justice & Invernizzi, 2004	320 students at one elementary school	Case Study	N/A	Teachers and administrators at this school reported on literacy practices used with K - 2 nd grade students at this school	Teachers differentiated reading instruction by using small and whole group reading instruction as well as excellent management procedures

A- 2. Continued

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Wharton-McDonald, Pressley & Mistretta-Hampston, 1998	9 first grade teachers recognized as outstanding by principal	Observation Interviews	N/A	Teachers were observed for 1-2 hours twice per month. Over two interviews teachers asked to identify highly effective instructional practices	Balanced literacy instruction coupled with outstanding classroom management skills were identified as necessary to bringing about positive affects in achievement
Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998	10 fourth and fifth grade teachers in Upstate New York	Observation Interviews	N/A	Teachers were observed for 1-2 hours twice per month and two interviews examining ways in which teachers motivate students.	Teachers provided balanced literacy environments but were varied in the amount of self-regulation and encouragement provided to students.
Morrow, Tracey, Woo & Pressley, 1999	6 first grade teachers from six districts in New Jersey	Observation Interviews	N/A	Teachers were observed for a total of 25 hours over eight visits and interviewed twice to determine features that contribute to achievement	Teachers provided students with multiple opportunities to read and write, explicit skills instruction, and effective classroom management techniques
Pressley, Wharton-McDonald, Allington, Block, Morrow, Tracey, et al., 2001	30 first grade teachers from New York, New Jersey, Wisconsin, Texas, and California	Observation Interviews	N/A	Pairs of teachers (1 highly effective and 1 typical) were observed for 15-30 hours each and interviewed twice.	Classroom management, balanced literacy instruction, scaffolding, self-regulation, and connection to content areas were practices identified

A-3. Differentiated Reading Instruction

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
McIntosh, Vaughn, Schumm, Haager & Lee (1993)	60 general education teachers and 60 students with LD	Observation	N/A	Using the <i>Classroom Climate Survey</i> , researchers observed teachers in inclusive classrooms to determine how they instruction was modified for students with special needs	Instruction was not differentiated to meet all students needs. Students were not engaged in the tasks being taught. Whole class instruction was the most commonly used method of instruction.
Moody & Vaughn (1997)	49 3 rd grade general education and special education collaborators	Observation	N/A	Interviews and Focus Group discussions were coded to find common themes regarding student grouping in inclusive classroom settings	Predominant use of whole class grouping in reading, teachers were divided on whether to use heterogeneous or homogenous grouping, and classroom management influence teachers' decisions to rely on whole class instruction during reading

A-3 Continued

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Vaughn, Hughes, Schumm, & Klingner (1998)	7 general education teachers	Observation	Workshop in writing, strategic reading, peer tutoring, and word study	Teacher Interviews, Validity Checklists, teacher checklists, and observations were used to determine if teachers used workshop interventions	Teachers did not alter grouping practices due to time and classroom management factors, and teachers' instruction focused on preparation for standardized testing
Vaughn, Moody & Schumm (1998)	14 special education teachers and their 82 students	Observation Pre/Post of students using SAT	N/A	Teacher interviews, observations, and teacher self reports were used to determine if reading instruction in the resource room was different than inclusive classrooms	11 out of 14 teachers used whole class instruction followed by seatwork as main mode of reading instruction. Teachers used less strategy instruction. Students in these classrooms made very little gains.
Moody, Vaughn, Hughes & Fischer (2000)	6 special education teachers from previous study and their 49 students	Observation of Teachers; Pre/Post test of students using WJR-PC and TORF	N/A	Teacher interviews, observations, and teacher self reports were used to determine if teachers began to differentiate reading instruction after learning of previous study results	Half of teachers used less whole class instruction. Students were by ability. Teachers who did not use small group instruction said classroom management issues were the cause. Students made no gains in comprehension or fluency

A-3. Continued

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Schumm, Moody, & Vaughn (2000)	<p>Study 1: 29 3rd grade teachers</p> <p>Study 2: 147 students categorized as high, average, low and LD</p>	<p>Study 1: Observation</p> <p>Study 2: Pre/Post Test KTEA, Piers-Harris Children's Self Concept & Elementary Reading Attitude Survey</p>	N/A	<p>Study 1: Teachers were observed using the <i>Classroom Climate Scale</i> and interviewed regarding grouping practices and differentiated reading instruction.</p> <p>Study 2: Students were tested on reading achievement, self perception and attitudes toward reading from fall to spring.</p>	<p>Study 1: Classroom teachers reported needing better understanding of differentiated instruction practices, classroom management, collaboration, reading assessment, and grouping.</p> <p>Study 2: Teachers continued to rely on whole group reading instruction as primary mode of presentation.</p> <p>Study 2: From fall to spring, high and average achievers made moderate gains while low achievers and students with LD made little or no gains. Across all achievement levels, there were no changes in self-concept and attitudes toward reading at home and school declined.</p>

A-4. Effective Classroom Management

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Kounin, 1970	49 videotapes of first and second grade students	Observation	N/A	49 videotapes of classrooms across the country were examined to determine the differences between effective and ineffective classroom managers	Effective classroom managers set up their classroom environments to prevent problem behaviors before they occur. Identified four critical classroom management elements.
Emmer, Evertson & Anderson, 1980	27 elementary classroom teachers in eight schools in Texas	Observation	N/A	Using the Classroom Narrative Record and Student Engagement Scale, observers focused on practices that led to high student engagement	More effective teachers taught rules/procedures explicitly, immediately addressed problem behaviors, and provided academic activities
Evertson, Emmer, Sanford & Clements, 1983	41 teachers in two school districts in the southwest.	Experimental Control n=18 Treatment n=23	Classroom management manual and workshops held at beginning of school year	Treatment and control groups. Treatment groups received manual and workshops. Control teachers received treatment at middle of school year	Treatment group teachers used practices more than those in control group. Treatment group teachers had higher rates of engagement and better-managed classrooms.

A-4. Continued

Author(s) & Year	Sample Description	Design	Intervention	Method	Results
Evertson, 1989	29 teachers in 1 st – 6 th grades	Experimental Control n=14 Treatment n=15	One Day classroom management workshop with manual	Teachers in treatment group participated in a workshop and received materials	Treatment group teachers provided better management and implemented rules and routines more efficiently

APPENDIX B
OBSERVATION CHECKISTS

Differentiated Instruction and Classroom Management Checklist

Teacher: _____ School: _____
Date: _____ Observer: _____

Checklist for Differentiated Instruction				
Domain	Indicator	Yes	No	U/C
Teacher Behaviors	<p>1. Does the teacher use whole-class activities?</p> <ul style="list-style-type: none"> ▪ The entire class is involved with the same activity/assignment. ▪ Involves only formal structures arranged by the teacher 			
	<p>2. Does the teacher use group activities?</p> <ul style="list-style-type: none"> ▪ Although seating arrangement may be affected by group activities, this item relates to student interaction in a group, not seat assignment. ▪ The class is working in two or more groups, with three or more students in each group. ▪ The teacher is working with a group of three or more students for more than 5 minutes. 			
	<p>3. Does the teacher use student pairing?</p> <ul style="list-style-type: none"> ▪ The class is divided into groups of two students. ▪ One child acts as peer tutor to another student. ▪ Most of the students are working in pairs. ▪ Students are in groups of two to share notes, tutor, or work on an activity or assignment. 			
	<p>4. Does the teacher use independent activities?</p> <ul style="list-style-type: none"> ▪ Students are engaged individually on an activity/assignment like the rest of the students in the class. 			
	<p>5. Does the teacher respond to the needs of the students?</p> <ul style="list-style-type: none"> ▪ Teacher re-teaches or explains new concepts in a different way. ▪ Incorrect items can be redone with teacher supervision. ▪ Teacher provides corrective feedback (re-explains, models the correct process, provides cues, or provides feedback regarding parts of assignments that were incorrect) 			
	<p>6. Does the teacher monitor on-going student performance?</p> <ul style="list-style-type: none"> ▪ The teacher checks in with the students during an activity to be sure they are performing correctly. ▪ The teacher asks students to demonstrate what they are doing. ▪ The teacher has students repeat directions. ▪ The teacher checks until practice items are correct. ▪ The teacher calls on students during class discussions. ▪ The teacher asks students to explain their work 			
	<p>7. Does the teacher communicate expectations?</p> <ul style="list-style-type: none"> ▪ The teacher provides clear and explicit indications of the goals and objectives of the assignment. ▪ The teacher provides information about why an assignment is important. ▪ The teacher provides step-by-step directions telling students what is to be done and how. ▪ The teacher provides clear indications of expected student performance. 			

Domain	Indicator	Yes	No	U/C
Student Behaviors	<p>8. Do the students appear engaged in task-related behavior?</p> <ul style="list-style-type: none"> ▪ The students work spending little time waiting for help, getting organized, or talking about personal matters. ▪ The students seek help from the teacher so they can continue to work on an assignment. ▪ The students seek help from other student so they can continue to work on tasks. ▪ Students appear involved in an assignment, demonstration, or project. 			
	<p>9. Do students ask teacher for help?</p> <ul style="list-style-type: none"> ▪ Students raise hands or call out for assistance. ▪ Students request assistance from the teacher 			
	<p>10. Do students interact with other students?</p> <ul style="list-style-type: none"> ▪ Students appear to be talking about or working on a similar assignment. ▪ Students make eye contact and other gestures that denote striving to work on similar goals as other students. ▪ Students share materials or work on the same assignment with others. 			
	<p>11. Do students interact with the teacher?</p> <ul style="list-style-type: none"> ▪ Students engage in conversations with the teacher regarding assignments. ▪ Students conference with teachers regarding ongoing projects or assignments. 			
	<p>12. Do students appear to know how to complete tasks?</p> <ul style="list-style-type: none"> ▪ Students understand the task and its purpose. ▪ Students use body language that indicates understanding and motivation to complete work. ▪ Students say things such as, “I know how to do this,” or “This is not hard” ▪ Students can complete task from start to finish with little or no help. 			
	Materials	<p>13. Does the teacher use individualized assignments or activities?</p> <ul style="list-style-type: none"> ▪ Students are not involved in pairing or group activities and are working individually on differentiated assignments. ▪ Individual students are working on individual/differentiated assignments. ▪ The teacher works individually with a student for 5 minutes or longer. 		
<p>14. Is the class working on different assignments/ activities?</p> <ul style="list-style-type: none"> ▪ Students are working using different materials. ▪ Students may select different materials to work with. 				
<p>15. Does the teacher provide a different sequence of activities for different students?</p> <ul style="list-style-type: none"> ▪ Students are working on assignments at their own pace and according to student level. ▪ The teacher provides flexible time allocations for different assignments based on student need. 				
<p>16. Does the teacher provide materials that both inspire students to collaborate or work independently depending on student choice?</p> <ul style="list-style-type: none"> ▪ Students have options for collaborating with others on tasks. ▪ Students can work independently ▪ Materials selected promote student collaboration 				
<p>17. Does the teacher use materials that appeal to different learning styles?</p> <ul style="list-style-type: none"> ▪ Materials encourage the use of visual, audio, hands-on, and movement activities. 				
<p>18. Are there instructional materials on the walls or bulletin boards?</p> <ul style="list-style-type: none"> ▪ Word walls, ABC charts, sound charts, spelling rules, proofreading marks, and other instructional materials displayed for all students to see. ▪ Teacher uses instructional charts to reinforce skills taught during classroom instruction. 				

Domain	Indicator	Yes	No	U/C
Centers	19. Does the teacher use centers in the classroom? <ul style="list-style-type: none"> ▪ Students work in groups at specified areas to review previously taught skills or engage in creative projects. ▪ Students collaborate or work independently to complete center tasks 			
	20. Do centers include activities that are at an appropriate level for all students? <ul style="list-style-type: none"> ▪ A variety of activities are available for all skill levels. ▪ Students do not appear to be frustrated or confused about tasks at centers. ▪ All students can participate at the centers. 			
	21. Are rules and directions posted at each center? <ul style="list-style-type: none"> ▪ Teacher provides students with behavioral expectations for each center. ▪ Step-by-step directions are provided at each center. ▪ Students appear to know what to do at each center. 			
	22. Is there a rotation plan in place for students to move about the centers? <ul style="list-style-type: none"> ▪ Students are in pre-determined groups for centers. ▪ Students know where to go for each center. ▪ Teacher posts a schedule for students to follow for center movement. 			
	23. Do students have ample time to complete center activities? <ul style="list-style-type: none"> ▪ Students complete tasks while at centers. ▪ Students do not appear to be “rushed” while completing work. 			
	24. Do children have adequate materials to complete center tasks? <ul style="list-style-type: none"> ▪ Supplies are available at the centers for task completion. ▪ Students know where to obtain materials for center tasks if not located at center. ▪ Materials are readily available for center activities. 			
	25. Do students have choices that allow them to differentiate center tasks for themselves? <ul style="list-style-type: none"> ▪ Students may select from a variety of tasks at the center. ▪ The teacher provides students with various options for task completion while at centers. 			
Adapted from <i>The Classroom Climate Scale</i> (McIntosh et al., 1993) and <i>Evaluation of Center Environments</i> (Owocki, 2005).				

Classroom Management Checklist				
Domain	Indicator	Yes	No	U/C
Physical Setting	1. Are the walls, floors, and furniture clean and in good repair and adjusted to the proper size for students? <ul style="list-style-type: none"> ▪ Desks, tables, and shelves are in working order. ▪ The environment is safe for children. ▪ Students can work at desks and tables with ease. 			
	2. Are rules, routines, and procedures posted in a manner that is easy to see? <ul style="list-style-type: none"> ▪ Signs with rules, routines and procedures can be found in the room. ▪ Students can view these postings from any location in the room. ▪ Writing/print is legible. ▪ Picture representations are provided for non-readers. 			
	3. Are unnecessary and distracting items removed from view or reach? <ul style="list-style-type: none"> ▪ Items unrelated to instruction or activity have been removed or stored. ▪ Students have limited access to teacher items. 			
	4. Do students have secure and adequate space for personal storage? <ul style="list-style-type: none"> ▪ Students have individual cubbies or shelves for personal items. ▪ Students have storage in their desks. 			
	5. Has furniture been placed to decrease traffic flow challenges? <ul style="list-style-type: none"> ▪ Students can move about the room freely without harm. ▪ Students can access necessary activities in the classroom. 			
	6. Do instructional areas of the classroom have clear visual boundaries for students? <ul style="list-style-type: none"> ▪ Teacher's desk space is clearly separate from the instructional areas. ▪ Dividers/carpets/shelves separate different learning areas. 			
	7. Is student work posted or displayed prominently? <ul style="list-style-type: none"> ▪ A variety of student work can be found on the walls or bulletin boards. ▪ All levels of student work are displayed 			
Scheduling	8. Is the daily schedule of activities posted and reviewed regularly. <ul style="list-style-type: none"> ▪ Teacher posts an agenda where students can see. ▪ Teacher provides students with an agenda/planner of assignments or activities. ▪ Teacher reviews agenda with students throughout the lesson/day. 			
	9. Does the teacher use procedures, repetitions and rituals to foster greater ease of transitions? <ul style="list-style-type: none"> ▪ Students are aware of how to move between instructional activities. ▪ A system is in place to ease speed and smoothness of transitions (beat the clock, music during transition times, or reminder bell) 			
	10. Are transitions and non-instructional activities posted and regularly reviewed? <ul style="list-style-type: none"> ▪ Students know what to do during transitions between activities or grouping changes. ▪ Teacher posts the schedule for non-instructional activities regularly 			
	11. Is there a method for posting changes to the schedule? <ul style="list-style-type: none"> ▪ Teacher uses a procedure for indicating a change in the schedule to students. ▪ Teacher makes all students aware of schedule changes 			
	12. Does each student spend most of his/her time engaged in active learning activities with little or no unstructured downtime? <ul style="list-style-type: none"> ▪ Students converse about academic tasks and not personal matters. ▪ Student conversations with teachers are focused on assignments or tasks. ▪ Little time is spent on transitions between activities 			

Domain	Indicator	Yes	No	U/C
Instructional Planning and Delivery	13. Are lesson objectives developed based on students' functioning levels? <ul style="list-style-type: none"> ▪ Teacher sets goals according to students' skill levels. ▪ Teacher takes student skill levels into account when planning lessons. 			
	14. Are assignments relevant and meaningful to students? <ul style="list-style-type: none"> ▪ Students see the purpose for tasks. ▪ Tasks teach material relevant to students. 			
	15. Is the pace of instruction appropriate for the needs of all students? <ul style="list-style-type: none"> ▪ Students are given ample time to complete tasks. ▪ Task time allocation is based on student need. 			
	16. Are non-punitive provisions made for students needing more time? <ul style="list-style-type: none"> ▪ Students are not punished for incomplete work. ▪ Students do not have to miss out on other content instruction to complete work. 			
	17. Are skills taught in the settings and situations for which they would naturally occur? <ul style="list-style-type: none"> ▪ Students receive instruction in the classroom environment. ▪ Students are not removed from the classroom for additional instruction. 			
Classroom Discipline Plan	18. Are classroom rules positively stated? <ul style="list-style-type: none"> ▪ Teacher states what she would like students to do rather than using "No" language. 			
	19. Is the number of rules limited to no more than 5? <ul style="list-style-type: none"> ▪ Rules are no more than five in length. ▪ Rules are short and do not use excessive wording. 			
	20. Are the rules worded in observable and measurable terms? <ul style="list-style-type: none"> ▪ Teacher can clearly observe behaviors listed in rules. Subjective language such as "nice," "good," or "clean" are not used			
	21. Are reinforcers available for all students to earn? <ul style="list-style-type: none"> ▪ All students have access to verbal, nonverbal, tangible items, and activity reinforcers. 			
	22. Are reinforcers varied and individualized? <ul style="list-style-type: none"> ▪ Reinforcers are selected according to individual student need. ▪ Students can choose between a variety of reinforcers. 			
	23. Are consequences for rule violations posted? <ul style="list-style-type: none"> ▪ Teacher provides students with visual reminders of consequences of rule infractions. ▪ Consequences are clearly posted for all students to see, read and understand. 			
	24. Are consequences delivered consistently and in a timely manner? <ul style="list-style-type: none"> ▪ Teacher delivers the consequences for the same rule infractions immediately after the rule infraction occurs. ▪ Teacher provides all students with the same consequences for rule infractions. 			
	25. Are students reminded of their choices and consequences prior to delivery? <ul style="list-style-type: none"> ▪ Teacher reminds students of rules and consequences before rule infractions occur. ▪ Teacher provides students with prompts 			
Adapted from <i>Best Practices Classroom Management Checklist</i> (Florida's Positive Behavior Supports Project for the Center for Positive Behavior Interventions and Supports at the University of South Florida)				

APPENDIX C
OPERATIONAL DEFINITIONS FOR CHECKLIST INDICATORS

C-1. Checklist for Differentiated Instruction: Indicators and Operational Definitions

Domain	Indicator	Definition
Teacher Behaviors	1. Does the teacher use whole-class activities?	<ul style="list-style-type: none"> ▪ The entire class is involved with the same activity/assignment. ▪ Involves only formal structures arranged by the teacher
	2. Does the teacher use group activities? * Although seating arrangement may be affected by group activities, this item relates to student interaction in a group, not seat assignment.	<ul style="list-style-type: none"> ▪ The class is working in two or more groups, with three or more students in each group. ▪ The teacher is working with a group of three or more students for more than 5 minutes.
	3. Does the teacher use student pairing?	<ul style="list-style-type: none"> ▪ The class is divided into groups of two students. ▪ One child acts as peer tutor to another student. ▪ Most of the students are working in pairs. ▪ Students are in groups of two to share notes, tutor, or work on an activity or assignment.
	4. Does the teacher use independent activities?	<ul style="list-style-type: none"> ▪ Students are engaged individually on an activity/assignment like the rest of the students in the class.
	5. Does the teacher respond to the needs of the students?	<ul style="list-style-type: none"> ▪ Teacher re-teaches or explains new concepts in a different way. ▪ Teacher provides corrective feedback (re-explains, models the correct process, provides cues, or provides feedback regarding parts of assignments that were incorrect).

C-1. Continued

Domain	Indicator	Definition
	6. Does the teacher monitor on-going student performance?	<ul style="list-style-type: none"> ▪ The teacher checks in with the students during an activity to be sure they are performing correctly. ▪ The teacher asks students to demonstrate what they are doing. ▪ The teacher has students repeat directions. ▪ The teacher checks until practice items are correct. ▪ The teacher calls on students during class discussions. ▪ The teacher asks students to explain work.
	7. Does the teacher communicate expectations?	<ul style="list-style-type: none"> ▪ The teacher provides clear and explicit indications of the goals and objectives of the assignment. ▪ The teacher provides information about why an assignment is important. ▪ The teacher provides step-by-step directions telling students what is to be done and how. ▪ The teacher provides clear indications of expected student performance.
Student Behaviors	8. Do the students appear engaged in task-related behavior?	<ul style="list-style-type: none"> ▪ The students work spending little time waiting for help, getting organized, or talking about personal matters. ▪ The students seek help from the teacher so they can continue to work on an assignment. ▪ The students seek help from other student so they can continue to work on tasks. ▪ Students appear involved in an assignment, demonstration, or project.

C-1 Continued

Domain	Indicator	Definition
	9. Do students ask teacher for help?	<ul style="list-style-type: none"> ▪ Students raise hands or call out for assistance. ▪ Students request assistance from the teacher.
	10. Do students interact with other students?	<ul style="list-style-type: none"> ▪ Students appear to be talking about or working on a similar assignment. ▪ Students make eye contact and other gestures that denote striving to work on similar goals as other students. ▪ Students share materials or work on the same assignment with others.
	11. Do students interact with the teacher?	<ul style="list-style-type: none"> ▪ Students engage in conversations with the teacher regarding assignments. ▪ Students conference with teachers regarding ongoing projects or assignments.
	12. Do students appear to know how to complete tasks?	<ul style="list-style-type: none"> ▪ Students understand the task and its purpose. ▪ Students use body language that indicates understanding and motivation to complete work. ▪ Students say things such as, “I know how to do this,” or “This is not hard” ▪ Students can complete task from start to finish with little or no help.
Materials	13. Does the teacher use individualized assignments or activities?	<ul style="list-style-type: none"> ▪ Students are not involved in pairing or group activities and are working individually on differentiated assignments. ▪ Individual students are working on individual/differentiated assignments. ▪ The teacher works individually with a student for 5 minutes or longer.

C-1. Continued

Domain	Indicator	Definition
	14. Is the class working on different assignments/ activities?	<ul style="list-style-type: none"> ▪ Students are working using different materials. ▪ Students may select different materials to work with.
	15. Does the teacher provide a different sequence of activities for different students?	<ul style="list-style-type: none"> ▪ Students are working on assignments at their own pace and according to student level. ▪ The teacher provides flexible time allocations for different assignments based on student need.
	16. Does the teacher provide materials that both inspire students collaborate or work independently depending on student choice?	<ul style="list-style-type: none"> ▪ Students have options for collaborating with others on tasks. ▪ Students can work independently ▪ Materials selected promote student collaboration.
	17. Does the teacher materials that appeal to different learning styles?	<ul style="list-style-type: none"> ▪ Materials encourage the use of visual, audio, hands-on, and movement activities.
	18. Are there instructional materials on the walls or bulletin boards?	<ul style="list-style-type: none"> ▪ Word walls, ABC charts, sound charts, spelling rules, proofreading marks, and other instructional materials displayed for all students to see. ▪ Teacher uses instructional charts to reinforce skills taught during classroom instruction.
Centers	19. Does the teacher use centers in the classroom?	<ul style="list-style-type: none"> ▪ Students work in groups at specified areas to review previously taught skills or engage in creative projects. ▪ Students collaborate or work independently to complete center tasks.

C-1. Continued

Domain	Indicator	Definition
	20. Do centers include activities that are at an appropriate level for all students?	<ul style="list-style-type: none"> ▪ A variety of activities are available for all skill levels. ▪ Students do not appear to be frustrated or confused about tasks at centers. ▪ All students can participate at the centers.
	21. Are rules and directions posted at each center?	<ul style="list-style-type: none"> ▪ Teacher provides students with behavioral expectations for each center. ▪ Step-by-step directions are provided at each center. ▪ Students appear to know what to do at each center.
	22. Is there a rotation plan in place for students to move about the centers?	<ul style="list-style-type: none"> ▪ Students are in pre-determined groups for centers. ▪ Students know where to go for each center. ▪ Teacher posts a schedule for students to follow for center movement.
	23. Do students have ample time to complete center activities?	<ul style="list-style-type: none"> ▪ Students complete tasks while at centers.
	24. Do children have adequate materials to complete center tasks?	<ul style="list-style-type: none"> ▪ Supplies are available at the centers for task completion. ▪ Students know where to obtain materials for center tasks if not located at center. ▪ Materials are readily available for center activities.
	25. Do students have choices that allow them to differentiate center tasks for themselves?	<ul style="list-style-type: none"> ▪ Students may select from a variety of tasks at the center. <p>The teacher provides students with various options for task completion while at the center.</p>

Adapted from *The Classroom Climate Scale* (McIntosh et al., 1993) and *Evaluation of Center Environments* (Owocki, 2005).

C-2. Classroom Management Checklist: Indicators and Operational Definitions

Domain	Indicator	Operational Definition
Physical Setting	1. Are the walls, floors, and furniture clean and in good repair and adjusted to the proper size for students?	<ul style="list-style-type: none"> ▪ Desks, tables, and shelves are in working order. ▪ The environment is safe for children. ▪ Students can work at desks and tables
	2. Are rules, routines, and procedures posted in a manner that is easy to see?	<ul style="list-style-type: none"> ▪ Signs with rules, routines and procedures can be found in the room. ▪ Students can view these postings from any location in the room. ▪ Writing/print is legible. ▪ Picture representations are provided for non-readers.
	3. Are unnecessary and distracting items removed from view or reach?	<ul style="list-style-type: none"> ▪ Items unrelated to instruction or activity have been removed or stored. ▪ Students have limited access to teacher items.
	4. Do students have secure and adequate space for personal storage?	<ul style="list-style-type: none"> ▪ Students have individual cubbies or shelves for personal items. ▪ Students have storage in their desks.
	5. Has furniture been placed to decrease traffic flow challenges?	<ul style="list-style-type: none"> ▪ Students can move about the room freely without harm. ▪ Students can access necessary activities in the classroom.
	6. Do instructional areas of the classroom have clear visual boundaries for students?	<ul style="list-style-type: none"> ▪ Teacher’s desk space is clearly separate from the instructional areas. ▪ Dividers/carpets/shelves separate different learning areas.
	7. Is student work posted or displayed prominently?	<ul style="list-style-type: none"> ▪ A variety of student work can be found on the walls or bulletin boards. ▪ All levels of student work are displayed.

C-2. Continued

Domain	Indicator	Definition
Scheduling	8. Is the daily schedule of activities posted and reviewed regularly.	<ul style="list-style-type: none"> ▪ Teacher posts an agenda where students see. ▪ Teacher provides students with an agenda/planner of assignments or activities. ▪ Teacher reviews agenda with students throughout the lesson/day.
	9. Does the teacher use procedures, repetitions and rituals to foster greater ease of transitions?	<ul style="list-style-type: none"> ▪ Students are aware of how to move between instructional activities. ▪ A system is in place to ease speed and smoothness of transitions (beat the clock, music during transition times, or bell)
	10. Are transitions and non-instructional activities posted and regularly reviewed?	<ul style="list-style-type: none"> ▪ Students know what to do during transitions between activities or grouping changes. ▪ Teacher posts the schedule for non-instructional activities regularly.
	11. Is there a method for posting changes to the schedule?	<ul style="list-style-type: none"> ▪ Teacher uses a procedure for indicating a change in the schedule to students. ▪ Teacher makes all students aware of changes in the schedule.
	12. Does each student spend most of his/her time engaged in active learning activities with little or no unstructured downtime?	<ul style="list-style-type: none"> ▪ Students converse about academic tasks and not personal matters. ▪ Student conversations with teachers are focused on assignments or tasks. ▪ Little time is spent on transitions.

C-2. Continued

Domain	Indicator	Definition
Instructional Planning and Delivery	13. Are lesson objectives developed based on students' functioning levels?	<ul style="list-style-type: none"> ▪ Teacher sets goals according to skill levels. ▪ Teacher takes student skill levels into account when planning lessons.
	14. Are assignments relevant and meaningful to students?	<ul style="list-style-type: none"> ▪ Students see the purpose for tasks. ▪ Tasks teach material relevant to students.
	15. Is the pace of instruction appropriate for the needs of all students?	<ul style="list-style-type: none"> ▪ Students are given ample time to complete tasks. ▪ Task time allocation is based on student need.
	16. Are non-punitive provisions made for students needing more time?	<ul style="list-style-type: none"> ▪ Students are not punished for incomplete work. ▪ Students do not have to miss out on other content instruction to complete work.
	17. Are skills taught in the settings and situations for which they would naturally occur?	<ul style="list-style-type: none"> ▪ Students receive instruction in the classroom environment. ▪ Students are not removed from the classroom for additional instruction.
Classroom Discipline Plan	18. Are classroom rules positively stated?	<ul style="list-style-type: none"> ▪ Teacher states what she would like students to do rather than using "No" language. ▪
	19. Is the number of rules limited to no more than 5?	<ul style="list-style-type: none"> ▪ Rules are no more than five in length. ▪ Rules are short and do not use excessive wording.
	20. Are the rules worded in observable and measurable terms?	<ul style="list-style-type: none"> ▪ Teacher can clearly observe behaviors listed ▪ Subjective language such as "nice," "good," or "clean" are not used.

C-2. Continued

Domain	Indicator	Definition
	21. Are reinforcers available for all students to earn?	<ul style="list-style-type: none"> ▪ All students have access to verbal, nonverbal, tangible items, and activities
	22. Are reinforcers varied and individualized?	<ul style="list-style-type: none"> ▪ Reinforcers are selected according to individual student need. ▪ Students can choose between a variety of reinforcers.
	23. Are consequences for rule violations posted?	<ul style="list-style-type: none"> ▪ Teacher provides students with visual reminders of consequences of rule infractions. ▪ Consequences are clearly posted for all students to see, read and understand.
	24. Are consequences delivered consistently and in a timely manner?	<ul style="list-style-type: none"> ▪ Teacher delivers the consequences for the same rule infractions immediately after the rule infraction occurs. ▪ Teacher provides all students with the same consequences for rule infractions.
	25. Are students reminded of their choices and consequences prior to delivery?	<ul style="list-style-type: none"> ▪ Teacher reminds students of rules and consequences before rule infractions occur. ▪ Teacher provides students with prompts

Adapted from *Best Practices Classroom Management Checklist* (Florida's Positive Behavior Supports Project for the Center for Positive Behavior Interventions and Supports at the University of South Florida)

APPENDIX D
TEACHER FORMS

Teacher Information Form

Please answer the following questions about yourself and aspects of your classroom:

1. Name _____

2. Gender (Circle One):

Male Female

3. Race (Circle One):

White African American Asian/Pacific Islander

Hispanic Other _____

4. Degree held (Circle One):

Bachelor's Master's Specialist's Doctorate

5. Special Certification(s) (Circle one):

Reading Special Education Other _____

6. Years teaching (Circle One):

1 – 5 6 – 10 11 – 15 16 – 20 21+

7. How would you classify your school?

Urban Suburban Rural High Poverty

8. How many students in your class have been identified as Limited English Proficient (LEP), learning disabled (LD), emotional handicapped (EH), gifted, or other health impaired? _____

9. Which reading program do you currently use as your Core Reading Program?

10. Do you use any supplementary reading programs in your classroom? If so, which ones? List below:

Teacher Pre-Observation Checklist

1. What was your basis for grouping students for your reading lesson today?

- Following reading basal suggestions for grouping
- Needs of students
- Monitoring student performance
- Other _____

2. What was the composition of your groups?

- Same-ability grouping
- Mixed-ability grouping
- Other _____

3. Who selected the materials used in different groups?

- Teacher
- Administrator
- Students
- Reading Coach
- Other _____

4. What types of materials did you use for the different groups?

- Independent worksheets
- Supplemental workbooks for core reading program
- Trade books
- Manipulatives
- Teacher-created materials
- Other _____

APPENDIX E
INSTITUTIONAL REVIEW BOARD DOCUMENTS

1. TITLE OF PROTOCOL: Differentiated Reading Instruction and Classroom Management Practices that Promote Reading Growth in Second Grade Students

2. PRINCIPAL INVESTIGATOR(s):

Melissa A. Miller, M. Ed.
Doctoral Candidate
Department of Special Education
PO Box 117050
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Phone: (352) 392-0701 ext. 246
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3. SUPERVISOR (IF PI IS STUDENT): *(Name, campus address, phone #, e-mail & fax)*

Holly Lane, Ph.D.
PO Box 117050
G315 Norman Hall
Gainesville, FL 32611-7050
Office Telephone: (352) 392-0701, ext. 246
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4. DATES OF PROPOSED PROTOCOL: From August 1, 2006-August 1, 2007

5. SOURCE OF FUNDING FOR THE PROTOCOL: None

6. SCIENTIFIC PURPOSE OF THE INVESTIGATION:

The scientific purpose of this study is to understand how differentiated instruction in reading and classroom management practices predict reading achievement.

7. DESCRIBE THE RESEARCH METHODOLOGY IN *NON-TECHNICAL* LANGUAGE.

Observers will conduct 90-minute observations in 32 second-grade classrooms three times between August 7, 2006, and December 15, 2006. While conducting all observations, the researcher will use the attached checklist to measure how teachers differentiate reading instruction and manage their classrooms. . According to Tomlinson (2001), differentiated instruction allows students to have access to academic content through a variety of instructional approaches, groupings, use of materials, and presentations. Teachers use a balance of whole class, small group, and individual instruction depending on the needs of the students in the classroom. Differentiated instruction allows teachers to provide the access to the same curriculum to all students so that all children can make academic progress. Tomlinson (1999) defines differentiated instruction not by the “stuff” that kids learn, but the “how” they learn.

Teachers will complete the attached Pre-observation checklist prior to all observations. Additionally, teachers will complete the information sheet attached, and nominate two students from each of three achievement levels (high, average, and low) using the attached nomination form. These students will complete the attached *Elementary Reading Attitude Survey* to determine if reading attitude improves in classrooms where reading instruction is differentiated.

Each of the participating teachers will be from *Reading First* schools in Alachua and Marion County. These *Reading First* schools regularly assess their students using the *Dynamic Indicators of Basic Early Literacy Skills (DIBELS)* four times per year. Using the classroom reports that are made available to each teacher from the first two assessment periods that occur between August 7 and December 15, 2006, the doctoral student researcher will examine the classroom data from these reports to compare the reading growth of students in classrooms where differentiated reading instruction occurs. Classroom management factors will also be correlated using the *Statistical Package for the Social Sciences* to predict how well differentiated reading instruction and classroom management factors can predict reading growth in second graders.

8. POTENTIAL BENEFITS AND ANTICIPATED RISK.

No more than minimal risk is involved in participating in this project. We do not anticipate the participant benefiting directly by participating in this study.

9. DESCRIBE HOW PARTICIPANT(S) WILL BE RECRUITED, THE NUMBER AND AGE OF THE PARTICIPANTS, AND PROPOSED COMPENSATION (if any):

Second grade teachers in Alachua and Marion County *Reading First* schools will be recruited to participate in the study. 32 participants (16 from each county) will be asked to participate in three observations between August and December. Each of the 32 teachers will nominate six students total from their reading class. Each second grader will be nominated according to achievement levels (high, average, and low) based on their DIBELS Oral Reading Fluency measures from the final assessment from the previous year. No compensation will be provided to any of the participants.

10. DESCRIBE THE INFORMED CONSENT PROCESS. INCLUDE A COPY OF THE INFORMED CONSENT DOCUMENT (if applicable).

Teachers will provide informed consent to participate in the study. Additionally, parents of the nominated students will provide consent for their children to participate in the study. Letters are attached.

Please use attachments sparingly.

Principal Investigator's Signature

Supervisor's Signature

I approve this protocol for submission to the UFIRB:

Dept. Chair/Center Director Date

Informed Consent

Protocol Title: Differentiated Reading Instruction and Classroom Management Practices that Promote Reading Growth in Second Grade Students

Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study: The scientific purpose of this study is to understand how differentiated instruction in reading and classroom management practices predict reading achievement

You will be asked: To complete a form providing information about yourself. You will also be asked to be observed three times during the Fall semester for approximately 90-minutes during your scheduled reading block.

Time required: 4 1/2 hours total

Risks and Benefits: No more than minimal risk is involved in this study. There is no direct benefit to the participant in this research. There is no compensation for participating in this study.

Confidentiality: Your identity will be kept confidential to the extent provided by law. Only the researcher will have access to your observation data, which will be stored in a locked file cabinet for the duration of the study. The final results will be presented at a conference and may be submitted to educational journals for possible publication.

Voluntary participation: Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study: You have the right to withdraw from the study at anytime without consequence. You do not have to answer any question you do not want to answer.

Whom to contact if you have questions about the study:

Melissa Miller, M. Ed., Doctoral Student or
Holly Lane, Ph. D., PO Box 117050, G315 Norman Hall, Gainesville, FL, 32611-7050, (352) 392-0701, ext. 246.

Whom to contact about your rights as a research participant in the study:

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; ph 392-0433.

I have read the procedures outlined above. I voluntarily agree to participate in this study and have received a copy of this description.

Participant's signature and date

Principle investigator's signature and date

Volunteer Recruitment Script

My name is (researcher states name) and I am a graduate student in the College of Education. I am a doctoral student conducting a study to understand how differentiated reading instruction and classroom management practices promote growth in reading.

I need second grade elementary education teachers at Reading First schools to volunteer to participate in this study. If you agree to participate, I would like to observe you three times, for approximately 90-minutes during each observation, in your classroom during your scheduled reading block.

Additionally, you will be asked to nominate six students from your reading class meeting will take place, at your convenience, after transcription and analysis. This meeting will be used to get some feedback from you about the interview.

Your identity will be kept confidential to the extent provided by law. Only I will have access to the taped interviews which I will personally transcribe, removing any identifiers during transcription. The tapes will be destroyed at the completion of the project. The final results will be presented at a conference and may be submitted to educational journals for possible publication.

No more than minimal risk is involved in this study. There is no direct benefit to you in this research, although the results may contribute toward the change of education practice in the future. Your participation in this study is completely voluntary. There is no penalty for not participating. You have the right to withdraw from the study at anytime without consequence.

Would you like to participate?

REFERENCES

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Adelman, H.S., & Taylor, L. (2002). School counselors and school reform: New directions. *Professional School Counseling, 5*(4), 235-248.
- Allington, R.L. (1991). The legacy of "Slow it down and make it more concrete." In J. Zutell & S. McCormick (Eds.). *Learner factors/teacher factors: Issues in literacy research and instruction: 40th yearbook of the National Reading Conference*. Chicago: National Reading Conference.
- Anders, P.L., Hoffman, J.V., & Duffy, G.G. (2000). Teaching teachers to teach reading: Paradigm shifts, persistent problems, and challenges. In M.L. Kamil, P.B. Rosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research, Vol. III*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Armbruster, B.B., Lehr, F., & Osborne, J.M. (2001). *Put reading first: The research building blocks for teaching children to read*. Washington, DC: The National Institute for Literacy. Retrieved February 22, 2006, from <http://www.nifl.gov/prtnershipforreading/publications/Cierra.pdf>
- Ash, G.E., Kuhn, M.R., & Walpole, S. (2003). Flying in the face of research: Inservice teachers' use of round-robin reading (research in progress). Paper presented at the National Reading Conference, Scottsdale, AZ.
- Babiyak, A. E., Koorlund, M., & Mathes, P. G. (2000). The effects of story mapping instruction on the reading comprehension of students with behavioral disorders. *Behavioral Disorders, 25*(3), 239-258.
- Baker, J.M. & Zigmond, N. (1990). Are regular classes equipped to accommodate students with learning disabilities? *Exceptional Children, 56*, 515-526.
- Ball, E., & Blachman, B. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly, 26*, 49-66.
- Ball, D.L., & Feiman-Nemser, S. (1988). Using textbooks and teachers' guides: A dilemma for beginning teachers and teacher educators. *Curriculum Inquiry, 18*, 401-427.
- Barton-Arwood, S.M., Wehby, J., & Falk, K.B. (2005). Reading instruction for elementary age students with emotional and behavioral disorders: academic and behavioral outcomes. *Exceptional Children, 72*(1), 7-27.
- Baumann, J.F., Kame'enui, E.J., & Ash, G.E. (2003). Research on vocabulary instruction: Voltaire redux. In J. Flood, D. Lapp, J.R. Squire, & J.M. Jensen (Eds.), *Handbook on*

- research on teaching the English language arts (2nd ed.)*. Mahwah, NJ: Erlbaum Associates.
- Beck, I.L., & McKeown, M.G. (2001). Text talk: Capturing the benefits of read-aloud experiences for young children. *The Reading Teacher*, 55(1), 10-20.
- Beck, I.L., Perfetti, C.A., & McKeown, M.G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology*, 74, 506-521.
- Bennett, K. J., Brown, K. S., Boyle, M., Racine, Y., & Offord, D. (2003). Does low reading achievement at school entry cause conduct problems? *Social Science & Medicine*, 56(12), 2443-2449.
- Block, C.C. & Pressley, M. (2002). *Comprehension instruction: Research-based best practices*. New York: Guilford.
- Bonate, P.L. (2000). *Analysis of pretest-posttest designs*. Boca Raton, FL: Chapman & Hall.
- Bos, C. S., & Vaughn, S. (1998). *Strategies for teaching students with learning and behavior problems*. Boston: Allyn & Bacon.
- Brophy, J. (1973). Stability of teacher effectiveness. *American Educational Research Journal*, 10, 245-252.
- Brophy, J.E. (1986). Research linking teacher behavior to student achievement: Potential implications for instruction of Chapter 1 students. In B.I. Williams, P.A. Richmond, & B.J. Mason (Eds.). *Designs for compensatory education: Conference proceedings and papers*. Washington DC: Research and Evaluation Associates.
- Brophy, J.E., & Evertson, C.M. (1976). *Learning from teaching: A developmental perspective*. Boston: Allyn & Bacon.
- Bryk, A.S., & Raudenbush, S.W. (1992). *Hierarchical linear models*. Sage: Newbury Park, CA.
- Buchner, A., Faul, F., & Erdfelder, R. (1997). *G*Power: A priori, post hoc, and compromise power analyses for the Macintosh (Version 2.1.2)*. [Computer Program]. Trier, Germany: University of Trier.
- Carr, E.J., Taylor, J.C., & Robinson, S. (1991). The effects of severe behavior problems in children on the teaching behavior of adults. *Journal of Applied Behavior Analysis*, 24, 523-535.
- Chall, Jeanne S. (1967). *Learning to read: The great debate*. New York: McGraw-Hill.
- Clarke, L.K. (1989). Encouraging invented spelling in first graders' writing: Effects on learning to spell and read. *Research in the Teaching of English*, 22, 281-309.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Coie, J. & Krehbiel, G. (1984). Effects of academic tutoring on the social status of low-achieving, socially rejected children. *Child Development*, 55, 1465-1478.
- Coleman, M., & Vaughn, S. (2000). Reading interventions for students with emotional behavioral disorders. *Behavioral Disorders*, 25(2), 93-104.
- Cooper, R., Slavin, R.E., & Madden, N.A. (1997). *Success for all: Exploring the technical, normative, political, and socio-cultural dimensions of scaling up* (Report No. 16). Baltimore, MD: Johns Hopkins University, Center for Social Organization of Schools
- Cornwall, A., & Bawden, H. N. (1992). Reading disabilities and aggression: A critical review. *Journal of Learning Disabilities*, 25, 281-288.
- Coyne, M.D., Simmons, D.C., & Kame'enui, E.J. (2003). Vocabulary instruction for young children at-risk of experiencing reading difficulties: Teaching word meanings during shared storybook readings. In J. F. Baumann & E. J. Kame'enui (eds.), *Vocabulary instruction: Research to practice*. New York, NY: Guilford Publishing Company.
- Cunningham, A.E. (1990). Explicit versus implicit instruction in phonemic awareness. *Journal of Experimental Child Psychology*, 50, 429-444.
- Danielson, C. (1996). *Enhancing professional practice: A framework for teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. New York: National Committee on Teaching and America's Future.
- Denton, C.A., Vaughn, S., & Fletcher, J.M. (2003). Bringing research-based practice in reading intervention to scale. *Learning Disabilities Research & Practice*, 18(3), 201-211.
- Dewey, J. (1960). *How we think: A restatement of the relation of reflective thinking to the educative processes*. Lexington, MA: D.C. Heath & Company.
- Duke, D. (1979). *Classroom management: The 78th yearbook of the national society for the study of education, Part II*. Chicago: The University of Chicago Press.
- Dunkin, M., & Biddle, B. (1974). *The study of teaching*. New York: Holt, Rinehart & Winston.
- Dunn, N.A., & Baker, S.B. (2002). Readiness to serve students with disabilities: A survey of elementary school counselors. *Professional School Counselors*, 5(4), 277-284.
- DuPaul, G.J., Ervin, R.A., Hook, C.L., & McGoey, K.E. (1998). Peer tutoring for children with attention deficit hyperactivity disorder: Effects on classroom behavior and academic performance. *Journal of Applied Behavior Analysis*, 31, 579-592.

- Emmer, E.T., Evertson, C.M., & Anderson, L.M. (1980). Effective management at the beginning of the school year. *Elementary School Journal*, 80, 219-231.
- Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003). *Classroom management for secondary teachers* (6th ed.). Boston: Allyn and Bacon.
- Evertson, C.M. (1989). Improving elementary classroom management: An experiment in secondary classrooms. *Journal of Educational Research*, 83, 82-90.
- Evertson, C.M., Emer, E.T., Clements, B.S., Sanford, J.P., & Worsham, M.E. (1981). *Organizing and managing the elementary school classroom*. Austin, TX: Research and Development Center for Teacher Education, The University of Texas.
- Evertson, C.M., Emmer, E.T., & Worsham, M.E. (2003). *Classroom management for elementary school teachers* (6th ed.). Boston: Allyn & Bacon.
- Evertson, C.M., Emmer, E.T., Sanford, J., & Clements, B. (1983). Improving classroom management: An experiment in elementary classrooms. *Elementary School Journal*, 84, 173-188.
- Evertson, C.M. & Harris, A.L. (1992). What we know about managing classrooms. *Educational Leadership* 49(7), 74-78.
- Falk, K. B., & Wehby, J. H. (2001). The effects of peer-assisted learning strategies on the beginning reading skills of young children with emotional and behavioral disorders. *Behavioral Disorders*, 26(4), 344-359.
- Florida Center for Reading Research. (2005). *Student center activities: Teacher resource guide*. Tallahassee, FL: Florida Department of Education.
- Florida Department of Education (2003). *History of statewide assessment program*. Retrieved March 16, 2006 from <http://fcats.fldoe.org/hsaphome.asp>
- Foorman, B. R., Francis, D. J., Fletcher, J. M., Schatschneider, C., & Mehta, P. (1998). The role of instruction in learning to read: Preventing reading failure in at-risk children. *Journal of Educational Psychology*, 90 (1), 37-55.
- Foorman, B.R., Francis, D.J., Shaywitz, S.E., Shaywitz, B.A., & Fletcher, J.M. (1997). The case for early reading interventions. In B. Blachman (Ed.), *Foundations of reading acquisition and dyslexia: Implications for early intervention*. Mahwah, NJ: Erlbaum.
- Foorman, B.R. & Moats, L.C. (2004). Conditions for sustaining research-based practices in early reading instruction. *Remedial and Special Education*, 1(4), 51-60.
- Fuchs, L.S. & Fuchs, D. (1993). Formative evaluation of academic progress: How much growth can we expect? *School Psychology Review*, 22(1), 27-49.

- Good, T. & Brophy, J. (1994). *Looking in classrooms (6th Ed.)* New York: Harper & Row.
- Good, R.H. & Kaminski, R.A. (Eds.). (2002). *Dynamic Indicators of Basic Early Literacy Skills (6th ed.)*. Eugene, OR: Institute for Development of Educational Achievement.
- Good, R. H., Simmons, D. S., Kame'enui, E. J., Kaminski, R. A., & Wallin, J. (2002). *Summary of decision rules for intensive, strategic, and benchmark instructional recommendations in kindergarten through third grade* (Technical Report No. 11). Eugene, OR: University of Oregon.
- Graves, M.F. (2000). A vocabulary program to complement and bolster a middle-grade comprehension program. In B.M. Taylor, M.F. Graves, and P. Van Den Broek (eds.), *Reading for meaning: Fostering comprehension in the middle grades*. New York: Teachers College Press.
- Grek, M.L. (2000). *First grade non-natural readers: A descriptive study of teaching and learning of the reading process*. Doctoral dissertation, Florida State University, Tallahassee.
- Grossen, B. (1997). *Thirty years of research: What we know about how children learn to read: A synthesis of research on reading from the National Institute of Child Health and Human Development*. Santa Cruz, CA: Center for the Future of Teaching and Learning.
- Grossman, P.L., & Thompson, C. (2004). *Curriculum materials: Scaffolds for new teacher learning?* Seattle: University of Washington, Center for the Study of Teaching and Policy.
- Gumm, R., & Turner, S. (2004, July). *90 Minutes Plus: Demystifying the Reading Block*. Presented at the National Reading First Conference in Minneapolis, MN: Eastern Regional Reading First Technical Assistance Center. Available from: <http://www.fcrr.org/science/pptpresentations.htm>
- Gunter, P. L. & Denny, R. K. (1998). Trends and issues in research regarding academic instruction of students with emotional and behavioral disorders. *Behavior Disorders* 24, 44-50.
- Gunter, P. L., Hummel, J. H., & Conroy, M. A. (1998). Increasing correct academic responding: An effective intervention strategy to decrease behavior problems. *Effective School Practices*, 17, 36-54.
- Haager, D. & Klingner, J.K. (2005). *Differentiating instruction in inclusive classrooms: The special educator's guide*. Boston: Pearson.
- Hattie, J.A. (1992). Measuring the effects of schooling. *Australian Journal of Education*, 36(1), 5-13.
- Haycock, K. (1998). *Good teaching matters*. Washington, DC: Education Trust.

- Hoffman J. & Roller, C. (2001). The IRA Excellence in Reading Teacher Preparation Commission's report: Current practices in reading teacher education at the undergraduate level in the United States. In C. Roller (Ed.), *Learning to teach reading: Setting the research agenda*. Newark, DE: International Reading Association.
- Huck, S.W. (2004). *Reading statistics and research (4th ed.)*. New York: Allyn & Bacon.
- Juel, C. (1988). Learning to read and write: A longitudinal study of fifty-four children from first through fourth grade. *Journal of Educational Psychology, 80*, 437-447.
- Kauffman, J.M. (1997). *Characteristics of emotional and behavioral disorders of children and youth (6th ed.)*. Columbus, OH: Merrill.
- Kazdin, A. E. (1982). *Single-case research designs: Methods for clinical and applied settings*. New York: Oxford University Press.
- Kennedy, C. (2005). *Single case designs for educational research*. Boston: Allyn & Bacon.
- Kirschner, P. A., Sweller, J., and Clark, R. E. (2006). Why minimal guidance during instruction does not work: an analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist, 41*(2), 75-86.
- Kounin, J.S. (1970). *Discipline and group management in classrooms*. New York: Holt, Rinehart & Winston.
- Lewis, T.J., Sugai, G., & Colvin, G. (1998). Reducing problem behavior through a school wide system of effective behavior support: Investigation of a school-wide social skills training program and contextual interventions. *School Psychology Review, 27*, 446-459.
- Longford, N.T. (1987). A fast scoring algorithm for maximum likelihood estimation in unbalanced mixed models with nested effects. *Biometrika, 74*(4), 817-827.
- Maag, J.W. (1999). *Behavior management: From theoretical implications to practical applications*. San Diego: Singular.
- Maloch, B., Fine, J., & Seely-Flint, A. (2002). "I just feel like I'm ready": Exploring the influence of quality teacher preparation on beginning teachers. *The Reading Teacher, 56*(4), 348-350.
- Maloch, B., Seely-Flint, A., Eldridge, D., Harmon, J., Loven, R, Fine, J.C., Bryant-Shanklin, M., & Martinez, M. (2003). Understandings, beliefs, and reported decision making of first-year teachers from different reading teacher preparation programs. *The Elementary School Journal, 103*(5), 431-457.
- Marzano, R.J. (2003). *What works in schools*. Alexandria, VA: ASCD.
- Marzano, R.J., Marzano, J.S., & Pickering, D.J. (2003). *Classroom management that works*. Alexandria, VA: ASCD.

- Mazzoni, S.A., & Gambrell, L.B. (2003). Principles of best practice: Finding the common ground. In L. Morrow, L.B. Gambrell, & M. Pressley (Eds), *Best Practices in Literacy Instruction 2nd Ed.* New York: Guilford Press.
- McGill-Franzen, A., Zmach, C., Solic, K., & Zeig, J.L. (2006). The confluence of two policy mandates: Core reading programs and third grade retention in Florida. *Elementary School Journal, 107*(1) 67-91.
- McIntosh, R., Vaughn, S., Schumm, J.S., Haager, D., & Lee, O. (1993). Observations of students with learning disabilities in general education classrooms. *Exceptional Children, 60*(3), 249-261.
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis*, (2nd ed.). Newbury Park, CA: Sage.
- Moody, S.W. & Vaughn, S. (1997). Instructional grouping for reading. *Remedial and Special Education, 18*(6). 347-357.
- Moody, S.W., Vaughn, S., Hughes, M.T., & Fischer, M. (2000). Reading instruction in the resource room: Set up for failure. *Exceptional Children, 66*(3), 305-316.
- Morrow, L.M., Tracey, D.H., Woo, D.G., & Pressley, M. (1999). Characteristics of exemplary first-grade literacy instruction. *The Reading Teacher, 52*(5), 462-476.
- National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network (ECCRN). (2005). A day in third grade: A large-scale study of classroom quality and teacher and student behavior. *Elementary School Journal, 103*(3), 305-323.
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington DC: U.S. Government Printing Office.
- National Longitudinal Transition Study-2. (2003). *Youth with disabilities: A changing population. A report of findings from the National Longitudinal Transition Study (NLTS) and the National Longitudinal Study-2 (NLTS-2)*. Menlo Park, CA: SRI International.
- National Reading Panel (2000). *Report of the national reading panel: Teaching students to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups*. Bethesda, MD: National Institute of Child Health and Human Development, National Institutes of Health.
- Nelson, C.M., Scott, T.M., & Polsgrove, L. (1999). *Perspective on emotional/behavioral disorders: Assumptions and their implications for education and treatment*. Reston, VA: Council for Exceptional Children.

- Ornstein, A. (1995). Synthesis of research: Teaching whole-group classrooms. *Peabody Journal of Education*, 70(2), 104-116.
- Osborn, J., Lehr, F., & Hiebert, E.H. (2003). *A focus on fluency*. Honolulu, HI: Pacific Resources for Education and Learning.
- Owocki, G. (2005). *Time for literacy centers*. Portsmouth, NH: Heinemann.
- Palincsar, A.S. & Brown, A.L. (1985). Reciprocal teaching: Activities to promote reading with your mind. In T.L. Harris & E.J. Cooper (Eds.), *Reading, thinking and concept development: Strategies for the classroom*. New York: The College Board.
- Perie, M., Grigg, W.S., and Donahue, P.L. (2005). *The Nation's Report Card: Reading 2005* (NCES 2006-451). U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. Washington, D.C.: U.S. Government Printing Office.
- Pianta, R.C., La Paro, K., Payne, C., Cox, M. J., & Bradley, R. (2002). The relation of kindergarten classroom environment to teacher, family, and school characteristics and child outcomes. *Elementary School Journal*, 102(3), 225-238.
- Pinnell, G.S., & Fountas, I.C. (1998). *Word matters*. Portsmouth, NH: Heinemann.
- Porter, A.C., & Brophy, J. (1988). Synthesis of research on good teaching: Insights from the work of the Institute for Research on Teaching. *Educational Leadership*, 45(8), 74-85.
- Pressley, M. (1998). *Elementary reading instruction that works: Why balanced literacy instruction makes more sense than whole language or phonics and skills*. New York: Guilford Press.
- Pressley, M. (2002). *Reading instruction that works: The case for balanced teaching (2nd ed.)*. New York: Guilford.
- Pressley, M., Rankin, J., & Yokoi, L. (1996). A survey of the instructional practices of outstanding primary level literacy teachers. *Elementary School Journal*, 96, 363-384.
- Pressley, M., Wharton-McDonald, R., Allington, R., Collins-Block, C., Morrow, L., Tracey, D., Baker, K., Brooks, G., Cronin, J., Nelson, E., & Woo, D. (2001). A study of effective first-grade literacy instruction. *Scientific Studies of Reading*, 5(1), 35-58.
- Pressley, M., Wharton-McDonald, R., Mistretta-Hampston, J., & Echevarria, M. (1998). Literacy instruction in 10 fourth- and fifth- grade classrooms in upstate New York. *Scientific Studies of Reading*, 2(2), 159-194.
- Pressley, M., Yokoi, L., Rankin, J., Wharton-McDonald, R., & Misretta, J. (1997). A survey of the instructional practices of grade 5 teachers nominated as effective in promoting literacy. *Scientific Studies of Reading*, 1(2), 145-160.

- Putnam, R.T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, 29, 4-15
- Rayner, K., Foorman, B., Perfetti, C.A., Pesetsky, D., & Seidenberg, M.S. (2001). Psychological science can inform the teaching of reading. *Psychological Science in the Public Interest*, 2(2), 31-74.
- Rudestam, K.E., & Newton, R.R. (2001). *Surviving your dissertation: A comprehensive guide to content and process*. Thousand Oaks, CA: Sage Publications.
- Schalock, H., & Schalock, M. (1993). Student learning in teacher evaluation and school improvement: An introduction. *Journal of Personnel Evaluation in Education*, 7(2), 103-104.
- Schatschneider, C., Buck, J., Torgesen, J., Wagner, R., Hassler, L., Hecht, S., & Powell-Smith, K. (2004). A multivariate study of individual differences in performance on the reading portion of the Florida Comprehensive Assessment Test: A brief report.
- Schumm, J.S. (1999). *Adapting reading and math materials for the inclusive classroom: Kindergarten through grade five*. Reston, VA: Council for Exceptional Children.
- Schumm, J.S. Moody, S.W., & Vaughn, S. (2000). Grouping for reading instruction: Does one size fit all? *Journal of Learning Disabilities*, 33(5), 477-488.
- Schumm, J.S., Vaughn, S., & Harris, J. (1997). Pyramid power for collaborative planning. *Teaching Exceptional Children*, 62-66.
- Schumm, J. S., & Vaughn, S. (1992). Planning for mainstreamed special education students: Perceptions of general education teachers. *Exceptionality*, 3, 81-89.
- Schumm, J.S., Vaughn, S., & Leavell, A.G. (1994). Planning pyramid: A framework for planning for diverse student needs during content area instruction. *The Reading Teacher*, 47(8), 608-615.
- Scott, T.M., & Lane, H.B. (2001). *Project PASS: Promoting academic and social success. A model demonstration project*. Office of Special Education Projects: U.S. Department of Education.
- Scott, T. M., Nelson, C. M., & Liaupsin, C. J. (2001). Effective instruction: The forgotten component in preventing school violence. *Education and Treatment of Children*, 24(3), 309-322.
- Skiba, R., & Peterson, R. (2000). School discipline at a crossroads: From zero tolerance to early response. *Exceptional Children*, 66, 335-346.
- Slavin, R.E., Karweit, N.L., Wasik, B.A., Madden, N.A., & Dolan, L.J. (1994). Success for All: A comprehensive approach to prevention and early intervention. In R.E. Slavin, N.L. Karweit & B.A. Wasik (Eds.), *Preventing early school failure*. Boston: Allyn & Bacon.

- Snow, C.E. (2002). *Reading for understanding: Towards a research and development program in reading comprehension*. Santa Monica, CA: Rand.
- Snow, C. E., Burns, M.S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington DC: National Academy Press.
- Soar, R., & Soar, R. (1979). Emotional climate and management. In P. Peterson & H. Walberg (Eds.). *Research on teaching: Concepts, findings, and implications*. Berkeley, CA: McCutchan.
- Stahl, S.A. (2005). Four problems with teaching word meanings (and what to do to make vocabulary an integral part of instruction). In E.H. Hiebert and M.L. Kamil (eds.), *Teaching and learning vocabulary: Bringing research to practice*. Mahwah, NJ: Erlbaum.
- Stahl, S.A., & Murray, B.A. (1998). Issues involved in defining phonological awareness and its relation to early reading. In J. Metsala & L. C. Ehri (Eds.), *Word recognition in beginning literacy*. Mahwah, NJ: Erlbaum.
- Stanovich, K.E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21(4), 360-406.
- Stanovich, I.E. (1994). Romance and reality. *The Reading Teacher*, 47, 280-291.
- Taylor, B.M., Pearson, P.D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary grade reading instruction in low-income schools. *Elementary School Journal*, 101, 121-166.
- Taylor, B.M., Pearson, P.D., Peterson, D., & Rodriguez, M.C. (2002b). *The CIERA School Change Project: Supporting schools as they implement home-grown reading reform. CIERA Report #2016*. Center for the Improvement of Early Reading Achievement, University of Michigan-Ann Arbor.
- Taylor, B.M., Pressley, M., & Pearson, P.D. (2000). *Research-supported characteristics of teachers and schools that promote reading achievement*. Washington DC: National Education Association.
- Tomlinson, C.A. (1999). Mapping a route toward differentiated instruction. *Educational Leadership*, 57(1), 12-16.
- Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms*. (2nd Ed.) Alexandria, VA: ASCD.
- Torgesen, J.K., & Burgess, S.R. (1998). *Consistency of reading-related phonological processes throughout early childhood: Evidence from longitudinal-correlational and instructional studies*. In J. Metsala & L. Ehri (Eds.). *Word recognition in beginning reading*. Hilldale, NJ: Erlbaum.

- Torgesen, J. K. (2002). The prevention of reading difficulties. *Journal of School Psychology, 40*, 7-26.
- U.S. Department of Education. (2001). *Twenty-third annual report to Congress on the implementation of the Individuals with Disabilities Education Act*. Washington DC: Author.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research, 54*, 143-178.
- Vaughn, S., Hughes, M.T., Schumm, J.S., & Klingner, J. (1998). A collaborative effort to enhance reading and writing instruction in inclusive classrooms. *Learning Disability Quarterly, 21*, 57-74.
- Vaughn, S., & Klingner, J.K. (1998). Students' perceptions of inclusion and resource room settings. *Journal of Special Education, 32*, 79-88.
- Vaughn, S., Moody, S.W., Schumm, J.S. (1998). Broken promises: Reading instruction in the resource room. *Exceptional Children, 64*, 211-225.
- Vaughn, S., & Schumm, S. (1995). Responsible inclusion for students with learning disabilities. *Journal of Learning Disabilities, 28*, 264-270.
- Walker, H. M., Colvin, G., & Ramsey, E. (1995). *Antisocial behavior in school: Strategies and best practices*. Pacific Grove, CA: Brooks/Cole.
- Walpole, S., Justice, L., & Invernizzi, M. (2004). Closing the gap between research and practice: Case study of school-wide literacy reform. *Reading & Writing Quarterly, 20*, 261-283
- Wang, M.C., Haertel, G.D., & Walberg, H.J. (1993). Toward a knowledge base for school learning. *Review of Educational Research, 63*(3), 249-294.
- Wehby, J. H., Falk, K. B., Barton-Arwood, S., Lane, K. L., & Cooley, C. (2003). The impact of comprehensive reading instruction on the academic and social behavior of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 11*(4), 225-238.
- Wehby, J.H., Lane, K.L., & Falk, K.B. (2003). Academic instruction for students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 11*(4), 194-197.
- Wehby, J.H., Symons, F.M., Canale, J., & Go, F. (1998). Teaching practices in classrooms for students with emotional and behavioral disorders: Discrepancies between recommendations and observations. *Behavioral Disorders, 24*, 52-57.
- Welkowitz, J., R. B. Ewen, and J. Cohen (1991). *Introductory statistics for the behavioral sciences (4th Ed.)*. San Diego, CA: Harcourt Brace Jovanovich.

- Wharton-McDonald, R., Pressley, M., & Mistretta-Hampston, J. (1998). Outstanding literacy instruction in first grade: Teacher practices and student achievement. *Elementary School Journal, 99*, 101-128.
- Williams, S. & McGee, R. (1994). Reading attainment and juvenile delinquency. *Journal of Child Psychology and Psychiatry, 35*, 441-461.
- Wright, S.P., Horn, S.P., & Sanders, W.L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11*, 57-67.
- Yopp, H.K. (1992). Developing phonemic awareness in young children. *Reading Teacher, 45*(9), 696-703.
- Zigmond, N., & Baker, J.M. (1995). Concluding comments: Current and future practices in inclusive schooling. *Journal of Special Education, 29*, 245-250.

BIOGRAPHICAL SKETCH

Melissa Ann Miller was born in Miami, Florida. The eldest of two children, she grew up mostly in Ocala, Florida, graduating from Vanguard High School in 1987. She earned both her Bachelor's and Master's degrees in Special Education from the University of Florida in 1993 and 2003, respectively. She taught students with emotional/behavioral disorders for eight years in Marion County, Florida. Melissa achieved certification from the National Board of Professional Teaching Standards in 2002, and maintains certification to teach students with disabilities in K-12 grades in the state of Florida.

Melissa began her doctoral studies in 2003, focusing on the prevention and remediation of reading difficulties for students with behavior problems. She was an Alumni Fellow at the University of Florida, and was supported by two federal grants, including Project PASS: Promoting Academic and Social Success, and an EBD leadership grant sponsored through the Office of Special Education Programs. While completing her studies, Melissa served as a student representative to the Teacher Education Division of the Council for Exceptional Children for two years, and served as an editorial assistant to Dr. Terry Scott for *Beyond Behavior*, a journal published by the Council for Children with Behavior Disorders (CCBD).

Upon completion of her Ph.D. program, Melissa and her family will move to Chapel Hill, North Carolina where she will begin a career as an Assistant Professor of Special Education at the University of North Carolina at Chapel Hill. She has been married to her husband, Jed Miller, for six years. They have one daughter, Maisy, age 4.