

THE STATE OF PROFESSIONAL DEVELOPMENT FOR
TEACHERS OF BEGINNING READERS IN FLORIDA'S RURAL SCHOOLS

By

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To my husband, Brantly Walker Helvenston, IV,
I love you. I have loved you all of my life.
“God bless the broken road that led me straight to you.”

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Abstract of Dissertation Presented to the Graduate School
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THE STATE OF PROFESSIONAL DEVELOPMENT FOR
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This study reviews the state of professional development (PD) for teachers of beginning readers in Florida's rural schools. Teachers of beginning readers need to have a deep understanding of language, of how the reading process develops, and of effective pedagogy in early literacy. Few teachers begin their careers with sufficient knowledge and skills to be effective in teaching children how to read. Prior research demonstrates the importance of high quality PD for helping teachers develop the necessary knowledge and skills and also provides frameworks for evaluating effectiveness of PD activities.

This study was conducted using prior research and frameworks of PD as a foundation. The study used a mixed-mode survey technique that included an online survey, telephone contacts, and face-to-face interviews for non-responders. Public elementary schools (n=118) that serve students in kindergarten, first, second, and third grades in all 28 of Florida's designated rural districts were invited to participate. A total of 84 schools responded to the survey making the total response rate 71.18%. Telephone calls to schools that volunteered to answer additional questions were made regarding trends in results.

Results indicated the primary focus of PD for the 2012-2013 school year was on Common Core State Standards (CCSS). Although schools reported using effective PD delivery methods, many other features of PD activities were inadequate. In particular, far too little time was devoted to PD to produce sustainable changes, and the narrow focus on CCSS meant that teachers' needs for increased knowledge and skills about the reading process went unmet. The lack of collective participation was also noted, as was the limited use of technology to address the inherent difficulties in providing PD in rural areas. Follow-up interviews indicated that time and money were the most common barriers to effective PD implementation. Interviews also revealed that rural schools have inherent advantages (e.g., a strong sense of community and commitment) over urban and suburban schools. These advantages are perceived to mitigate challenges. The study's findings are discussed in relation to prior research. A discussion of the study's limitations, its implications for policy, practice, and future research, is also provided.

CHAPTER 1 INTRODUCTION

Teaching children to read early and well is perhaps the most important function of the elementary school. Classroom teachers have the ultimate responsibility for helping students reach ever-increasing standards (Darling-Hammond & Ball, 2004); however, many teachers are not prepared to teach reading effectively (Bos, Mather, Dickson, Podhajski, & Chard, 2001; Cunningham, Perry, Stanovich, & Stanovich, 2004; Moats & Foorman, 2003). Teaching reading requires specialized knowledge about language, about how children learn and acquire literacy skills, and about how teachers can use a variety of instructional strategies to assist students with diverse needs (Al Otaiba, Kosanovich-Grek, Torgesen, Hassler, & Wahl, 2005; Foorman & Torgesen, 2001; Moats & Foorman, 2003; Moats & Lyon, 1996).

The average teacher takes three credit hours in most college education preparation programs on how to teach reading. Three credit hours or one course in reading instruction is inadequate (Bos et al., 2001; White & Kline, 2012). First-year teachers are introduced to difficult challenges in the classroom, including children with extremely limited background knowledge and experiences, or children with language barriers, and teachers are ill prepared to address them (Ball, 1988). White and Kline (2012) stated it is impossible for even the most rigorous of universities to offer pre-service teachers all the knowledge required to make developmentally appropriate adjustments for the specific needs of the students they will teach. As a result, providing ongoing high quality professional development for educators working in classrooms across the country is paramount (Bornfield, Hall, Hall, & Hoover, 1997; White & Kline, 2012).

Professional development is considered by districts, administrators, and educators to be the most effective pathway for increasing teacher knowledge, developing teachers' skillful classroom instruction, and increasing student achievement (Guskey, 2002; Howley & Howley,

2005). Rural districts face more roadblocks than most when attempting to provide high quality PD for teachers (Mitchem, Wells, & Wells, 2003; Strange, 2011) and the numbers of rural districts are high. Stockard (2011) reports that over 71% of U.S. districts are serving schools with less than 2,500 students. According to the Rural School and Community Trust (RSCT) (2012) rural districts across the country educate almost 13 million students. If all small rural districts were combined into one large district, it would be the poorest, most racially diverse district in the nation, with the highest rate of disadvantaged students (Strange, 2011).

According to Stockard (2011), “Reviews of research on rural education suggest that identifying ways to help rural schools improve teachers’ pedagogical skills should be high priority” (p. 1). Yet, support in the way of professional development for rural teachers, who educate this struggling population of children, is minimal and studies of those who work with beginning readers are almost non-existent (Arnold, Newman, Gaddy, & Dean, 2005; Howley, 2003). There are a few existing studies of professional development conducted in rural districts, but those studies focus primarily on PD related to high school science and mathematics curriculum.

Significance of the Study

Reading is a skill that is crucial for success in today’s world. In the book *Becoming a Nation of Readers* (Anderson, Heibert, Scott, and Wilkinson, 1985), reading is described as a basic life skill. The authors state that “Reading is the cornerstone for a child’s success in school and indeed, throughout life. Without the ability to read well, opportunities for personal fulfillment and job success inevitably will be lost” (p. 1). Adams (1990) argues that “Reading is the key to education, and education is the key to success for both individuals and a democracy” (p. 13). The ability to read facilitates the completion of simple daily tasks such as paying bills, accessing news in print, understanding medicine labels, following written instructions, and filling

out forms (Anderson et al., 1985; Chhabra & McCardle, 2004). Adams (1990) reports that there is extensive literature documenting that a child's early literacy achievement is the single best predictor of his or her future academic success. Studies indicate that children who struggle with basic reading acquisition perform lower in other subject areas, are less likely to catch up in later grades, possess lower self-esteem, present greater discipline problems in school, and are less likely to finish high school (Foorman, Francis, Shaywitz, Shaywitz, & Fletcher, 1997; Snow, Burns, & Griffin, 1998).

In 2011, the National Assessment of Educational Progress (NAEP) revealed that only 34% of all fourth grade students and 34% of eighth graders in the U.S. were currently reading at or above a proficient level (National Center for Educational Statistics, 2011). These unsatisfactory levels of proficiency are especially true for children from rural, low-income communities, who come to school less prepared than other children (Lee & Burkam, 2003). The Rural School and Community Trust (2012) reports students who attend rural schools in Florida have the seventh worst graduation rate in the United States. This discouraging number of children at risk of reading failure follows a decade of national reform specifically designed to address this issue. A national education reform effort titled the No Child Left Behind Act (NCLB, 2001) became law to ensure every child would learn to read on grade level by the year 2014. NCLB also promised support for high-quality professional development (PD) to be made available so all teachers are prepared to teach reading effectively.

Research indicates that continuing professional development and teacher learning is a critical factor in improving the quality of U.S. schools (Borko, 2004; Darling-Hammond, 1993; Desimone, 2009). However, few studies exist of PD designed specifically for teachers of

beginning readers. Research on PD for beginning reading teachers in rural districts is even more limited.

PD for Beginning Reading Teachers in Florida's Rural Districts

Florida Statute 1012.98 of the School Community Professional Development Act established that the purpose of professional development was to increase student achievement and enhance classroom instructional strategies that promote rigor and relevance throughout the curriculum (FLDOE). Providing PD in beginning reading may be especially challenging to rural districts that strive to meet the needs of their educators as well as the diverse needs of rural students (Howley, 2003). The United States faces significant academic setbacks with states that have the largest rural populations. Students living in rural areas of the United States achieve at lower levels and drop out of high school at higher rates than do their non-rural counterparts (Roscigno & Crowley, 2001). Florida currently ranks eleventh of the South's 13 highest priority states where rural education requires significant improvement (Rural School Community Trust (RSCT), 2012). The RSCT's report maintains more students attend rural schools in Florida than in all but eight other states. A one-size-fits-all approach in PD does not work for all educators (White & Kline, 2012). If research indicates rural districts have unique challenges in providing effective PD to their teachers (Arnold et al., 2005; Dayton, 1998), there is a need to explicitly define the term "rural."

Federal agencies are responsible for tracking rural populations. Locale codes are derived from a classification system originally developed in the 1980's by the National Center for Education Statistics (NCES) and are based on the physical location in a geographic database maintained by the Census Bureau. NCES and the Census Bureau define rural via three distinct categories: rural fringe, rural distant, and rural remote. For an address to qualify as rural fringe, the territory must be less than or equal to five miles from an urbanized area and less than or

equal to two and a half miles from an urban cluster. To qualify as rural distant, the territory must be more than five miles but less than or equal to 25 miles from an urbanized area. Finally, to qualify as rural remote, the territory must be more than 25 miles from an urbanized area and also more than 10 miles from an urban cluster. To put these definitions into perspective, it is important to note the NCES (2011) defines an urbanized area as a territory that has a principal city with a population of 250,000 or more, 100 times larger than their definition of a rural district.

Defining the characteristics of a rural school district is more complicated (Hull, 2003). A school district's locale code is not assigned on the basis of one address. It is derived from the addresses and locale codes of the schools within the district (NCES, 2011). If 50% or more of the public school students attend schools with the same locale code, that locale code is assigned to the district. For example, if 60% of students are enrolled in schools with a "rural distant" locale code, and 40% are enrolled in schools with a "rural fringe" locale code, the district would be assigned a "rural distant" locale code. If no single locale code accounts for 50% of the students then the major category (fringe, distance, or remote) with the greatest percent of students determines the locale (NCES).

Locale codes for a public local education authority (LEA) can also be defined by a combination of their population and their distance from an urban area. Florida's Department of Education (FLDOE) defines a rural school district using the same territorial requirements as does the NCES, but also recognizes the following: a rural school district exists when the population density is fewer than 10 persons per square mile and 20% or more of the children ages five to 17 are from families with incomes below the poverty line, as defined by U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE, 2011).

Florida's rural school districts are geographically larger than those in most other states (RSCT, 2012). The rural districts in Florida identified for this study are also eligible for professional development funds provided by the Bureau of Federal Educational Programs, Title VI, Part B, Subpart 2: Rural and Low-Income Schools (RLIS). The RLIS program is designed to help alleviate the challenges (e.g., lack of personnel and resources) faced by rural districts needed to compete effectively for competitive federal grants and formula grant allocations. Most often the grant request process results in amounts too small to be effective in meeting their intended purpose (FLDOE, 2012).

Challenges Facing Rural Districts

Rural districts have deficits and challenges that are as diverse as the communities they serve (Arnold, Newman, Gaddy, & Dean, 2005; Howley & Howley, 2005; Kannapel & DeYoung, 1999). However, characteristics that define rural districts across the United States - rural fringe, rural distant, and rural remote - share similar difficulties. A discussion of the distinctive problems encountered by various rural districts follows.

Financial distress. One important concern facing rural school districts is the inability to effectively and sufficiently provide school funding. Struggling with the increase of nationwide educational budget cuts, rural districts with already small operating budgets are at a woeful disadvantage (Arnold et al., 2005; Jimerson, 2005). Rural schools require more money to operate than larger urban areas because of sheer geographical isolation (Arnold et al., 2005). Strange (2011) reports that rural students are more expensive to educate. Even when the expense is adjusted to take into account cost differences in geographic areas, rural district expenditures per student are higher (e.g., longer bus routes resulting in higher fuel costs, bus maintenance, driver compensation, and provisions for food services). State funding for schools are augmented either by the local tax base or a millage rate that each local education agency generates.

However, rural areas generally have low tax bases and low millage rates and cannot adequately produce enough revenue to meet the financial needs of their schools (Kollie, 2007). Families that live within rural areas tend to have lower income levels (Hull, 2003). In Florida, these families are generally working in agriculture, seafood, farming, manual labor, or minimum wage service jobs. There is significant pressure in rural communities to keep taxes low, which means that already struggling district budgets cannot provide capital improvement programs, adequate facility construction and maintenance, new textbooks, or technology (Kollie, 2007; Mitchem, Wells, & Wells, 2003).

High quality professional development is important to ensure every teacher acquires the necessary knowledge and skills to teach reading effectively (Christie, 2009; Howley, 2003), but the needs may be greater in rural districts. Rural districts have typically low teacher salaries that contribute to problems in staffing and retaining highly qualified teachers (Arnold, Newman, Gaddy, & Dean, 2005; Barley & Brigham, 2008). Evidence reveals children from more affluent districts and children of low socio-economic rural areas do not differ in their ability to learn, but instead differ in the quality of instruction received in their schools (Ogle, 2003).

Due to budget restraints rural districts are often unable to employ central-office staff members or curriculum specialists who specifically with provide PD. These staff members could effectively be utilized in low-performing schools (McNeil, 2009). Further, rural districts face difficulties in providing high quality PD to their teachers due to their lack of tax revenues (Dayton, 1998). Without the financial contribution of the local tax base, rural districts cannot afford high quality PD. The geographical isolation of many rural districts that lack close proximity to colleges or universities where course work would be available leaves continuing education credits and PD choices for teachers as extremely limited (Arnold, Newman, Gaddy, &

Dean, 2005). Choosing substantive PD programs can also be problematic in that small rural schools may employ only one teacher for a content area such as science, and rural districts find it difficult to justify the expense to enhance one teacher's instruction (Howley & Howley, 2005). Strickland and Snow (2002) argue that PD is costly, but enhancing teacher learning and providing effective professional development is an investment in human capital that will yield positive results in the lives of students.

Shortage of high-quality teachers. Another problem is rural districts are unable to offer salaries sufficient to entice highly qualified teachers (Barley & Brigham, 2008; Dayton, 1998). Workloads in rural districts may require teachers to teach multiple grade classrooms, or have multiple teaching assignments. With high district needs and expectations, high-quality teachers are reluctant to accept rural positions or stay for extended periods, thus creating the higher teacher attrition rate in rural districts (Rosenkoetter, Irwin, & Saceda, 2004). Strange (2011) notes, "The challenge of luring a teacher to a small, low-wealth rural community with limited amenities, poor housing and few college-educated peers, then keeping that teacher there beyond the first beckoning from a better situated district, is simply daunting." (p. 12). A 2004 study on attrition and retention rates of rural educators by Rosenkoetter, Irwin, and Saceda found that teachers in rural areas leave their positions in order to seek better opportunities in larger school districts. Teachers who decided to stay in small rural areas typically did so because of responsibilities to a spouse or elderly parents who also lived in the community and not necessarily because they were more satisfied with the working conditions (Rosenkkoetter et al., 2004; White & Reid, 2008).

Children who live in poverty. Another issue facing rural districts is higher than average levels of poverty. Most rural districts have higher rates of children who are eligible for free or

reduced lunch (Howley & Howley, 2005; Hull 2003). Franklin County, Florida, a rural district in Florida's panhandle, has only one school for all students K-12th grade for the entire county and reports 100% of their student population qualifies for free or reduced-price lunch (FLDOE). Franklin County, Florida, is not alone in the respect of the high numbers of children in live in poverty. The numbers of disadvantaged children can be as high as one-quarter to one-third of the general population in rural districts (Hull, 2003; Strange 2011). There is considerable documentation reporting significantly lower achievement scores for children who come from homes with lower socio-economic status (SES) relative to their peers from middle class or affluent homes (Bean, Heisey, & Roller, 2010; Hart & Risley, 1995; Ladd, 2012; Reardon, 2011). Temple (2009) revealed strong empirical evidence that preschool education increases school readiness, but many children enter kindergarten with no prior involvement in formal early learning facilities. These children are more likely to come from low socio-economic families and/or from families that reside in rural areas where availability of quality early education is in short supply (Grace et al., 2006). However, Darling-Hammond (1999) reported that, "The effects of well-prepared teachers on student achievement can be stronger than the influences of student background factors such as poverty, language background, and minority status." (p. 39).

Students with minority status and English-language learners. Rural schools often face large concentrations of minority students who have historically scored lower on achievement tests compared to their counterparts (Jimerson, 2005). FLDOE (2011) reports Florida is ranked 3rd in the U.S. for English Language Learners (ELL). Although Spanish is the major native language of these students, in Florida schools, ELLs speak a total of 230 different languages (FLDOE, 2011). In Hendry County, a district in southern Florida, 75% of the student population holds a minority status (FLDOE). Children who are from low-SES environments are

often from minority cultures and are especially susceptible to falling into low achievement groups (Jimerson, 2005). Jerald and Ingersoll (2002) state out-of-field teaching, or teachers who are unqualified to teach in certain content areas or grade levels, are more prevalent in schools with higher poverty rates and higher percentages of minority children. Students who do not speak English bring with them to school a varied range of educational experiences and diverse cultural backgrounds (Lenski, Ehlers-Zavala, Daniel, & Sun-Irminger, 2006) creating challenges for teachers to identify and accommodate for potential learning challenges. ELLs have consistently lagged behind their native-English speaking peers, and the same achievement gap experienced by children of poverty also includes children who are of varied nationalities (Strickland & Alvermann, 2004). Encouraging parental involvement is an important and serious challenge in any area, but communicating with non-English speaking families in rural schools where no translators are employed and where there is a lack of bilingual staff, is nearly impossible. Additionally, the average rural teacher is unable to accurately assess student progress and plan future instruction for ELL students because of language barriers (Lenski et al., 2006).

Students from migrant families. Family poverty has also been associated with significant residential movement as families struggle to find stable housing arrangements and employment. Such movement is disruptive not only for the children who move in and out of schools, but also for the children who remain in the schools with high proportions of mobile students (Raudenbush, Jean, & Art, 2011), since teachers often have to spend time re-teaching skills already covered to the new student arrivals. Rural districts commonly have higher percentages of students who are transient with migrant families who work in agriculture. Migrant families harvest seasonal crops and can move several times during a school year (Jimerson, 2005). Migrant families generally consist of foreign-born immigrants who speak little or no

English (Hull, 2003). Statistics indicate Florida has the fourth highest mobility rate of students in the U.S. public school system with a 16.4% transient rate (Rural School and Community Trust, 2012). For example, the DeSoto County school district in Florida reports a citrus industry that employs large numbers of migrant families to work during harvest season (FDOE, 2012). These families move when harvest season is over and work is no longer available.

Students with special needs. Low socioeconomic status is also associated with limited access to medical care having little or no health insurance (Hull, 2003). Poor health benefits can result in inadequate care for children. Specific learning disabilities (SLD) in young students may be traced back to undiagnosed, untreated chronic conditions that can hamper learning or cause students to miss more than an average number of school days (Hull). The Council for Exceptional Children (2004) reported the largest surge in the number of students with specific learning disabilities and these students were identified from rural districts. These numbers accounted for 45% of all children in programs with special needs.

A lack of qualified teachers can result in practices that perpetuate other teachers leaving the profession (Bornfield, Hall, Hall, & Hoover, 1997). Darling-Hammond (2003) states salary, working conditions, teacher preparation, and advisory support as other reasons teachers choose to stay in or leave the teaching profession. Less qualified teachers may be hired to instruct special education students although studies of teachers with insufficient certification are reported to be less committed to their positions (Miller, Brownell, & Smith, 1999). The high cost of providing services for students with special needs, combined with the scarcity of educational specialists in rural districts means that positive student achievement may be hindered (Bornfield et al., 1997).

While rural concerns are not necessarily an absolute indicator of poor student performance, the challenge of teaching a higher percentage of students who are at risk of academic difficulties can place disproportionate burdens on schools with already inadequate educational resources. Therefore, providing professional development for teachers who teach beginning reading to children of poverty, children from minority families, children with language barriers, children with special needs, and children of migrant families is extremely important.

Positive Attributes of Rural Districts

With the difficult challenges rural districts face today and pressure for districts, administrators, teachers, and students to meet national standards, it is easy to focus on the negative issues and ignore the positive attributes of teaching in a rural community. There are strengths within small districts (Kollie, 2007). Favorable characteristics including limited bureaucracy, and development of personal relationships among staff, students, and community. These advantages can help promote increased student achievement (Stockard, 2011). In smaller school districts, teachers are hired primarily from local populations, often from generations of educators who have strong attachments to their schools (Howley & Howley, 2005). Strong local attachment fosters loyalty of service to schools and to their students (Howley & Howley, 2005; Schmuck & Schmuck, 1992). D'Amico and Nelson's (2000) study showed that small school sizes combined with the strong links to a rural community make for successful partnerships. Rural communities and rural schools have connections that are related to each other in multiple ways (Kollie, 2007). In small communities, teachers, parents, and children most likely worship together, shop in the same grocery stores, and belong to the same civic organizations. Teachers and students are supported and encouraged by this community alliance. Theobald and Howley (1998) recognized that rural teachers have a responsibility to build relationships and foster school outreach in their local communities. Family-school-community outreach can help to

increase daily attendance, cultivate a more personal and positive learning environment, improve staff morale, and increase parent involvement (D'Amico & Nelson, 2000).

Strange (2011) confirms many school buildings in rural areas are often used as community centers, auditoriums for public meetings, and continuing education facilities. These school buildings may also be the only building large enough in the area to provide shelter in case of a disaster or emergency. Rural community school buildings are often the hub of the community as well as the largest employer in the area (Hull, 2003; Strange 2011).

Though small rural schools have many inherent strengths, students from rural districts generally score lower in academic achievement than their peers in urban and suburban districts. Other inherent characteristics of rural schools, such as strained budgets and difficulties attracting and retaining high quality teachers, perpetuate the problems. Therefore, effective professional development is essential for teachers who work in rural schools.

A Need for PD in Beginning Reading Instruction

Limited evidence exists as to what constitutes effective teacher professional development for teachers of literacy, particularly for those who teach beginning readers (Sindelar, Brownell, & Billingsley, 2010). To conduct effective PD for beginning reading teachers, one must understand what teachers need to know to teach reading, and how teachers can implement that knowledge through research-based strategies in the classroom. Professional development can be successful only if relationships exist between PD programs, teacher knowledge and beliefs, and their classroom practice. This combination results in positive student outcomes (Sindelar, Brownell et al., 2010).

Purpose of Study

Research on identifying ways to help rural schools improve teacher knowledge and pedagogical skills should be high priority in order to promote student achievement (Stockard,

2011). Students who attend rural schools in Florida have the seventh worst graduation rate in the United States. An overarching question guided this study: What is the state of professional development for teachers of beginning readers in Florida's rural districts? Additionally, the following questions were explored:

1. What professional development activities are being offered to teachers who work with beginning readers in Florida's rural school districts?
2. How are professional development activities delivered?
 - a. What is the content focus of PD offered?
 - b. Who delivers the PD activity?
 - c. What is the format or method used to deliver PD activity?
 - d. Where is the PD activity delivered (i.e., on campus or a distance from the school)?
 - e. When is the PD activity delivered (i.e., during a school day, teacher workday)?
 - f. What is the duration of the PD activity (i.e., time spent in delivery only)?
 - g. What is the level of support offered for teachers afterward (i.e., time spent in follow-up coaching or mentoring)?
 - h. How was the effectiveness of the PD activity measured?

The following chapters provide additional details about the study. Chapter 2 provides a review of the existing literature on professional development for teachers of beginning readers. Chapter 3 provides a description of the research methods used in this study. Chapter 4 presents the findings of the study and Chapter 5 provides an explanation of the results, along with a discussion of the limitations and implications for policy, practice, and future research.

CHAPTER 2 REVIEW OF THE LITERATURE

A long held assumption in education has been that a knowledge-focused approach undertaken through teacher education coursework would be enough to ensure adequate student achievement (Zaslow, Tout, Halle, & Starr, 2010). However, the simplistic notion that teacher knowledge singularly made substantial effects on student achievement came under considerable scrutiny. A careful analysis by the National Center for Early Learning and Development reported that student scores in early education programs did not support this limited association. A consortium of researchers conducted further analyses in seven major early childhood datasets to examine the pattern of associations between teacher knowledge and student outcome (Early et al., 2007). The researchers concluded that knowledge-focused PD alone was not sufficient to bring about significant changes in student achievement. In addition, Pinnell (1987) stated, “Teachers will not come to the classroom knowing all they need to know, but knowing how to figure out what they need to know, where to get it, and how to make meaning of it, is crucial” (p. 51), thereby making continued professional development a must for teachers’ acquisition of new knowledge.

Effective Professional Development

There are many definitions of effective professional development. The meaning of the word effective depends on what one is trying to achieve. Effective professional development can differ from satisfying compliance with administrative rules and procedures, implementation of new curriculum and practices, to enhancing the general knowledge, skills, and practices of individual teachers (Smylie, Allensworth, Greenberg, Harris, & Luppescu, 2001). Guskey (2000) defines professional development as, “those processes and activities designed to enhance

the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students” (p.16).

Darling-Hammond and McLaughlin (1995) indicated PD programs need to (a) allow teachers to have blocks of time to work and learn collaboratively, (b) allow teachers to be involved in planning, sharing, and evaluating, and (c) school administrators to establish a culture of support. Professional development experienced by large numbers of teachers today lack critical pedagogical qualities that make it effective, including time to learn, implement and assess new ideas in their classrooms, and the creation of opportunities to collaborate with other educators (McCarthy, 2002).

Cochran-Smith and Lytle (1999) examined teacher learning and the transformation of teachers’ professional knowledge into practice. The main goal of their study was to examine teachers’ perceptions of knowledge. A three-part knowledge framework emerged: (a) knowledge-for-practice, (b) knowledge-in-practice, and (c) knowledge-of-practice. Knowledge-for-practice refers to the assumption that the more teachers know the better they will teach. This knowledge framework assumes that formal knowledge for teachers was made available through college courses or published resources and that teachers would apply this knowledge, without delay, in their teaching. The second knowledge perception, knowledge-in-practice, comes from teachers’ everyday experiences in schools and classrooms through direct interaction with students. This perception assumed that a teachers’ direct experiences while teaching would help increase teacher knowledge. Finally, in knowledge-of-practice, teachers played a central role in generating knowledge through classroom inquiry and connecting their work to other classrooms and schools. Cochran-Smith and Lytle (1999) concluded teachers wanted to examine, collaborate, and share best practices for the benefit of their students.

In a longitudinal study, Desimone, Porter, Garet, Yoon, and Birman (2002) examined the effects of PD on teachers' instruction and identified features considered to be essential: (a) content focus, (b), active learning, (c) coherence, (d) collective participation, and (e) duration. Content focus is considered one of the most influential features (Desimone et al., 2002). This focus provided explicit explanation to teachers as to what students are expected to learn (content knowledge) as well as how students are expected to learn subject matter (pedagogical knowledge). Active learning refers to how PD engages teachers actively in the learning process as opposed to passively receiving information through lecture. Active learning includes observing other teachers' instruction, being observed, or engaging in meaningful discussion, practice, and reflection. Coherence is the extent to which teacher learning is consistent with their knowledge and beliefs. Coherence must also include support of administration, policy makers, and school reform in order to provide maximum benefit to the PD activity. Desimone et al. (2002) also considers collective participation as another critical feature. This can be accomplished through participation of educators from the same school, grade level, or department. It encourages collective discussion and support of ongoing concepts and collaborative problem solving. Lastly, duration includes both span of time over which an activity is taught and the number of hours spent in follow-up coaching or mentoring.

Desimone's (2009) later study supported the earlier works of Desimone et al. (2002), but provided more comprehensive and detailed elements. However, both studies focused on professional development of teachers in science and mathematics, and not on literacy. The studies concentrated on what teachers need to know, how they learn, how collaboration and active participation helps to sustain knowledge, and how that knowledge affects teaching practices. Although neither study specifically addressed teaching literacy, these essential core

components of Desimone's framework can serve as a guide for evaluating professional development efforts in beginning reading.

A Need for PD in Beginning Reading Instruction

The literature increasingly accentuates the highly technical and intricate skills involved in teaching reading and notes that professional development and support are critical for teachers if they are to refine and enhance their instructional aptitude (Stockard, 2011). Sindelar, Brownell, and Billingsley (2010) supported the conclusion that to conduct effective PD for reading teachers, one must understand what teachers need to know to teach reading, and how teachers can implement that knowledge through research-based strategies in the classroom. Professional development can only be successful if relationships exist between the PD activity and that of teacher knowledge and beliefs, classroom practice, and positive student outcomes. The following explanations will help identify the important elements of beginning reading and the necessary mastery of knowledge in each area.

What students need to know. Research has established that children acquire early literacy skills long before they even enter formal schooling (Clay, 1991; Hart & Risley, 1995). The National Early Literacy Panel (NELP) reported in 2008 that home environments and parent involvement were important to a child's academic success. NELP determined instructional practices to help promote the development of a child's early literacy skills are: phonological awareness (the ability to detect, isolate, and manipulate sounds in a spoken language), alphabet knowledge (knowing the names and sounds of letters), rapid letter naming (the ability to quickly name random letters), rapid naming of objects/colors (the ability to quickly name random sets of pictures of objects or colors), writing/writing name, (the ability to write letters in isolation or to write one's name), and phonological memory, (the ability to remember spoken information for a short period of time). Other important literacy skills include concepts about print, print

knowledge, oral language, and visual processing. The amount of involvement in parent participation and literacy-rich home environments can impact the early literacy skills of young children and help shape their future academic success (Shanahan & Lonigan, 2010).

The National Institute of Child Health and Human Development (NICHD) created a panel to research the status of evidence-based knowledge, including the effectiveness of various approaches to teaching children to read. The National Reading Panel (NRP, 2000) published an explicit report that laid out five essential elements of reading. These elements included: (1) phonemic awareness, (2) phonics, (3) vocabulary, (4) fluency, and (5) comprehension. In other words, for children to learn to read they must have understanding of individual sounds and how sounds can be manipulated to make new words. Children need to know that sounds are directly correlated to written symbols, also known as the alphabetic principle (Moats, 2000). By becoming skilled and knowledgeable in blending and segmenting the alphabetic connection, children will become more confident while vocabulary expands with continued exposure to spoken language and written text (Beck, McKeown, & Kucan, 2002; Hart & Risley, 2003). This expanded confidence and ease in reading and writing is called fluency. Fluency is an important aspect of reading and consists of three major elements, accurate reading of text at a smooth conversational rate, and with appropriate vocal expression called prosody (Hudson, Lane, & Pullen, 2005). Fluency is the ease of the definitive connection between simple decoding of sounds and comprehension (Rasinski, 2011). Durkin (1993) characterizes comprehension as making sense of what is being read. Comprehension is further described as constructing meaning through the interaction and involvement with written language.

What teachers need to know. Teachers who work with beginning readers must know that young students will first establish spoken language and background knowledge through life

experiences generally between birth and age three (Hart & Risley, 1995). Children experience literacy long before formal schooling begins (Clay 1991; Ferreiro & Tebersoky, 1982; Goodman, 1986; Teale & Sulzby, 1986). Data from prior research concludes that the differences children have in the amount of cumulative experiences before schooling begins has a huge impact on the rates of vocabulary growth early on and is strongly linked to general academic success in years to come (Hart & Risley, 2003). Children of low socioeconomic (SES) families are more likely to lack sufficient background knowledge and struggle with early literacy (Adams, 1990; Dickinson & Tabors, 2001; Hart & Risley, 2003; Moats, 2000). Teachers need to be aware of the diverse backgrounds of the children they are educating and their needs and deficits that must be addressed. Children from low SES families are more likely to need more explicit guidance in understanding oral and written language (Dickinson & Tabors; Hart & Risley). Teachers of beginning readers need to be knowledgeable about the concepts widely discussed in reading research and have a comprehensive understanding of the numerous skills involved in each essential element. Yet many do not have this information (McCutchen et al., 2002).

Teachers of beginning readers must understand that words are made up of individual sounds or phonemes. Phonemes are the smallest parts of sound in spoken language that make a difference in meaning. Children who are aware of how to manipulate these individual sounds to create different words are more likely to be successful in learning to read (Dickinson & Tabors, 2001; Moats, 2000). Phonemic awareness includes recognizing beginning sound similarities and differences, isolating specific sounds (beginning, middle, or ending sounds), combining or blending sounds to make a word, and breaking apart or segmenting a word into its separate sounds (Moats). Phonemic awareness (PA) has received enormous attention in professional communities since it has been shown to be a strong predictor of later reading achievement and an

important key to successful beginning reading (Adams, 1990; Lane & Pullen, 2004; Snow, Burns, & Griffin, 1998; Torgesen, 1998). PA is a small subset of the larger phonological awareness, which includes identifying and manipulating larger parts of spoken language, such as syllables, onsets/rimes, rhyming words, alliterations, and intonations. Teachers must be knowledgeable in these areas and provide adequate practice and specific feedback to students while engaging in these phonemic activities.

The next element a teacher of beginning readers must have is an expert knowledge of phonics. Phonics is the system that connects spoken sounds (phonemes) to written symbols (graphemes) that represent that sound. Only when print becomes involved does phonemic awareness become phonics. This understanding of the relationship between oral and written sounds can be a complicated step if children have not yet mastered phonemic awareness (Juel, Griffith, & Gough, 1986). The phoneme to grapheme connection, where sounds in words are directly correlated to print, is known as the alphabetic principle. Unfortunately, the English language is not purely phonetic and various sounds can be represented by multiple written symbol patterns. Teachers must be knowledgeable of the wide-ranging phonetic anomalies in the English language in order to know when and how to effectively teach it to students (Ehri, Nunes, Stahl, & Willows, 2001; Moats, 2000).

Vocabulary is the knowledge of word meanings and is a powerful predictor of reading comprehension (Biemiller & Boote, 2006; Hart & Risley, 2003). Teachers need to be aware that beginning readers will use the words they hear and understand (oral vocabulary) to make sense of words they see and understand in print (reading vocabulary). So, beginning readers with larger expressive and listening vocabularies (words they speak and words they understand when spoken to) will find more success when addressing unfamiliar text. Beck, McKeown, and Kucan (2002)

report that vocabulary size plays a critical role for a child who is learning to read. One way teachers of beginning readers can introduce new vocabulary is through embedded instruction (Coyne, McCoach, Loftus, Zipoli & Kapp, 2009) within storybook reading, class discussions and discovery activities.

Fluency is increasingly recognized as critical to students' literacy development (Rasinski, 2011). Fluency involves three areas of instruction: accuracy, automaticity, and prosody. Teachers of beginning readers must understand that reading words correctly (accuracy), recognizing words at an appropriate rate (automaticity), and the use of voice intonations, oral expression, phrasing, and rhythm (prosody) is vital for understanding (Hudson, Lane, & Pullen, 2005). These three elements of fluency are necessary for beginning readers to fully understand what is being read. Comprehension of text is lost when children become bogged down in laborious decoding and random word calling.

Comprehension is defined as understanding the meaning of either written or spoken language (Adams, 1990). Effective comprehension instruction includes explicit instruction and sufficient time and opportunity for reading, writing and discussion of text (Duke & Pearson, 2002). O'Connor (2007) states that it is important for beginning readers to be exposed to repeated storybook reading. This repetitious technique allows beginning readers to make connections to vocabulary, to print, and aids in understanding the meaning of the story. Reading a story over and over again also helps to increase fluency. As the adult models good prosody while reading to the child, the story seems to come alive and comprehension is enhanced (O'Connor, 2007). Another impact on both fluency and comprehension involves adequate exposure to text (Adams, 1990; Chall, 1996).

All of these reading components are necessary for young readers, and it is important for teachers to understand that each element does not operate individually. The components should be coordinated, interactive, and taught throughout as a system whole (Adams, 1990).

What teachers need to do in classroom practice. Implementing skillful and appropriate classroom practices in teaching reading requires considerable expertise (Moats, 2000). Teachers must understand the content of reading and pedagogy, and must spend time implementing skills in the classroom. Teachers must deliver effective instruction in all five essential elements of reading, phonemic awareness, phonics, vocabulary, fluency, and comprehension both explicit and systematic. They must also provide multiple opportunities for children to practice these skills (NRP, 2000). Arrasmith (2002) defines explicit instruction as “instruction that is unambiguous and clear, leaving a student with no need for inference or difficulty in understanding instruction” (p. 2). Systematic instruction includes a range of strategic and sequential instruction in a consistent format (Arrasmith, 2002; Snow, Burns, & Griffin, 1998). Teachers must be efficient in assessing students, evaluating data, and planning instruction driven by student data. They must also organize instruction to deal with the diverse needs of all of their students in ways that address different learning styles and levels of instruction. Teachers who work in rural schools have traditionally tried to accommodate the diverse challenges rural students have. Pressley et al. (1998) noted that it is not the method or materials provided to young readers that ensures academic success, but the result of effective teachers who are knowledgeable and trained to address multiple variations in learning climates and extreme population differences. Teaching reading to beginning readers is a complex task (Moats, 2000). Effective PD can help teachers who are unfamiliar with the specific knowledge needed to teach reading, and provide the evidence-based strategies needed to practice in the classroom.

Method to Select Studies for Review

A search was conducted to locate studies for this literature review. First, an electronic search was conducted using EbscoHost, WilsonWeb, ERIC, ProQuest, SAGE, JSTOR, PsyNET, and Google Scholar. Keywords entered began with “professional development” and “literacy”. Other keywords used in various combinations with “professional development” were: “rural,” “teacher knowledge,” “teacher practice,” “struggling readers,” “emergent literacy,” “phonemic awareness,” “phonological awareness,” “alphabetic knowledge,” “phonics,” “decoding,” and “fluency”. Studies selected for inclusion in this review were based on the following criteria: (a) they contained empirical data, (b) included professional development, (c) focused on practicing literacy teachers, (d) incorporated teacher knowledge and/or practices with struggling readers, and (e) involved students in kindergarten, first, second, or third grade.

To sharpen the focus of the review, the following types of studies were eliminated: (a) studies involving pre-service teachers, paraprofessionals or community members (with the exception of Spear-Swerling & Brucker, 2003), (b) studies conducted outside of the United States, (c) studies that focused on English Language Learners, and (d) studies that focused on students younger than kindergarten or higher than third grade. In addition to the electronic search, a manual ancestral search was conducted using the references cited in published studies and 15 studies were ultimately selected meeting all criteria. Several studies included in this review involved schools in rural areas but were conducted in combination with urban or suburban schools. Few studies focused primarily on PD in elementary rural schools. Professional development studies that met the criteria included eight that focused on teacher knowledge, attitude, and beliefs, three that focused on teacher practice, and four that focused on student outcomes. Several of the studies examined more than one of these three potential outcomes of professional development, so studies were categorized based on the outcome

emphasized in the study. Yoon, Duncan, Lee, and Shapley (2008) state that professional development affects student achievement through three steps: “First, professional development enhances teacher knowledge, skills, and motivation. Second, better knowledge, skills, and motivation improve classroom teaching. Third, improved teaching raises student achievement. If one link is weak or missing, better student learning cannot be expected” (p. 3).

PD that Targets Teacher Knowledge, Attitudes, and Beliefs

Many things, such as a child’s background knowledge prior to formal schooling, the family economic status, and educational background of the parents, can influence children’s reading achievement. But one critical link to higher student outcome is teacher knowledge (International Reading Association, 2004). Providing a better understanding of the intricacies of the English language, and a higher knowledge of the pedagogical content of reading can increase teacher effectiveness (Spear-Swerling & Brucker, 2006). Pajares (1992) states the elements of teacher attitudes and beliefs are equal contributors in making professional development successful:

Few would argue that the beliefs teachers hold influence their perceptions and judgments, which in turn, affect their behavior in the classroom, or that understanding the belief structure of teachers is essential to improving professional preparation and teaching practices” (p. 307).

Nespor (1987) went so far as to suggest teacher attitudes and self-efficacy have stronger affective and evaluative components than knowledge. Studies of the relationships between teachers’ attitudes and the efficacy of professional development have been noted (Brady et al., 2009; Tschannen-Moran & McMaster, 2009). A teachers’ self-efficacy, or the belief in one’s ability to accomplish a desired outcome, is a powerful motivator and has been known to predict success or failure (Avalos, 2011; Bandura, 1977). In studies of effective PD, teachers’ openness to participate and actively engage in PD, equipped with evidence-based scientific knowledge, is

more likely to positively influence student performance. Without self-efficacy, educators will not expend time or energy because they believe these efforts to be futile (Guskey & Passaro, 1994).

Eight studies with teachers' knowledge, attitudes, or beliefs as the targeted outcome of beginning reading PD were yielded for this review. These studies are presented in no particular order, other than the first four studies were quasi-experimental studies and the latter four were experimental studies and contained control groups.

Tschannen-Moran and McMaster (2009) conducted a quasi-experimental study of four different PD formats to examine the relationship between teachers' self-efficacy, and their implementation of new skills in the classroom. The 93 participants included elementary reading teachers from nine separate schools within five different school districts and represented all types of socioeconomic statuses in suburban, urban, and rural areas. The nine schools were randomly assigned to one of four treatment formats. A cluster sampling design was used to avoid potential cross-contamination since each of the four PD treatments was offered at the school level. All participants completed a pre- and post-PD survey, Teacher Sense of Efficacy Scale (TSES), designed by Tschannen-Moran & Johnson, to determine their own teaching effectiveness.

All teachers participated in a three-hour workshop about Tucker Signing Strategies for Reading and received a teachers' manual. Treatment format 1 (Information, n=28), served as the baseline with only the PD and the manual. Treatment 2 (Information + Modeling, n=21) added a second component to the workshop with approximately 20 extra minutes of experts demonstrating hand gestures to use with the Tucker program. Treatment 3 (Information + Modeling + Practice, n=20) received the workshop, the expert hand gesture demonstration, and an added participant practice session lasting approximately one and one-half hours. The final format, Treatment 4 (Information + Modeling + Practice + Coaching, n=24) included all

previously mentioned PD steps with additional follow-up coaching. The one-on-one coaching sessions allowed more specific and individualized experiences for the teachers in this group.

Tschannen-Moran and McMaster reported post-PD survey results, which indicated that although all treatment groups reported increases in teacher confidence with the implementation of Tucker Signing Strategies. Treatment 4 (I+M+P+C) reported the most significant effect on teachers' self-efficacy. Post-PD results also indicated Treatment 1 (workshop only) was the least effective in boosting teachers' self-efficacy and the practice of new skills in the classroom.

Carlisle, Cortina, and Katz (2011) conducted a similar study of three different PD programs for the purpose of determining teachers' views, attitudes, and beliefs about their knowledge of reading instruction, and their ability to put that new knowledge into classroom practice. Participating first-grade teachers (n=68) were randomly divided into two professional development groups. PD consisted of 27 hours of instruction to develop teachers' knowledge of phonemic awareness, phonics, spelling, writing, fluency, vocabulary, syllabication, advanced decoding, and comprehension, and was delivered over nine different seminars. The first group of teachers, labeled K, was the most basic model that included the 27-hour knowledge seminar only. The second group of teachers, KE, received the same knowledge seminar but included a support system for teachers to evaluate their own teaching. The first two groups were randomly assigned, but the third group of teachers, titled KEC, was purposely chosen because of their previous involvement in Reading First instruction. The KEC group received the most comprehensive PD model, which included knowledge, personal evaluation support, and collaboration with an individual coach or mentor. Every teacher participated in the PD program called Language Essentials for Teachers of Reading and Spelling (LETRS; Moats & Foorman, 2003).

Each participant completed two different self-reported pre- and post-PD surveys: Language and Reading Concepts (LRC) and Satisfaction with My Work. The first survey, LRC, determined the knowledge base for teaching reading. Pre-PD results indicated teachers in the K and KE groups had similar scores while the third group of teachers, KEC, started with somewhat higher scores on the LRC. Carlisle et al. attributed the pre-test difference to the fact that the third group of teachers were in Reading First schools and had already received PD similar to LETRS. The post-PD survey, Satisfaction with My Work, showed an increase in teachers' self-evaluations of teaching reading in all three groups.

Brady et al. (2009) studied the efficacy of a PD program for building a knowledge base of first grade teachers in the areas of phonological awareness and phonics. Schools contributing to the study were required to have all first-grade teachers participate, strong administrative support, and student populations which included different levels of socioeconomic status. Thirty-eight schools qualified and agreed to random assignment and participation and 57 teachers were recruited.

All pre-PD teacher scores on the Teacher Knowledge Survey (TKS) indicated weak knowledge in the areas of phonological awareness and phonics. A Teacher Attitude Survey (TAS) was also given before PD. The TAS measured attitudes, external and internal motivation to participate, intentions to actively engage in learning new methods of reading strategies, and their sense of self-efficacy. In other words, the administration wanted to know if teachers truly wanted to participate and learn new research-based knowledge or if teachers were participating simply because they were encouraged by school administration to do so.

The professional development portion included a two-day summer institute during which participants were given an overview of scientifically based research findings. Monthly

workshops on phonological awareness and phonics were included. Additionally, expert support was provided to each of the 57 participants. Post-PD assessment results of TKS showed significant gains in self-efficacy and teachers' knowledge of teaching reading in each of the treatment groups by year-end. The post-TAS revealed significant correlations between initial teacher attitudes and year-end teacher performances. Overall, the professional development produced substantial teacher knowledge gains and positive attitudes toward classroom implementation. Brady et al. (2009) concluded that a well-planned PD model could have positive impacts on teacher knowledge and efficacy, especially when collaboration of mentors, teachers, and administrators are provided throughout the school year with any group of teachers who work with any group of students.

McCutchen and Berninger (1999) conducted a quasi-experimental model of PD for kindergarten through fourth grade general education and special education teachers. PD spotlighted instruction in the prevention of reading and writing disabilities along with intervention strategies for at-risk primary and elementary students. The PD focused on teacher knowledge related to understanding of the processes of reading and writing (i.e., morphemes, syllable structure, and spelling) as well as instructional approaches. The knowledge areas concentrated on helping students learn to read and write multi-syllabic words, since the rules governing the English language are not purely phonemic and can be challenging for students who already struggle with reading and writing. This PD also highlighted the importance of researcher-teacher collaboration whereby teachers become experts in transferring knowledge into embedded classroom practices through support and encouragement from experts.

Fifty-nine teachers were pretested with the Informal Survey of Linguistic Knowledge (Moats & Lyon, 1996) and found to be weak in linguistic knowledge. Participants attended a

two-week summer institute including instruction in phonological, orthographic, and morphological awareness. The summer institute also provided participating teachers with support from experts in linguistic knowledge. The institutes' experts came to the teachers' classrooms, observed instruction and documented practices that had been taught and modeled in the summer PD instruction. Observation notes were discussed with the teacher for reflection and assessment. Collaborative problem-solving strategies were addressed. Post-testing with the Informal Survey of Linguistic Knowledge revealed increased linguistic knowledge for all participating educators. However, observations of the use of effective teacher practices in the classroom revealed mixed outcomes. Some teachers began implementing more effective teaching strategies for struggling students immediately following PD, while others took longer to translate that new knowledge into changing classroom strategies. McCutchen and Berninger (1999) recognized collaboration with experts and follow-up sessions are paramount, but concluded that some teachers require more scaffolding than others, just as some students require different levels of instruction for different lengths of time.

Project RIME (Reading Instructional Methods of Efficacy) was a professional development model conducted by Bos, Mather, Narr, and Babur (1999). RIME was designed as an interactive and collaborative PD to support early education and special education teachers to increase their knowledge of explicit instruction for children at risk of reading failure. RIME was presented as a summer-long course that concentrated on (a) factors that affect reading and spelling; (b) types of assessment that could be used to detect children who are at risk; and (c) teaching strategies, methods, and techniques to address the needs identified. This course was followed by a year-long collaboration, which consisted of project staff who observed teachers in their classrooms and later met to share ideas, problem solve, and exchange experiences with

other teachers in a supportive professional environment. This experimental study included 11 teachers (kindergarten through second grade) from two schools and compared them to a control group of 17 teachers (kindergarten through second grade) from two other schools who did not receive PD. Both quantitative and qualitative measures were used to obtain information about the effects of RIME.

Teacher attitudes toward early reading were measured pre-PD and post-PD using a quantitative instrument called the Teacher Attitudes of Early Reading and Spelling. Teacher knowledge of the structure of the English language at the word and sound levels were measured with the Structure of Language assessment. Results indicated that with recognition and transformation of negative attitudes about teaching reading along with explicit knowledge, teachers presented more effective classroom practices with the assistance of collaborators. RIME participants who were provided demonstration lessons, material resources, observation and reflective problem solving with program developers were found to be significantly more knowledgeable in assessing students, evaluating instructional needs, and using explicit instruction. For the comparison teachers group, there were no significant differences from pre-test to post-test assessments.

In addition to these quantitative measures, qualitative procedures were used to document the impact of PD through teachers' reflective journals shared with their collaborators. Teacher journal entries often indicated RIME was valuable in increasing their general knowledge of reading and in their own professional growth.

Although Bos et al.'s (1999) focus was on teacher knowledge and practice, measures of student outcomes were also recorded. Pre- and post-PD assessments were given to participating students using the Woodcock-Johnson Tests of Achievement III (WJ-III). The students in

kindergarten, first, and second grades who were instructed by teachers who participated in RIME instruction revealed greater gains on the WJ-III, compared to those students whose teachers were in the control group.

Podhajski, Mather, Nathan, and Sammons (2009) conducted a similar research to Bos et al.'s, (1999) study. Podhajski, et al. examined the effects of PD in scientifically-based reading instruction on teacher knowledge and its relationship to how teachers use new knowledge to drive classroom instruction. Seven volunteer teachers were divided into an experimental group and a control group. The teachers in the control group (n=3) were from the same school and did not receive any PD. The teachers in the experimental group (n=4) were from a different school in the same district. The seven participants consisted of first and second grade teachers. The experimental group of teachers experienced a 35-hour (5-day) summer PD called TIME, which is an acronym for Training in Instructional Methods of Efficacy, and was developed in part with Bos et al.'s. (1999) RIME program. This training utilized some of the subtests of the assessment tools, but included a component of PD to address teachers' use of effective practices in the classroom. After the initial PD phase, TIME gave the experimental teachers opportunities to work in didactic partnerships. Teachers and mentors interacted on a weekly basis to collaborate and discuss their understanding of the English language and how speech is closely connected to print. They were also presented with opportunities to contrast both explicit and implicit teaching strategies.

Both groups of teachers were given a pre- and post-test, The Informal Survey of Teacher Knowledge (Moats & Lyon, 1996). After TIME was completed, the post-test indicated significant gains for the experimental teacher group who received PD but no significant gains for the control teacher group. Podhajski et al. (2009) also concluded through the teacher survey

analysis, Structure of Language (same assessment tool used in RIME), that teachers in the experimental group reported changes their instructional methods because of the PD. These teachers also indicated having a mentor in each experimental classroom to provide modeling, planning activities, reflection and on-site problem solving was extremely valuable.

The students participating in this study were identified as being “in need” of more explicit teacher instruction through their pre-test scores on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) as well as the Test of Word Reading Efficiency (TOWRE). Post-test results indicated students in both groups improved. However, students who worked with teachers in the TIME group made significantly greater gains than the control group on DIBELS and TOWRE.

Spear-Swerling and Brucker (2004) conducted an experimental study designed to increase teacher knowledge of basic reading and spelling skills. The participants were 147 novice teachers who came from a special education teacher certification program and were assigned to work with second grade struggling readers. The teachers were divided into three groups: Group 1 (n=39) teachers were given an 18-hour PD on word structure knowledge including graphophonemic segmentation, classification of pseudo words by syllable type, classification of real words as phonetically regular or irregular, and spelling skills. Group 1 also tutored local students who were struggling with learning to read. Tutoring sessions were conducted once weekly for an average of 60 minutes in addition to the students’ regular reading block. Group 2 (n=49) received the same PD as Group 1. However, teachers in Group 2 did not tutor students. Group 3 (n=59) served as the control group receiving no PD nor opportunities to tutor individual students. In this study, researchers wanted to measure teacher knowledge of word structure in order to compare growth of teacher knowledge with the growth of student

achievement. The Test of Word Structure Knowledge was used to measure teachers' knowledge in three specific areas: (a) graphophonemic segmentation, (b) syllable types, and (c) irregular word tasks. Spear-Swerling and Brucker (2004) chose these particular language knowledge tasks because they considered them central to phonics instruction. The researchers believed teacher knowledge and explicit understanding of these skills is critical in order to provide effective decoding and spelling instruction to beginning readers, especially to struggling readers. For teachers to do this they must have knowledge of phonemic structure, typical grapheme-phoneme mappings, common orthographic syllable patterns, and knowledge of irregularities in the English language.

Participating students were identified by their teachers to be at risk for reading failure (n=38) because of their unsatisfactory scores using the Consortium on Reading Excellence (CORE) assessment of reading tasks, spelling and reading of irregular words, and knowledge of sound and letter patterns. Student academic growth was measured with a post-PD test using the same CORE assessment tool.

The growth of teacher knowledge, post-PD, was measured using the same Test of Word Structure Knowledge, as pre-PD. Teacher scores correlated significantly with the academic growth of the tutored children. Teachers who had demonstrated more complex knowledge of word structure had students who scored higher in post-PD CORE testing, thereby linking teacher knowledge and student achievement. In contrast, students instructed by teachers with limited knowledge of word structure (the control group) had students with lower scores with the post-PD CORE assessment.

McCutchen et al. (2002) conducted a study similar to McCutchen and Berninger's (1999) research but used teachers of kindergarten and first grade only. Participants were 44 teachers

divided into two groups, the experimental treatment (n=24) and the control group (n=20). Again, using The Informal Survey of Linguistic Knowledge (Moats & Lyon, 1996), all participants were given a test before PD was delivered to the experimental group.

Teachers in the experimental group participated in the two-week summer institute, and studied the most recent research on explicit instruction of phonological and orthographical awareness for students with learning disabilities. In addition to the two-week institute, the experimental group met with experts three times throughout the year to discuss concerns and questions. The control group received no training or support.

Teachers in both groups participated in the pre-PD test. Only the experimental teacher group participated in the post-PD testing. An equivalent alternate version of the pre-PD survey was given with the post-PD survey to eliminate false scores due to repeated test exposure. (Teachers in the control group did not post-test.) Teachers in the experimental group had test scores that indicated the professional development delivered to the experimental group increased teacher knowledge of phonological and orthographical awareness for students with learning disabilities. Observational data of teachers' implementation of explicit instruction in the classroom were also recorded. Data indicated that kindergarten teachers in the experimental group spent an average of 4.5 more minutes on direct phonological awareness instruction than did the kindergarten teachers in the control group. Teachers in the first grade experimental group spent an average of 1.87 more minutes on explicit comprehension strategies than did the first grade teachers in the control group. Data indicated that teachers observed using explicit classroom instruction had students who scored higher than did students of teachers in the control group. In fact, students' scores correlated directly with the amount of time teachers were observed using such strategies. Teachers who taught more explicit phonemic awareness

activities had students who scored significantly higher in phonemic awareness assessments than students in the control group.

Students (n=779) enrolled in all participating classrooms were assessed multiple times during the school year. For kindergarten students, the Test of Phonological Awareness (TOPA) was used to test phonological awareness, listening comprehension, and orthographic fluency (a timed alphabet writing task). This test was administered four times during the year. For the first-grade students, the TOPA: Early Elementary Level was used to assess phonological awareness, and the Gates-MacGinitie test was administered to measure early reading comprehension, orthographic fluency, spelling, and composition. These assessments were administered three times during the year.

In the following year, teachers from the first study's control group were given the opportunity to participate in the PD. Thirteen of the original 20 took part in the PD program given to the experimental group the year before. Pre-tests were administered to these 13 teachers and results from their first year pre-PD scores compared to their second year pre-PD scores were found to have no significant difference. Post-PD testing of the 13 teachers who participated in the second PD program did show a significant increase in knowledge.

With this study, McCutchen et al. (2002) concluded three major findings: (a) teachers can deepen their knowledge of language when given professional development of reasonable duration, (b) collaboration with experts can lead to changes in observed classroom practice, and (c) changes in teacher knowledge and changes in classroom practices can lead to increased student achievement.

These eight studies of professional development are specifically focused on the aspects of PD that affect the knowledge, attitudes and personal beliefs of teachers. PD can be of benefit to

teachers of early literacy, as indicated by the baseline and control groups as described in Bos et al. (1999), McCutchen et al. (2002), McCutchen and Berninger (1999), and Podhajski, et al. (2009). All eight studies confirmed that after the initial PD, extended collaboration, in-class support, and mentoring that significantly affected increased teacher knowledge and self-efficacy.

Simply providing teachers with up-to-date knowledge about reading and reading instruction is not likely to provide substantive change in attitudes and self-efficacy. The most powerful source of efficacy-relevant information for teachers consists of mastery experiences or actual teaching accomplishments with students. Self-efficacy beliefs are raised when a teacher sees improvement in student performances, which contributes to optimism that future performance will also result in increased student achievement (Tschannen-Moran & Johnson, 2011). This increase in teacher self-efficacy results in greater effort and persistence over time. It is the explicit and systematic changes in teacher classroom practice that must be supported and sustained in order for teachers to impact student achievement (Carlisle, Cortina, & Katz, 2011).

Tschannen-Moran and McMaster (2009), Carlisle, Cortina, and Katz (2011), and Brady et al. (2009) demonstrated that extended professional collaboration effected substantial changes in knowledge. McCutchen and Berninger (1999) concluded the same but also noted the time between a teacher learning new skills and the teacher transferring that knowledge into new classroom practice will vary.

PD that Targets Teacher Practice

This portion of the literature review describes three studies that yielded direct connections of professional development to changes in teachers' classroom practices as the targeted outcome. Historically, studies that attempted to verify the correlation between teacher practice and student achievement were unsuccessful due in part to multiple variables unaccounted for such as students of different ethnicities, race, socio-economic status, and family

history (Rosenshine, 1970). However, more recent studies indicate PD that provides teachers with differentiated student instruction strategies, expert mentoring in the classroom, and support in making instructional decisions, can establish stronger teacher practice to student achievement correlations (Wayne & Youngs, 2003).

The first study in this review involves Abbott, Walton, and Greenwood (2002) who conducted a two-year study to examine the connection between newly acquired knowledge of effective, research-based practices and how teachers implement them in the classroom. In the first year, the researchers selected kindergarten teachers (n=2) who self-reported a need for additional help with phonemic awareness (PA) within their daily classroom instructional practice. In the first year, both kindergarten teachers participated in a PD that discussed current research in the area of PA and provided suggestions for activities to use with their students. However, they were not provided explicit instruction on how to implement those strategies. Both teachers self-reported at the end of that year that, although they were experienced teachers, they still lacked basic knowledge and skills needed to teach PA effectively.

The second year of the study, the same two kindergarten teachers and one additional first grade volunteer teacher attended a PD where current research-based instruction of PA was provided along with explicit and systematic, step-by-step, concrete explanations about how to use them in their classrooms. The PD activity included coaches who modeled how to manipulate sounds, segment and blend phonemes and practice correctly enunciating basic phoneme sounds. Planned activities were provided for the teachers to use with their students that included phonemes isolation, substitution, omission, and alliteration, as well as explicit instruction in blending, segmenting phonemes, onset-rimes, and syllables.

The kindergarten students (n=39) were tested using the DIBELS. Three basic subsets were identified as the focus of instruction for the kindergarten students: initial sound fluency, rapid letter naming fluency, and phonemic segmentation fluency. Six students who had scores, which indicated they were in the high-risk category, were chosen for the target intervention group. All students in both kindergarten classrooms received 20 minutes of small group instruction during learning center time. The six identified kindergarten students met directly with their teacher for an additional 20 minutes of explicit instruction, four days per week. The first grade teacher worked for an additional 20-minute with 11 low-performing students in two separate small groups on blending and segmenting sounds, two to three times each per week.

During the six months of classroom intervention, teachers' instructional fidelity was measured frequently with the Phonemic Awareness Strategy Fidelity Implementation checklist. The list consisted of instructional steps with check-off blanks next to each component. In the beginning, the teachers examined the list as the researchers modeled the procedures to the students. Later, teachers used the checklist to guide their own implementation and improve their proficiency. Researchers and teachers often used these checklists as a basis to reflect and revise instruction. Teacher fidelity on the procedural checklist was at an average of 84% by the end of the school year. Student DIBELS scores (comparing fall to winter) had increased in both kindergarten classrooms and the first-grade classroom in all targeted areas. At the end of the year, student scores on the DIBELS demonstrated all three groups increased significantly.

Scanlon, Gelzheiser, Velluntino, Schatschneider, and Sweeney (2008) examined and compared three different PD models using early education teachers. The PD was designed to instruct teachers how to implement research-based strategies in the classroom for the prevention of reading difficulties with kindergarten students at risk for reading failure. The longitudinal

study (beginning with students in kindergarten and following them through first grade) compared three approaches to assist struggling students: (a) professional development only (PDO), (b) intervention only (IO), and (c) a section that included both PD for teachers and intervention for the students who were most at risk of early reading difficulties (PD+I). Teachers in PDO and in PDI were also supported with an Early Literacy Collaborator (ELC) or coach. Teachers in these groups worked with their ELCs on at least five occasions throughout the school year. The group of teachers receiving IO was not provided a coach.

Teachers (n=28) were randomly assigned to one of the three treatment groups. The Classroom Language Arts Systematic Sampling and Instructional Coding (CLASSIC) was used to observe teachers in their classrooms. The expert observer recorded both a running narrative of the instructional events going on in the classroom, as well as a verbatim slice or instructional event, involving the teacher every 90 seconds. The data were later coded into three features; (1) specific instructional focus, i.e., what students were expected to focus on, such as reading, writing, speaking, (2) teacher activity, the instructional activity used, and (3) student activity, what the students were actually doing.

Results indicated that PD seemed to have had a positive effect on teacher instruction. Differences were noted across the three conditions. Teachers in the PD+I condition were five times more likely to be observed working with small ability-based groups and making greater use of appropriate leveled texts compared to the IO teachers. More IO teachers used trade book texts above the student's instructional level, which should be read aloud to the children, not used for specific instructional focus. The PD+I group spent significantly more time providing explicit language arts instruction during small ability-based groups using appropriate level texts.

Student measures were taken pre-PD and post-PD. The assessment used for the kindergarten students was the Phonological Awareness and Literacy Screening Battery (PALS-K). End of the year results indicated that the proportion of children who scored in the at-risk range at the end kindergarten differed in groupings. Students in the teachers' baseline group or intervention only (I+O) condition showed no reduction in the percentage of children who qualified as at-risk from the beginning to the end of the kindergarten year. Students with teachers participating in the PD+O and PD+I conditions, revealed a reduction in the percentage of students at-risk of failure at the end of the year. Researchers concluded that teacher knowledge focused PD combined with a teachers' explicit instruction provided to kindergarten students at-risk of reading failure can substantially reduce the incidence of further student reading difficulties.

Garet et al. (2008) in cooperation with The National Center for Education Evaluation (NCEE) and Regional Assistance conducted research to help states and districts make more effective decisions regarding professional development used to improve reading instruction for second graders. The study used an experimental design to test the effectiveness of two research-based PD models in 90 high poverty schools from six different urban districts. These schools combined included approximately 5,500 second-grade students. Equal numbers of schools were randomly selected in each district. This study was conducted to test how teachers transfer knowledge learned in summer institutes, seminars, and workshops into their own classrooms without additional support or if incremental coaching during the year was a necessary component.

Group (I) received institute PD instruction only while Group (I+C) received institute PD + Coaching. The professional development was from the NCEE PD for early reading teachers.

The control group received no more than the usual PD offered by their district. The institute's PD consisted of an eight-day program covering detailed instruction of phonemic awareness, phonics, analysis of student work samples, fluency, vocabulary, and comprehension titled Language Essentials of Reading and Spelling, (LETRS). This LETRS program was modified to provide more emphasis to areas that are more relevant to second grade reading instruction. The Institute + Coaching Group (I+C) received an additional 60 hours of in-class coaching over the school year.

To measure teacher knowledge about reading instruction, the Reading Content and Practices Survey (RCPS) was given to both treatment groups (I and I+C) as well as the control group in the fall and spring of the PD implementation year. The first administration of the RCPS given pre-PD was used as the baseline measure for teacher knowledge. After LETRS PD was provided to group I and group I+C, trained observers visited teachers in the group I+C in the fall and spring of the implementation year. Outcome measures were derived from observing teachers' explicit classroom practices, independent student activities, and the way in which teachers differentiated instruction to address the needs of diverse students. Results indicated that teachers in (I) and (I+C) groups used significantly more explicit instruction for their children during reading blocks than did their colleagues in the control group. Teachers in the (I) group spent 51% more time using explicit reading instructional practices than did the control group who used 42% of their instructional time. It was I+C teachers who outperformed all other groups with 57% of reading instruction time devoted to using explicit instructional strategies. State standardized tests were used to measure students' reading achievement.

Results from the study indicated significantly higher overall knowledge scores for the teachers in both treatment groups than the teachers' knowledge scores in the control group.

However, there were no significant differences in student achievement outcomes between either of the treatment groups and the control group. Even with the added component of coaching, group I+C, student data results found no statistical difference in achievement. Researchers noted that one possibility to explain the lack of statistical difference is that the second grade, standardized test used to compare student achievement before and after PD focuses primarily on comprehension and not on individual word skills that the PD addressed.

The three studies discussed in this section examined the effects of PD on teacher practice. Abbott et al. (2002) and Scanlon et al. (2008) both completed two-year longitudinal studies conducted with teachers implementing new practice techniques in phonemic awareness, letter naming and phoneme segmentation with kindergarten students. The Garet et al. study was conducted with second-grade teachers in low socioeconomic schools and was the only study in this section that included a control group for score comparisons. The three studies differed dramatically in the numbers of students in the study program. Garet et al. had a large data set of over 5,500 students; Scanlon et al. included approximately 2,400 students while the study by Abbot et al. studied effects on three teachers and 17 students' reading achievement. Yet, all three PD studies reported positive differences in effective teacher practice. While the data from these three studies indicate an increase in teacher knowledge after PD, the strongest improvement of effective teacher practice included PD with extended teacher consultation, self-evaluation, revision and reorganization.

Although this section focused on the effectiveness of PD on teacher practice, student outcomes were also noted. Abbott, Walton and Greenwood (2002) noted that their intervention groups were effective in reducing the number of children at risk of early reading failure by the end of kindergarten. Scanlon et al. (2008) indicated students who were in groups in which

teachers who received PD only (PD+O) and PD with intervention instruction (PD+I) had higher scores on PALS-K over time than did the group of intervention only (IO). Therefore, the study by Scanlon et al. revealed that PD combined with expert coaching is critical for student achievement as compared to classroom intervention instructional strategies without a PD knowledge component coaching included.

PD that Targets Student Outcomes

Professional development strives to make changes in teacher instruction with integration of literacy knowledge and scientifically based instructional practice, but most importantly professional development should be designed to improve student achievement (Hill, 2009). This section of the review presents four professional development studies that directly target student outcomes as the primary dependent variable. Two of the four studies have a specific focus on the academic achievement of beginning readers in rural environments.

Spear-Swerling and Brucker (2003) did an experimental study on university students. College courses are often considered a form of PD. The 90 participants in this study included pre-service teachers as well as practicing teachers who taught primary age children with special needs. The participants were divided into three groups: group A was the control group (n=40) who did not take the course, group B was the day group, or pre-service teachers (n=18) taking the university's course and group C was the night group, or practicing teachers (n=32) taking the university's course. Both instructional groups (B and C) were required to take the same course on teaching literacy to children who have special education needs. Particular highlights of the course included graphophonemic segmentation, classification of pseudowords by syllable type and classification of real words as phonetically regular or irregular. The differences in the two instructional groups that were the day group, group B, participated in a supervised tutoring program with children in conjunction with the course and the night group, group C did not.

Again, the focus of Spear-Swerling and Brucker was on “student outcomes”, The Test of Word-Structure Knowledge (administered to adult university students) was given pre-course and post-course. Pre-course results revealed group C, who had prior educational preparation and more classroom experience scored the same as group B who were new in the education field. These results indicate that prior experience in teaching reading does not always influence word-structure knowledge for teachers. Post-course analysis indicated greater knowledge gains in group B who were the day participants tutoring young readers through the university’s program.

O’Connor, Fulmer, Harty, and Bell (2005) examined student outcome through changes in teaching using a longitudinal layered professional development design. The PD involved instructing teachers about how to implement specific and explicit classroom practices to students. PD beginning with Layer 1 (or universal strategies) emphasized phonemic awareness, phonics, and vocabulary in kindergarten, while PD for first grade consisted of the alphabetic principle, word study, vocabulary and fluency. Each participating grade received ongoing support in discussing timelines, strategy implementation, feedback, student data collection and data driven planning. Additional 2-hour follow-up consultations with PD expert were conducted throughout each year.

The layered approach collected data each year about the students in the treatment groups beginning in kindergarten and first grade. All kindergarten and first grade teachers were instructed in layer 1 implementation of beginning reading skills. The study began with kindergarten students (n=31), and first grade students (n=17), while second and third grade students (n=27) did not participate in the intervention. As the students were promoted through grades, teacher professional development instruction continued into the upper grades and student data were collected each year. Second grade teachers who received no PD in the study’s first

year participated in the next years' PD while the third graders remained in the control group until the following year. Second grade teachers were given instructions on how to effectively implement strategies for identifying multi-syllabic words for reading and comprehension.

Layer 2 was provided for teachers who had students who demonstrated a need for more intensive small group or individual teaching. Layer 2 involved more explicit PD strategy instruction (at any participating grade level). Results indicated overall improvements in reading for all participating students, improved reading for students in the high-risk categories, and decreased numbers of children identified with reading disabilities by the end of third grade as compared to the original control groups.

Vernon-Feagans, Kainz, Hedrick, Ginsberg and Amendum (2010) conducted an experimental study that used a PD activity called Targeted Reading Intervention (TRI). This activity involved 16 rural schools for five rural counties, one school had to drop the program because of a lack of appropriate technology. The researchers posed two questions with this study: (1) Did the struggling students in the experimental group (whose teachers' received TRI PD) perform at a higher level at the end of their school year than the struggling students who did not have a TRI-trained teacher? (2) Did these struggling students in the TRI treatment group catch up with their non-struggling peers whose teachers did not participate in the PD?

The TRI PD model was unique in that classroom teachers delivered intervention to struggling students through one-on-one sessions while collaborating with TRI experts through innovative web-based technology. In this model, teachers could see and hear the experts through webcams, while the experts could see and hear the teacher as they worked with the individual struggling reader. Immediate feedback and problem solving was provided during these sessions. Fifteen rural, Title I schools participated. All kindergarten and first grade students were given

academic evaluations in order to identify those who were most at risk of reading failure and to evaluate their progress throughout the school year. The Woodcock Johnson Tests of Achievement (WJ-III) were administered in the fall and again in the spring. Ten struggling students were chosen to participate and ten students “on grade level” were chosen for comparison. For the purpose of more in-depth analysis, the researchers defined four groups of students to test the effectiveness of TRI: (1) experimental focal (n=5) – struggling students in TRI teacher trained classrooms; (2) experimental non-focal (n=5) - non-struggling students in TRI teacher trained classrooms; (3) control focal (n=5)- struggling students in general education classrooms with no TRI trained instructor, and (4) control non-focal (n=5)- non-struggling students in general education classroom with no TRI trained instructor. TRI sessions were 15-minute, one-on-one interventions with a focus on re-reading for fluency, and word work with a variety of multi-sensory strategies to help the child manipulate, say, and write words.

To answer the researchers’ first question: “Did struggling students in the experimental group (whose teachers’ received TRI PD) perform at a higher level at the end of their school year than the struggling students who did not have a TRI trained teacher?” The TRI sessions with webcam technology and individual student/teacher dyads, significantly increased student outcome in word reading and comprehension skills over one year. Scores on the WJ-III indicated students who had teachers that participated in the TRI PD activity outscored their peers who did not have teachers who participated in TRI.

The second question was: “Did these struggling students in the TRI treatment group catch up with the non-struggling peers whose teachers did not participate in the PD?” Scores indicated struggling students with TRI trained teachers did have comparable WJ-III scores as non-struggling students in classrooms whose teachers did not participate in TRI.

In the study, *Increasing Reading Skills in Rural Areas*, Stockard (2011) used a PD program, called Reading Mastery (RM), to document the effects of using different amounts of direct instruction. RM is a highly explicit and systematic reading program that is teacher scripted to ensure consistency. The program provides immediate feedback to students and planned corrective procedures to prevent errors from becoming learned habits (Grossen, Lee & Johnston, 1995).

For this study, students (n=1,355) were chosen from a sparsely populated Mid-western state. Students from separate rural school districts (district A, district B, and district C) were each randomly assigned to three different cohorts. One cohort was the control group used to compare achievement levels and academic growth to the full exposure cohort and the partial exposure cohort. Comparison scores were conducted across cohorts within each district, later across other participating districts, and even a comparison with national averages. Students were tested pre-PD using DIBELS assessment measures in nonsense word fluency (NWF) and oral reading fluency (ORF). The full exposure cohort started with the RM curriculum at the beginning of kindergarten. The partial exposure cohort began RM in the middle of kindergarten, and the control group received no RM instruction. However, each district began the PD activity in separate years and RM instruction followed students up through third grade. District B started the RM program with three cohorts in the fall of 2004, district C began in the fall 2006, and district A started the RM program with three cohorts in the fall 2007.

Results from continuous DIBELS assessments given throughout the school year indicated scores of the full exposure cohort were significantly higher than students in the control cohort, and somewhat higher than students in the partial exposure cohort. These results were from district B, who was the first district to participate in 2004. As other districts began the RM

curriculum in following years (district C two years later, and district A in 2007), scores across districts were compared and the results were consistent with initial findings in district B: students with full exposure to RM scored higher than the other cohorts. Differences were also noted in most comparisons with the national sample. Comparison of district results to national averages (using a multivariate analysis of growth to control for at-risk status and differences between sites), indicated students with full exposure cohort scored equal to or higher than the national average, students in the partial exposure cohort began to catch up by the end of third grade, while students in the control cohort scored consistently lower than their peers nationally.

Although the focus of this section was student outcomes, all four studies reiterated the critical need for teachers, school administrators, and districts to dedicate their professional efforts and be proactive in keeping current with scientifically-based research methods and new technology that can help increase student outcome who are considered at risk. Guskey (2000) insists that student achievement remain the most important aspect of effective professional development. Stockard (2011) reveals student achievement to be more significant when students are given more explicit and systematic teacher instruction.

Spear-Swerling and Brucker's (2003) study differed from the others because PD was delivered through a university course rather than in-service school based PD, but results were similar in that a collaborative hands-on approach with knowledgeable extended support increased student academic achievement. In addition, Spear-Swerling and Brucker's participants were special education majors, as Vernon-Feagans et al. (2010) and O'Connor, Fulmer, Harty, and Bell (2005) also focused on special education students and struggling beginning readers.

The studies in this section concluded that direct hands-on interventions are more effective for increasing student achievement. Data indicated smaller student ability-grouping made

positive differences in student achievement. Vernon-Feagans et al. (2010) revealed significant differences in student achievement when students work directly with a teacher in a one-on-one format, even to the point of catching up with non-struggling peers. O'Connor, Fulmer, Harty, and Bell (2005) showed a longitudinal layered approach can be effective and should be continued throughout students' grade promotions in school.

Discussion

There is evidence across all studies in this review that indicate PD programs which emphasize "learning while doing" can produce better teacher knowledge, beliefs and practices in comparison to PD that emphasizes knowledge only. Vernon-Feagans et al. (2010), Tschannen-Moran (2009), Carlisle, Cortina and Katz (2011), and Spear-Swerling and Brucker (2004) studied groups that used teacher collaboration following PD and compared data with baseline groups. The practice of extended collaboration for teachers was found to increase the confidence of teachers in their teaching.

There is increasing evidence that effective professional development for teachers of beginning readers must first participate in the learning of new knowledge and skills in the critical field of reading pedagogy. Guskey (1986) stated that teachers who have positive attitudes and perceptions are more likely to seek new knowledge and skills.

Further, the studies in this review revealed that the efficiency with which teachers implement new knowledge and skills in the classroom is related to the degree to which their students show progress. Teachers should be allowed an opportunity to practice under the watchful eye of a qualified coach or mentor until mastery is established. Desimone, et al. (2002) reports that sustained change, through new knowledge and skills, is dependent upon a system of support such as mentoring or coaching. According to the International Reading Association (IRA) (2004), coaching is a form of professional development used in many schools and has

shown remarkable gains for student performance. Studies also remind us that teachers will likely revert to the way that they were taught, rather than the way college preparation programs and professional development activities encourage, if they are not supported in making change (NRP, 2000). The studies reported in this paper indicate teachers must reflect on successes and challenges, establish a collaborative community, and discuss and revise issues until resolved. Wald and Castleberry (2000) validate the need for reflection by stating that real learning happens in analyzing experiences. These reflections can be shared within a professional learning community (PLC) or individually. In either case, analysis of one's own instruction deepens their understanding of work and informs their discussions and decisions about future practice.

Lastly, studies of professional development show that student outcomes in reading are improved when teachers are taught to use explicit, systematic instruction and continued support of knowledge and strategies. These procedures produce better results compared to groups that do not receive pieces of the framework.

Limitations of the studies

The largest limitation of effective professional development for teachers of beginning readers who work in rural schools is undoubtedly the extremely small number of empirical studies. Although the limited numbers of studies indicate PD can produce positive effects on teachers' knowledge and practice, Avalos (2011) concludes little is known about how pervasive these changes are and to what extent they are sustainable. Another limitation includes measurement tools used to assess teacher knowledge. Assessments varied widely between the research of McCutchen and Berninger (1999), McCutchen et al. (2002), Tschannen-Moran and McMaster (2009), Bos, Mather, Narr and Babur (1999), and Spear-Swerling and Brucker (2004). Different instruments used to assess teacher knowledge make it difficult to compare across studies with convincing consensus. It is, to coin the phrase, "comparing apples to oranges."

Measurement tools associated with documenting teacher practices were also different with each study: see Scanlon et al. (2008), Garet et al. (2008), Abbott, Walton and Greenwood (2002).

The researchers conducting the study sometimes created assessment tools used to measure targeted variables in studies. This issue could create a threat to data results. Several of the assessments used are self-reported by participants and not corroborated with separate classroom observation to determine if new knowledge or classroom instruction is actually implemented. Teacher self-reports can often be skewed to indicate results teacher deem important for evaluation, also known as respondent bias. Teachers may respond in ways that could be considered socially desirable and offer positive feedback regarding PD activity results.

Student measures were less varied, although student outcome was not always reported in detail in several studies since it was not the targeted outcome. The most common assessment used to compare students across districts, states, and even with national reports are state standardized tests that are not administrated until a student's third grade year. Often, by third grade, these students have been through several years of teachers who may or may not have had high-quality PD. To address differences in assessment, the larger problem is the lack of agreement among researchers as to the most effective measurement tool. "Unifying threads must be found in the midst of diversity" (Avalos, 2011, p. 17).

An assumption can be made from across these studies that the importance of teacher participation in PD alone may be effective, but PD should be accompanied by ongoing mentoring and support to produce sustained changes and result in more significant gains of teacher knowledge and practice. This ongoing support may be especially important for teachers who work with young readers in rural districts. Although Vernan-Feagans et al.'s, (2010) study revealed significant student achievement with one-on-one student to teacher instruction through

the use of expert mentoring with webcams, most rural schools do not have access to, nor do they have the budget for such technology.

A contradiction of conclusive evidence was apparent in McCutchen et al. (2002) that indicated prior teaching experience influenced higher performance on knowledge tests while Bos et al. (2001) found no correlation between experience and teacher knowledge.

Similarities in the studies of this review indicate Desimone's (2009) framework for effective professional development is important for success. Effective PD should include explicit instruction to teachers about literacy (content focus) and how to implement it in the classroom (active learning), allow teachers time to work and learn collaboratively (collective participation), and allow teachers to be involved in planning, sharing, and evaluating PD programs. School administrators must establish a culture of support and cooperation (coherence), and establish time for sustainable knowledge to occur (duration). Each study in this review contained one or more of these essential elements.

Implications for Practice

After examining PD studies involving teachers who educate young readers, particularly struggling readers, patterns emerge. First, results from the PD studies reviewed indicate that it is important to provide practicing teachers with continued effective and detailed professional development of the knowledge of language and literacy. It is the continued process of learning that builds stronger teachers' self-efficacy, better attitudes for teaching new skills, and a solid foundation from which teachers can draw pedagogical content and necessary literacy elements to deliver instruction. A challenge in designing effective PD is to find a way to promote willingness of teachers to improve their teaching, including overcoming resistance to raising standards for teachers and students (Cohen & Hill, 2001).

Secondly, the PD review shows us that actual teacher practice in the classroom is guided by their knowledge levels and the comfort and ease in which they implement strategies to better suit the needs of beginning readers. Strategies should be explicit and systematic. Research findings tell us teachers can benefit significantly from collaboration and feedback from experts, coaches and mentors who are able to help with problem solving and planning for future instruction. There is substantial evidence that a critical component of effective PD includes giving teachers opportunities for collective participations providing them with support and guidance in making changes in classroom practices. These change processes require time, experimentation, and reflection (Taylor, Pearson, Clark, & Walpole, 1999). Studies indicate that national reform to improve student achievement must begin with effective PD for practicing teachers to make noteworthy changes in teacher knowledge and effective practices. In order to make a difference at the national level, researchers need to begin at the ground level by identifying effective PD in local districts and supporting them with state reform efforts.

Studies need to be conducted to determine how districts make decisions about which professional development programs are chosen. It is important to determine the strengths and weaknesses of the PD programs currently offered. Once student achievement data is gathered and analyzed, the results can help districts and local schools make better, more informed decisions about the critical aspects of choosing effective PD programs to increase teacher knowledge, improve classroom practice and most importantly, increase student achievement.

Implications for Future Research

Despite the overwhelming evidence of the importance of a child's success in early literacy, there is no united perspective that combines research and policy on effective instruction for teachers of beginning readers (Kamil, 2010). Offering extensive instruction for pre-service teachers in the linguistic foundation of reading and promoting a heightened awareness of

teachers' knowledge about reading should be addressed (Bos et al., 1999; Foorman & Moats, 2004; McCutchen et al., 2002; McCutchen & Berninger, 1999). The minimal research produced in rural schools, which represent one-third of our nation's public school children, cannot be ignored. The category of "rural" should not be dismissed as backward or insignificant (Strange, 2011). Funding PD for rural educators should reflect their differences and unique needs in order to enhance the quality of education these students receive. Research needs to be conducted in areas of PD for teachers who teach in rural districts, and especially for those teachers who work with beginning readers.

Previous research on the effects of professional development for teachers of early literacy is limited and unfocused, the foundation is weak, and future opportunities to study questions of importance and interest are vast (Sindelar, Brownell, & Billingsley, 2010). There are gaps in the empirical foundation on which we build teacher preparation and professional development activities for practicing teachers. Researching strengths and weaknesses of PD in rural school systems may promote higher quality instruction from teachers in rural areas. "Identifying ways to help rural schools improve teachers' pedagogical skills in ways that have the best impact on student achievement should be a priority area of research in rural education" (Arnold, et al., 2005, p. 18).

Future research of effective PD for teachers of beginning readers in rural districts should look closer at how teacher knowledge is measured. This information is vital if PD is to address the gaps in understanding the necessary components of teaching reading and actual teacher practice. The National Staff Development Council (NSDC) states that if professional development is to improve student learning, many levels of change are required, each with its own particular evaluation challenges (Christie, 2009). Characteristics of PD to facilitate

increased teacher knowledge, improve teachers' practice of research-based strategies, and ultimately facilitate higher student achievement require additional studies to establish indisputable evidence. Policy makers need to be made aware of empirical evidence particularly of rural education studies and the unique challenges teachers in rural schools face in order to make informed decisions.

Well-specified PD conditions should be strongly related to the needs identified by the teachers of reading in rural districts. Models that combine both knowledge and practice-focused PD are more beneficial regarding teachers' understanding of the content and increased student outcomes (Zaslow et al., 2010). Teachers of rural districts must be competent in the knowledge of accommodations and cultural adaptations for the challenges they face in extremely small school areas (Stockard, 2011).

There is evidence that reading teachers need specialized knowledge about reading in order to teach it, but Phelps' (2009) study did not establish a definitive method to determine how teachers acquire this knowledge. Phelps also stated that measures used to assess such specialized knowledge are currently imprecise.

Future studies of professional development should use Desimone's (2009) comprehensive framework as used in mathematics and science activities and apply it to literacy education. PD activities that contain content focus, active learning, coherence/collaboration, collective participation, coaching/mentoring, and appropriate duration of the activity could be of significant value for schools, districts, states and national reform. Results from studies of effective PD for teachers of beginning readers could guide policy makers in choosing the most efficient professional model which will increase and sustain teacher knowledge, make lasting

changes in effective classroom practice and ultimately make noteworthy changes in student academic achievement.

Conclusion

Research indicates that teachers who complete basic teacher education programs are academically weak and underprepared for their jobs (Darling-Hammond & Youngs, 2002). Eighty percent of elementary teachers surveyed self-reported they did not have adequate subject knowledge of how to teach reading (Garet et al., 2008). Professional development for practicing teachers is considered an extremely important tool in school reform and policies for increased student academic success. PD offered currently in schools today is not intensive enough, and does not concentrate on enough literacy knowledge (content or pedagogical) to be effective (Cohen & Hill, 2001; Garet, Porter, Desimone, Birman, & Yoon, 2001).

Changes are needed to provide teachers with current, scientifically based, and proven effective professional development programs. Effective PD activities for teachers of beginning readers should be designed for delivering knowledge, classroom strategies, impetus, and enthusiasm to provide young children with the high quality instruction they both need and deserve from US schools.

As noted by Snow, Griffin, and Burns (2005), “the task ahead of us is documentation that teachers who possess greater knowledge of language and understand its’ acquisition actually teach better and more effectively than those who do not” (p. 210). All state policy makers, districts, and schools should strive to provide more effective professional development for teachers to obtain and sustain such high-quality knowledge and practice for the sake of student success.

CHAPTER 3 METHODOLOGY

The purpose of this study was to achieve better understanding of the current state of professional development (PD) for teachers who teach beginning reading in Florida's rural school districts. Specifically, this study was conducted to determine what professional development is available to those teachers of beginning readers in Florida's rural school districts, how PD is implemented, and how schools and districts assess the effectiveness of PD.

To accomplish this, a mixed-mode survey technique was used, including an online survey, with follow-up contact via both e-mail and telephone with non-responders. Mixed-mode survey techniques often increase the timeliness of response, increase the number of respondents, and reduce measurement error (Dillman, Smyth, & Christian, 2009). In addition, those respondents who volunteered for further follow-up were contacted for a telephone or face-to-face interview to discuss trends in the survey data and to elaborate on PD activities in Florida's rural schools. This study has the potential to inform state policy makers, district professionals, and school administrators in Florida's rural districts about the content and delivery of reading PD and its capacity to meet the diverse needs of teachers in rural schools who work with beginning readers to promote student achievement.

In this chapter, the procedures and techniques for conducting this study are described. First, a description is provided of the participants and the settings where the study took place. Next, the process used to develop the survey and the procedures used to gather school and district professional development data are described. Finally, the data analysis methods and limitations of the study are presented.

Research Questions

The following overarching question guided this study: What is the state of professional development for teachers of beginning readers in Florida's rural schools? The survey was conducted to further study the following specific research questions:

1. What professional development activities are being offered to teachers who work with beginning readers in Florida's rural schools?
2. How are professional development activities delivered?
 - a. What is the content focus of PD offered?
 - b. Who delivers the PD activity?
 - c. What is the format or method used to deliver PD activity?
 - d. Where is the PD activity delivered (i.e., on campus or a distance from the school)?
 - e. When is the PD activity delivered (i.e., during a school day, teacher workday)?
 - f. What is the duration of the PD activity (i.e., time spent in delivery only)?
 - g. What is the level of support offered for teachers afterward (i.e., time spent in follow-up coaching or mentoring)?
 - h. How is the effectiveness of the PD activity measured?

Setting and Participants

Setting

This study was situated in Florida's school districts that were identified by the FLDOE as meeting the criteria for eligibility in Title VI, Part B, Subpart 2: Rural and Low-Income Schools. Twenty-eight rural districts that met these criteria are located in three regions of the state. Eleven rural districts are clustered in Florida's panhandle, 11 rural districts are clustered in northern Florida, and the smallest cluster of six rural districts are found in Florida's southern region. These districts (rural fringe, rural distant, and rural remote) serve a unique student demographic not necessarily experienced in larger urban and suburban school districts, including high percentages of students living in poverty, children of migrant families, and students who do not use English as their primary language.

The challenges in rural settings warrant further study. Table 3-1 provides a summary of student demographics in rural school districts, a total of rural districts combined, and statewide

averages in each category. Table 3-2 provides a summary of student reading performance on Florida’s Comprehensive Assessment Test for third grade students in participating districts and statewide totals.

Table 3-1. Student Demographics by Rural Region and Rural Totals and Statewide

Variable	Panhandle		Northern		Southern		State Rural Totals		State
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
White	73.33%	10.60	74.20%	18.07	41.33%	5.69	65.61%	18.91	51.27%
Black	19.33%	9.71	16.00%	15.73	21.33%	12.74	19.25%	15.12	24.31%
Hispanic	3.00%	0.00	6.20%	2.95	34.67%	21.73	11.86%	15.00	22.07%
Asian-Pacific Islander	4.33%	1.15	3.60%	1.52	6.00%	6.08	3.64%	2.15	2.34%
Low SES	71.67%	24.54	62.80%	12.11	67.00%	13.23	61.88%	3.55	28.71%
ELL	1.00%	0.00	2.40%	2.30	9.33%	5.69	2.72%	2.06	9.66%

Note. SES = Socio Economic Status, ELL = English Language Learner, SD = Standard Deviation

Participants

The participants for this study are schools in districts identified as rural using the Florida Department of Education’s criteria. For the 2012-2013 school year, Florida’s DOE has identified 28 rural school districts. One hundred eighteen public elementary schools that serve students in kindergarten through third grade within these 28 Florida rural districts were invited to participate in this study, and a total of 84 responded. Schools were invited via e-mail to the principal, but the survey respondent could be the principal, a designated school staff member, or a combination of these. Each principal (or appropriate representative) completed an online survey regarding what PD is offered to the school’s K-3 teachers, how it is implemented, and how it is assessed as effective.

Instrumentation

Surveys are instruments used to obtain information directly from individuals who are selected to provide a basis for making inferences about a larger population (Fowler, 2009). In

Table 3-2. 2012 FCAT 3rd grade Test Scores by Districts and State

		Percent in Each Achievement Level						
Florida's Rural Regions	District	Mean	1	2	3	4	5	≥3
Panhandle	Calhoun	207	8	24	24	28	15	68
	Franklin	195	26	29	21	17	7	45
	Gulf	200	13	31	32	17	6	56
	Holmes	199	16	29	22	23	9	55
	Jackson	202	14	26	25	25	10	60
	Jefferson	202	14	26	25	25	10	60
	Liberty	199	14	37	17	30	3	50
	Madison	193	34	27	21	13	6	40
	Taylor	194	26	30	22	18	5	44
	Walton	205	10	26	22	27	14	64
Washington	201	15	27	23	24	10	58	
Northern	Bradford	194	22	34	25	16	3	44
	Citrus	205	11	23	27	26	13	66
	Columbia	202	13	27	30	22	9	60
	Dixie	199	17	29	30	19	6	54
	Gilchrist	198	19	27	28	19	8	55
	Hamilton	192	27	34	21	13	5	38
	Lafayette	195	19	42	21	14	4	39
	Levy	196	23	29	23	18	7	48
	Putnam	194	25	32	21	16	6	43
	Suwannee	201	13	28	26	24	9	59
Union	204	12	24	25	28	11	64	
Southern	De Soto	193	26	37	21	12	4	37
	Glades	199	16	29	25	24	6	55
	Hardee	202	7	35	29	20	8	57
	Hendry	195	23	30	27	15	5	47
	Highlands	199	17	33	21	21	9	50
	Okeechobee	195	24	30	24	16	7	46
Statewide		201	18	26	23	22	11	56

Note: Mean is the mean FCAT Equivalent Scale Score (100-500).

order to answer the research questions; it was necessary to contact those individuals who are charged with the important task of planning and implementing PD opportunities for their schools. The survey created for this study was designed to gather data from Florida's rural

elementary schools regarding what reading PD is offered to teachers in kindergarten through third grade, how PD is implemented, and how the effectiveness of PD is evaluated.

Survey Development

The content of the questions in this survey was derived in part from Florida's Department of Education Professional Development Evaluation Protocol. This system is used by the FLDOE to evaluate professional development for teachers at all grade levels and all subject areas.

Evaluators examine district-level, school-level, and individual teachers' professional development efforts.

Florida's Protocol System is composed of strands generated from the National Staff Development Council (NSDC) Standard for Staff Development. These strands include four specific areas of questioning: planning, delivery, follow-up and, evaluation. Each of the four strands has numbered standards that address more detailed information. Florida's Department of Education gathered data through the Professional Development System Evaluation Protocol System and reported generally lower scores evident in Florida's rural districts, particularly in the standard areas of delivery, and evaluation. The delivery standards address the "who," "how," and "for how long" component of the PD activities. The evaluation standards consider PD activities delivered and their connection to student learning as a direct outcome. Table 3-3 indicates the scores in each standard within each of Florida's regions. In addition, the state average on each standard is reported. The scores range on a 4-point scale from 1, which equals "unacceptable," up to 4, which equals "excellent." A description of each variable is provided in Appendix A.

As evidenced in the data collected with Florida's Professional Development Protocol System in Florida's rural districts, areas of concern are noted. The Florida Department of Education mandates any score below 2.5 on the PD protocol evaluation scale to be unsatisfactory

Table 3-3. Florida’s PD Protocol System Scores by Rural Regions and State

Variables	Panhandle		Northeast		Southern		State	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Planning								
District Needs	3.88	0.35	3.71	0.47	3.33	0.82	3.7	0.6
Generating District – Wide PD System	3.25	0.71	3.21	0.58	3.33	1.03	3.7	0.6
Content	4.00	0.00	4.00	0.00	4.00	0.00	4.0	0.0
Trainers	3.38	0.52	3.57	0.51	3.50	0.55	3.9	0.2
Delivery								
Relevance of PD	3.38	0.92	3.43	0.76	3.33	0.52	3.4	0.5
Learning Strategies	3.63	0.74	3.79	0.43	3.83	0.41	4.0	0.0
Sustained Training	3.63	0.52	3.57	0.65	3.50	0.55	3.5	0.6
Use of Technology	3.50	0.53	3.57	0.51	3.50	0.84	3.5	0.6
Time Resources	3.75	0.46	3.50	0.52	3.50	0.55	3.7	0.5
Dollar Resources	3.50	0.76	3.50	0.76	3.50	0.55	3.4	0.7
Coordinated Records	4.00	0.00	3.79	0.43	3.83	0.41	3.9	0.3
Leadership	4.00	0.00	3.86	0.36	4.00	0.00	3.9	0.2
Growing the Org.	3.00	0.93	3.43	0.65	3.17	1.17	3.6	0.8
Follow-up								
Transfer to Students	3.63	0.52	3.57	0.51	2.67	1.37	3.4	0.8
Coaching/Mentoring	2.88	0.83	3.36	0.74	3.33	0.52	3.2	0.7
Web-based Resources	2.75	0.71	2.64	0.63	3.00	0.63	3.2	0.8
Evaluation								
Implementing System	3.50	0.76	3.00	0.78	2.83	0.98	3.3	0.9
Transfer to Classroom	2.38	0.74	2.93	0.83	2.50	1.22	3.1	1.0
Student Changes	2.50	0.76	2.86	0.95	2.33	1.03	2.9	1.1
Evaluation Methods	2.75	0.89	3.14	0.95	2.50	0.84	3.1	1.0
Use of Results	2.88	0.83	2.93	0.92	3.33	0.52	3.1	1.1
Expenditures	2.75	1.49	2.93	1.21	3.00	1.10	3.5	0.6
Student Gains	3.13	0.83	2.64	1.01	2.17	0.41	3.1	0.9

Note: SD = Standard Deviation.

and requires the district to immediately devise and implement a plan to remediate. Within the four standards in the protocol system, planning, delivery, follow-up, and evaluation, many of the lowest scores found in rural districts were in follow-up and evaluation. This study adapted Guskey’s (2000) and Desimone’s (2009) framework to address professional development in reading and survey principals of rural elementary schools in Florida about PD options chosen for

their K-3 teachers, how PD is implemented, the use of coaching or mentoring, and how effectiveness of PD is assessed.

Guskey (2000) states that content characteristics, process variables, and context characteristics are critical components in determining high quality PD. Content characteristics define “what” the PD activity is about, while process variables include not only “how” the PD activity is carried out but also “how” the PD activity is followed-up. Context characteristics are the “who, when, where and why” of PD. Guskey (2000) emphasizes that “neglecting any one of

Table 3-4. Links between survey questions and Guskey’s framework.

Guskey’s Framework	Survey Question(s)
Content Characteristics “What”	Q5 What is the content focus addressed in this reading PD?
Process Variables “How”	Q9 What format was used to deliver this READING PD activity? Q13 What was the amount of time devoted to the reading PD delivery only? Q14 Was follow-up mentoring/coaching provided with this reading PD activity? Q15 If mentoring/coaching was provided, who facilitated it, how long did it last, what was the format used?
Context Characteristics “Who” “Why” “Where” “When”	Q6 What grade level(s) of students were the focus of this PD? Q7 Why was this particular reading PD activity chosen to offer your teachers? Q10 Who facilitated this READING PD activity with your teachers? Q11 Where was the reading PD activity facilitated? Q12 When did your teachers participate in the PD activity?

these three dimensions can significantly diminish the effectiveness of professional development and drastically reduce the likelihood of improvement in student learning” (p. 74). Each of Guskey’s components was addressed in this survey. See Table 3-4 for links between survey questions and Guskey’s framework for effective professional development.

Desimone’s (2009) framework for evaluating PD is similar to Guskey’s (2000) and was also considered when developing the survey questions. Desimone’s framework includes the following components: (a) content focus, which is the subject content teachers will learn; (b) active learning, which refers to teachers being an involved and functional learners rather than a passive listener; (c) coherence, which describes the extent to which teacher learning is consistent with their beliefs and attitudes as well as that of school administration and school culture; (d)

Table 3-5. Links between survey questions and Desimone’s framework.

Desimone’s Framework	Survey Question(s)
Content Focus	Q5 What is the content focus of this reading PD?
	Q6 What grade level(s) of students were the focus of this PD?
Active Learning	Q9 What format was used to deliver this reading PD? A few options for answers include: lecture, active participation, observation, text-based PD, online learning...
Coherence	Q7 Why was this particular reading PD activity chosen?
	Q8 Was this PD optional for your teachers?
Duration	Q12 When did your teachers participate in the reading PD activity?
	Q13 What the amount of time devoted to the PD delivery alone?
	Q14 Was follow-up mentoring/coaching provided with this reading PD activity?
	Q15 If yes, who facilitated it, how long did it last, what was the format used to mentor/coach?
Collective Participation	Q9 Also addresses this component by offering answer options including: classroom observation of other experts, teacher collaboration, school colleague, in-class coaching....

duration, which includes both the amount of time spent in PD activity and the length of which the activity is spread; and (e) collective participation, which is accomplished through collaboration of colleagues in the same school, grades, or departments. Each of the components

of Desimone's framework was addressed in this survey. Table 3-5 lists each component and the corresponding survey question(s).

Expert review. A FLDOE PD representative completed an expert review in order to critique the questionnaire and establish whether the objectives of the study were met and if the survey was considered adequate for the population of interest. The reviewer determined the survey questions were adequate and aligned with the intent of the study.

Field-testing. In addition to the FLDOE representative, other educational professionals who work in the field of professional development or had specialized knowledge of questionnaires reviewed the survey. Dillman, Smyth, and, Christian (2009) suggest that field-testing a range of respondents is an effective way to identify aspects of question construction others may miss. The final product was a result of three separate rounds of field-testing. The survey was sent to 15 education professionals, including former elementary principals, current elementary principals, current reading coaches in suburban elementary schools, elementary school staff members who supervise professional development, and University of Florida doctoral students whose own research was related to PD. Respondents shared ideas for possible revisions. One respondent commented that many of the key words which had originally been highlighted with bright "university" orange color seemed to get "visually lost" in the questions and should, instead, be black, bold, and capitalized. Another respondent suggested that on the consent page, the rationale of the study should come before the details of taking the survey. Other suggestions included additional choices made optional in Questions 7 and 8. Several of those who field-tested the survey noted and approved of the "piping" used to make it more efficient and less time consuming. One former elementary principal commented that school administrations receive multiple surveys weekly, so brevity is important and added that the

survey should include a deadline for completion; presenting a survey without a deadline for completion means it will likely be superseded by more immediate pressing issues. All comments were considered and revisions to the original survey were made.

Web-based survey formatting. The final survey questions were entered into SurveyMonkey, a web-based survey software program. The complete web-based version of the survey instrument is presented in Appendix B.

The first page of the survey was the informed consent letter that informs the respondent (school principal or designated personnel) of the researcher's contact information, as well as the University of Florida's Institutional Review Board approval for the study (see Appendix C). A rationale of the study, explanation of possible implications, and a predicted time frame to complete the survey were given. Respondents were made aware that no compensation will be given and there is no more than minimal risk for completing the survey. There is also no penalty for non-participation. The respondents were notified that by clicking "next" at the bottom of the page, they are giving consent to participate.

The page that followed asked the respondent to answer 15 questions regarding a reading PD activity that had been offered to their K-3 teachers since June 1, 2012. The subsequent questions addressed Desimone's (2009) and Guskey's (2000) framework for components of effective PD including content focus, method of PD delivery, willingness of collective teacher participation, and whether mentoring and/or coaching was provided.

Some of the questions were short-answer response questions; while others were either "check one" or "check all that apply" answer choices. Several of the questions used a technique termed "skip logic," also known as "piping." Piping enables the researcher to carry text from one question to the next depending on the options selected by the respondent (Beasty, 2006). For

example, one of the survey questions asked, “Was follow-up mentoring or coaching provided with this PD activity?” If the respondent chose “yes”, an additional question popped up and prompted them to briefly describe who facilitated the PD, how long it lasted, and what format was used. Through the use of piping, researchers can ensure that only relevant questions are displayed to the appropriate respondents. If the respondent had chosen “no” as the answer, the prompt to elaborate would be unnecessary.

Another example of piping in this survey was question 14: “Was follow-up mentoring or coaching provided?” If the respondent answered “yes,” the survey prompted the respondent to explain the types of mentoring or coaching and lengths of time involved. Question 16 asked, “Would you like to enter another reading PD activity?” If the answer was “yes,” the survey looped back to begin again, if “no,” the respondent was directed to the final questions. The survey’s final questions addressed how the school measured effectiveness of PD activities offered.

Survey Implementation

The survey was first sent via e-mail to the 118 public schools that serve students from kindergarten through third grade in Florida’s rural districts (virtual, magnet, charter, and alternative schools were excluded). Principals of these rural schools could either complete the survey or designate a staff member charged with overseeing professional development at their school. The initial request yielded 11 responses. The first reminder was sent six days later and an additional 18 schools responded to the survey. The second email reminder was sent to all non-responders approximately two weeks after the initial invitation, resulting in 10 additional responses. For the next two weeks, the researcher made telephone calls to schools to request participation, and then a final email was sent to all non-responders. This additional effort, including telephone calls and emails, yielded an additional 45 responses. A total of 84 schools

responded to the survey, bringing the response rate to 71.18%. Of these 84 surveys, nine were incomplete.

Table 3-6. Response Rate by Region and State

	Panhandle	Northern	Southern	State Total
Total Qualifying Schools	36	52	30	118
Respondents	28	38	18	84
Response Rate	77.77%	78.00%	60.99%	71.18%

Telephone interviews were used to follow up with those who volunteered their name and contact information on the last page of the survey for further discussion with the researcher regarding professional development. Questions for these telephone interviews were determined by trends that appeared after preliminary analysis of survey results. In particular, input was sought from the respondents regarding the factors that facilitated or acted as barriers to providing effective beginning reading PD.

Conclusion

This chapter provided a description of the methods employed in this study. Chapter 4 provides a summary of the survey results. Chapter 5 provides a discussion of the study's findings, including relationships with prior research, and implications for policy, practice, and research. The study's limitations are also discussed.

CHAPTER 4 RESULTS

Results of the mixed-mode survey study regarding professional development (PD) activities in Florida's rural schools are presented in this chapter. Demographic items describing the participants are presented, followed by survey question results that address each research question. An overarching question guided this study: "What is the state of professional development for teachers of beginning readers in Florida's rural districts?" To address this question, the following research questions were explored:

1. What professional development activities are being offered to teachers who work with beginning readers in Florida's rural school districts?
2. How are professional development activities delivered?
 - a. What is the content focus of PD offered?
 - b. Who delivers the PD activity?
 - c. What is the format or method used to deliver PD activity?
 - d. Where is the PD activity delivered (i.e., on campus or a distance from the school)?
 - e. When is the PD activity delivered (i.e., during a school day, teacher workday)?
 - f. What is the duration of the PD activity (i.e., time spent in delivery only)?
 - g. What is the level of support offered for teachers afterward (i.e., time spent in follow-up coaching or mentoring)?
 - h. How is the effectiveness of the PD activity measured?

In this chapter, answers to survey questions are clustered by topics that relate to the research questions presented. Florida's three rural regions are the panhandle, northern Florida, and Florida's southern region. Answers will be identified primarily by state results; however, due to the differences in rural populations in various parts of the state, significant differences from one Florida region to another may be noted.

Analysis of Survey Responses

Analysis of survey results denoted trends in responses. The last survey questions were open-ended and encouraged principals to give their opinions of PD in general and as it relates to rural schools in particular. In addition, twenty-five principals of participating schools responded

affirmatively to a request on the survey to be contacted for additional questions. The researcher interviewed 23 of these volunteers via telephone, and two volunteers in Florida’s northern region were interviewed face-to-face.

Description of Participating Schools

Preliminary questions were posed asking for the school name, district, and number of teachers the school employed in kindergarten, first, second, and third grade. These questions were posed so the researcher could ascertain the general size of the school reporting. The range of teachers in Florida’s rural schools who serve children from kindergarten to third grade varied widely, from 0.5 or “half teacher” in one school to 22 in another. (A “half teacher” indicates the school shares a teacher in a combination class with more than one grade level.) Both schools at the far end of the spectrum were located in Florida’s northern region. The school with 22 kindergarten teachers was a school that services only kindergarten and first grade students. Another school within the same district serves students in second and third grade only. These data are summarized in Table 4-1.

Table 4-1. Numbers of Teachers in Each Grade Level in Participating Schools

Grade	Panhandle	Northern	Southern	State Total
Kindergarten	120.0	215.5	102.0	437.5
First Grade	120.5	211.5	102.0	434.0
Second Grade	112.5	192.0	98.0	402.5
Third Grade	118.0	193.0	96.0	407.0

Taking the total number of teachers reported in each area and dividing the sum by the number of schools who responded to the survey allowed for the calculation of the average number of teachers per grade level in Florida’s rural schools. Florida’s panhandle had an average number of 5.22 kindergarten teachers, and 5.24 first grade teachers. The average of second grade

teachers was reported as 4.89, while third grade was 4.92. Florida's northern region reported an average number of kindergarten teachers as 5.82, first grade at 5.72, second grade with 5.33 teachers per school, while third grade averaged 5.36 teachers per school. The southern region of Florida had the smallest percentage of schools that responded to the survey but the highest number of teachers per grade. In kindergarten, the average number of teachers was 6.38 for the region, first grade was 6.00, and second grade was 5.76, while third grade had an average of 5.71 teachers per school.

Survey Results as Related to Research Questions

To elucidate the current state of beginning reading professional development in Florida's rural schools, the research questions were fashioned from the framework of effective professional development by Desimone (2009) and Guskey (2000). The bulk of the survey questions in this study were clustered into related framework topics that corresponded to these research questions.

Research question 1. The first research question asked what professional development activities are being offered to teachers who work with beginning readers in Florida's rural school districts. To address this research question, the survey asked respondents, "Have your K-3 teachers been offered any PD related to reading since June 1, 2012?" If the respondent answered "no" to this question, the survey automatically directed or "piped" the respondent to the end of the survey where contact information could be given. If the respondent answered, "yes" to the first question, the survey piped the respondent to the next page where they were directed to "Please write the name of the reading PD activity offered." Respondents were also instructed that descriptions of three separate PD activities could be provided, but they were asked to begin with the description of the PD activity they considered to be of greatest importance to their school. The rationale behind this was to increase participation by limiting the amount of time

necessary to complete the survey. An additional question was asked as to why the PD activity was chosen.

By far the most common answer given for reading PD activities offered to K-3 grade teachers in Florida's rural schools were activities related to Common Core State Standards (CCSS). A total of 67 schools reported CCSS-related PD activities. Titles reported include, but are not limited to, Instructional Shifts to Common Core, CCSS Reading, CCSS Training, Close Reading and Core Curriculum Instruction, as well as Text Complexity. The reasons given for providing these activities were very similar across Florida rural schools. Respondents reported reasons for offering identified PD activities, including: "wanting and needing a better understanding of CCSS," "support for new transitions to CCSS," "cross-curricular training for CCSS," and "to provide rigor with CCSS instruction." Several schools indicated the reason for choosing CCSS PD activities were district mandates.

Although the majority of PD activities reported in Florida were related to CCSS, several schools provided reading PD activities identified as "Success for All (n=2)," "Intensive Phonics (n=4)," "Improving Comprehension," and "Small Group Differentiated Instruction (n=4)." Reasons for choosing these included "wanting to build lessons with high yield strategies," "to meet the needs of our children," and "FAIR data indicated we needed help with comprehension instruction."

Research question 2. The following analysis includes research question 2 (i.e., How are professional development activities delivered?) and related components, along with a few additional questions for clarification. The following survey questions were asked to address research question 2. These questions included the following, What is the content focus of the reading PD activity? What grade level(s) was targeted with the PD activity? Was the PD activity

optional? Who delivered the PD activity? Where was the PD activity delivered? When was the PD activity delivered? What is the format or method used to deliver the reading PD activity? What is the duration of the PD activity? What is the level of support offered for teachers afterward? and How was effectiveness measured?

Respondents were asked which particular reading content area was the focus of the reading PD activity offered. With the five essential components of reading presented as answer options (i.e., phonemic awareness, phonics, vocabulary, fluency, and comprehension), respondents were asked to check all that applied (see Table 4-2 for regional and state results of content area focus). The content area focus of the majority of PD activities offered in Florida’s rural schools was comprehension with 91.55% of schools reporting at least one PD activity with this focus. This was followed by vocabulary, with 74.65% reporting this as a focus of PD efforts. Phonics and fluency were both reported by 56.34% of participating schools, and phonemic awareness had the smallest percentage of content focus across the state with 52.11% reporting it as an area of focus. It is notable that in Florida’s panhandle, comprehension was the focus in 100% of PD activities delivered.

Table 4-2. Content Focus of Reading PD Activities Offered

Reading Content	Panhandle	Northern	Southern	State Total
Phonemic Awareness	54.55%	51.52%	50.00%	52.11%
Phonics	54.55%	63.64%	43.75%	56.34%
Vocabulary	86.36%	69.70%	68.75%	74.65%
Fluency	63.64%	51.52%	56.25%	56.34%
Comprehension	100.00%	51.52%	56.25%	91.55%

When asked which grade level was targeted, Florida’s most common grade levels of focus were first and second grades with 90.14% each. When asked if teacher participation in the PD activity was optional at their school, 81.25% of the respondents statewide reported that

participation was not optional. Statewide, 83.33% of the schools reported compensating teachers for participation in PD activities. Eleven schools offered no teacher compensation. Respondents went on to explain that compensation (if any) was extended to teachers by way of stipends (n=28), compensatory hours (n=5), or continuing education points (n=31). Across the rural schools in Florida that responded to this survey, the persons most commonly reported to be delivering PD activities to K-3 teachers of reading were school colleagues (28.16%), closely followed by district staff (20.39%). Tables 4-3, 4-4, and 4-5 summarize regional and state results to these questions.

Table 4-3. Grade Level Focus of PD Activities Offered

Grade	Panhandle	Northern	Southern	State Total
Kindergarten	77.27%	96.97%	81.25%	87.32%
First Grade	77.27%	96.97%	93.75%	90.14%
Second Grade	81.82%	96.97%	87.50%	90.14%
Third Grade	59.09%	81.82%	68.75%	71.83%

Table 4-4. Teacher Participation in PD Activities by Region and State

PD Optional?	Panhandle	Northern	Southern	State Total
Not Optional	77.27%	81.82%	90.91%	81.25%

Table 4-5. Facilitators of PD Activities by Region and State

Facilitator	Panhandle	Northern	Southern	State Total
FLDOE Representative	8.11%	0.00%	10.53%	4.85%
Consortium Representative	2.70%	6.38%	5.26%	4.85%
District Staff	24.32%	23.40%	5.26%	20.39%
School Colleague	16.22%	29.79%	47.37%	28.16%
Curriculum Publishers' Representative	2.70%	6.38%	10.53%	5.83%
College or University Expert	5.41%	0.00%	5.26%	2.91%
Independent Consultant	32.43%	10.64%	0.00%	16.50%
Other	8.11%	23.40%	15.79%	16.50%

The most common response for the location of PD activities was “on campus” or “0 miles away” with 78.87%. The most common response for when professional development activities were delivered was “during school hours” with 39.47%. In the “other” category option for when PD activities were delivered, responses included “preplanning days” and during “common activity time.” Table 4-6 summarizes where PD activities were delivered and Table 4-7 summarizes when PD activities were delivered. Both tables report region and state results.

Table 4-6. Where PD Activities were Delivered by Region and State

Delivery Location Distance to Campus	Panhandle	Northern	Southern	State Total
0 Miles	72.73%	75.76%	6.06%	78.87%
10 Miles or less	9.09%	9.09%	93.75%	7.04%
More than 10 Miles but less than 25 Miles	13.64%	9.09%	0.00%	8.45%
25 Miles or more	4.55%	6.06%	0.00%	5.63%

Table 4-7. When PD Activities were Delivered by Region and State

When PD Facilitated	Panhandle	Northern	Southern	State Total
During School Hours	43.59%	46.15%	17.39%	39.47%
Teacher Work Day/Half Day with Students	12.82%	7.69%	21.74%	12.28%
Teacher Work Day/Full Day with no Students	2.56%	11.54%	17.39%	9.65%
After School	12.82%	11.54%	17.39%	13.16%
Weekend	0.00%	0.00%	0.00%	0.00%
Summer	25.64%	11.54%	4.35%	14.91%
Other	2.56%	11.54%	21.74%	10.53%

To provide further information about the nature of PD activities, survey respondents were asked about the format or “how” the PD activity was delivered. The most common responses across Florida’s rural schools were “active participation” (28.57%) and “teacher collaboration” (20.48%). See Table 4-8 for region and state results.

Table 4-8. PD Activity Delivery Formats by Region and State

Delivery Format	Panhandle	Northern	Southern	State Total
Lecture	20.83%	15.46%	21.95%	18.57%
Active Participation	26.39%	30.93%	26.83%	28.57%
Observation	18.06%	12.37%	12.20%	14.29%
Online PD	1.39%	6.19%	2.44%	3.81%
Teacher Collaboration	18.06%	21.65%	21.95%	20.48%
Text-based PD	2.78%	4.12%	2.44%	3.33%
In-Class Coaching	11.11%	5.15%	12.20%	8.57%
Other	1.39%	4.12%	0.00%	2.38%

The number of hours devoted to PD delivery varied from 45 minutes in one school to more than 40 hours in another. Statewide results revealed a mean of 11.18 hours, with a standard deviation of 8.14. The panhandle mean was 13.88 hours spent in PD participation, with a standard deviation of 11.04. The northern region mean was 11.12 hours with the standard deviation of 5.85, and the southern region of Florida reported a mean of 7.37 hours and a standard deviation of 6.01.

When respondents were asked if follow-up coaching or mentoring was provided to teachers, 76.81% of rural school statewide reported that it was. Schools in the panhandle reported that coaching was provided as part of 72.73% of the PD activities. Schools in the northern and southern regions reported coaching at 77.42% and 81.25%, respectively. The most common answers for the persons who provided the coaching included; school principals, reading specialists, and teachers on special assignment. The length of time coaching or mentoring was provided ranged from 3 hours to “throughout the school year,” with classroom observations and teacher collaboration being the format most often used for follow-up. Methods of coaching reported included observing, modeling, and sharing best practices.

Respondents had the opportunity to report up to three specific reading PD activities offered to K-3 teachers in their schools. Space was also provided to list additional activities beyond three, but no respondents reported more than three activities. Table 4-9 provides the total number of PD activities offered in each region and statewide.

Table 4-9. Number of Reading PD Activities Offered Since June 1, 2012

Number of PD Activities	Panhandle (N=24)	Northern (N=33)	Southern (N=18)	State Total
Schools Offering No Activities	1	1	0	2
Schools Offering One Activity	22	23	15	60
Schools Offering Two Activities	1	7	3	11
Schools Offering Three Activities	0	2	0	2

The survey also asked respondents to describe any other PD activities offered to their K-3 teachers that did not relate to reading. Florida’s panhandle schools listed 16 PD activities that were mostly CCSS math (6), CCSS science (6), and data driven instruction (4). Florida’s northeast region reported PD activities identified as K-5 Common Core math (5), technology (1), writing (3), and pathways to CCSS strategies (8). Southern Florida schools reported the same types of PD relating to CCSS in all core subjects (8). A few exceptions included creating a safe playground (1), Kagan cooperative strategies (2), and STAR literacy (1).

The survey also included a question about how schools measured the effectiveness of PD activities for teachers. Classroom walkthroughs had the highest total, 24.16% statewide, while classroom observation was close with 22.30%. Totals for all measures reported are found in Table 4-10.

As a measure of the effects of PD activities on student achievement, respondents reported that Student Progress Monitoring was the most-used evaluation tool, with 36.57%

statewide. In the “other” option, “teacher observation” and “informal assessments” were identified. See Table 4-11 for results by region and state.

Table 4-10. Methods Used to Measure Effectiveness of PD Activities

Measure	Panhandle	Northern	Southern	State Total
Pre and Post Tests	2.60%	2.33%	1.59%	2.23%
Self-Evaluations	12.99%	13.18%	9.52%	12.27%
Classroom Observation	23.38%	20.93%	23.81%	22.30%
Lesson Plan Review	14.29%	15.50%	15.87%	15.24%
Classroom Walkthrough	23.38%	24.81%	23.81%	24.16%
Student Portfolio	1.30%	1.55%	1.59%	1.49%
Student Achievement Scores	20.78%	18.60%	20.63%	19.70%
None	0.00%	0.00%	0.00%	0.00%
Other	1.30%	3.10%	3.17%	2.60%

Table 4-11. Measures of PD Activity Effects on Student Performance

Measure	Panhandle	Northern	Southern	State Total
Action Research Results	6.38%	4.26%	2.94%	4.57%
Teacher Constructed Tests	12.77%	13.83%	11.76%	13.14%
District Constructed Tests	8.51%	15.96%	11.76%	13.14%
Standardized State Examinations	25.53%	22.34%	26.47%	24.00%
Student Progress Monitoring	40.43%	32.98%	41.18%	36.57%
Student Portfolio	4.26%	7.45%	2.94%	5.71%
None	0.00%	0.00%	0.00%	0.00%
Other	2.13%	3.19%	2.94%	2.86%

Results of Follow-Up Interviews

At the end of the survey, there was a request for respondents to volunteer to be contacted by the researcher for follow-up interviews. Twenty-five respondents agreed to be contacted. The researcher interviewed 23 by telephone and interviewed two respondents face-to-face. The first question posed to them was, “In your opinion, what do you see as the biggest obstacle to

providing effective professional development to your teachers of reading in grades K-3?” The most common obstacle mentioned was insufficient time. Administrators believed it was extremely difficult to find time for all faculty members to attend PD sessions or participate in follow-up coaching or mentoring. They also reported that, since finding convenient times for all to attend was challenging, making scheduled PD activities mandatory was customary.

The second most common answer given by administrators as an obstacle in providing effective PD to their teachers was the cost. Principals admitted to having extremely limited budgets for providing PD activities, and some reported having no budget at all. One principal stated, “Trying to choose appropriate activities for our teachers, when we have so much need, is very difficult.” Another principal said, “My school services students from Pre-K through grade 12. We have to take turns with who gets PD each year. It can be a tough call.” Another concern related to the researcher in several telephone interviews was the subject of unions who advocate no work hours beyond contract requirement. A principal in northern Florida said, “Having to provide professional development outside of a teacher’s contractual obligation presents an added problem of finding funds to pay them to participate on their days off or on their summer vacation.”

Several interviewees in southern Florida stated that a big obstacle in providing PD activities for their faculty was finding effective PD that dealt with reading components combined with strategies to assist large student populations of English Language Learners (ELLs). These interviewees felt their teachers were high quality teachers but many had not been effective in teaching students with limited English language proficiency. One principal stated that because effective PD in this area was difficult to provide, “hiring teachers who are bilingual is very important at my school.”

After the preliminary analysis of survey data, a portion of the follow-up interviews was devoted to addressing trends in responses. One trend that was apparent was the high percentage of schools reporting “comprehension” as the focus of reading PD activities. When asked why comprehension was chosen so often, the most common reason was Florida’s adoption of CCSS. One interviewee responded, “Common Core State Standards requires reading more complex text than in the past and teachers are looking for better comprehension strategies to use in the classroom.” Another reason cited was the need reflected in student performance data. One interviewee responded, “We are trying to pull up students who are in the lowest quartile, our students who are ii vs. iii. They need explicit instruction in order to comprehend.” When asked if the CCSS PD activities provided teachers the tools for improving comprehension, interviewees were not convinced that they did. One stated, “It was a start,” while another replied, “Not specifically.”

Another trend in analysis was the location of delivery. Many of the schools reported that PD activities were delivered on campus. One follow-up interviewee reported, “In our district schools have literacy coaches. One of their jobs is to provide PD. They collaborate with other schools that have the same identified needs. We share costs and share best practices. We share a lot of our children. The interstate divides our district so children bounce back and forth often.” When asked the same question, another interviewee responded, “It doesn’t cost us any money to have it [on campus].”

The last questions of the follow-up interviews addressed the ways to measure effectiveness of PD activities for teachers and for students. The survey allowed respondents to check all that apply. Therefore, the percentages of options presented were fairly equal since schools use a variety of methods to measure effectiveness. To clarify, the researcher asked each

principal interviewed, “If you had to choose only one method to measure effectiveness of PD activities offered, which one would you choose?” The overwhelming response for evaluating teacher effectiveness was “student achievement scores.” The same question was posed for effects of PD activity on student achievement, and the most popular response was “student progress monitoring”.

Summary

The purpose of this study was to identify the state of professional development for teachers of beginning readers in Florida’s rural schools. Specifically, the study was designed to determine what PD activities were offered and how they were delivered. To ascertain the information needed, a survey was sent via email to all qualifying rural schools in Florida. Survey questions were created to address the elements of effective PD identified by Guskey (2000) and Desimone (2009).

The survey included questions with single choice-options, questions that could have multiple answers, open-ended questions, and questions requiring short answers. Piping was used to make the survey as quick and concise as possible. Descriptive analysis was used to report the results of the survey. Results indicated that most rural schools in Florida offered at least one PD activity to teachers of beginning reading during the 2012-2013 school year. Most of those activities addressed the Common Core State Standards and the primary area of focus was comprehension. The following chapter will present a discussion of the results, the limitations of these findings, and implications for policy, practice, and future research.

CHAPTER 5 DISCUSSION

Professional development (PD) for teachers is considered essential for improving the quality of instruction. High quality PD can aid teachers in acquiring knowledge and skills to teach reading effectively. Teaching reading requires specialized knowledge (Bos, Mather, Dickson, Podhajski, & Chard, 2001; Cunningham, Perry, Stanovich, & Stanovich, 2004; Moats & Foorman, 2003), and many current teachers are unprepared to teach it effectively (Bos et al., 2001; White & Kline, 2012). Rural districts have a particularly difficult time recruiting and retaining high quality teachers (Barley & Brigham, 2008; Dayton, 1998), and the diverse needs of students in rural schools makes this problem even more pressing (Lee & Burkam, 2003). Providing effective PD for teachers who work with beginning reading in rural districts may be especially difficult due to geographical isolation (Arnold et al., 2005), lack of qualified personnel (Arnold, Newman, Gaddy, Dean, 2005; Barley & Brigham, 2008), and the inability to provide capital improvement programs, adequate facility construction, maintenance, new textbooks, or technology (Kollie, 2007; Mitchem, Wells, & Wells, 2003).

Few studies exist of PD activities designed specifically for teachers of beginning readers and research of PD for teachers of beginning reading in rural districts is very limited (Strange, 2011). Policy reform is needed and if improvement of PD is going to happen, information must be gathered about what PD is currently being offered, how it is implemented, and how its effectiveness is measured.

Overview of the Study

The intent of this study was to examine state of professional development for teachers of beginning readers in Florida's rural districts. This was accomplished by collecting data via an online survey completed by school principals or designated staff members. The overarching

question that guided the study was “What is the state of professional development for teachers of beginning readers in Florida’s rural districts?” To address this general question, the following specific research questions were explored:

1. What professional development activities are being offered to teachers who work with beginning readers in Florida’s rural school districts?
2. How are professional development activities delivered?
 - a. What is the content focus of PD offered?
 - b. Who delivers the PD activity?
 - c. What is the format or method used to deliver PD activity?
 - d. Where is the PD activity delivered (i.e., on campus or a distance from the school)?
 - e. When is the PD activity delivered (i.e., during a school day, teacher workday)?
 - f. What is the duration of the PD activity (i.e., time spent in delivery only)?
 - g. What is the level of support offered for teachers afterward (i.e., time spent in follow-up coaching or mentoring)?
 - h. How is the effectiveness of the PD activity measured?

Quantitative analyses of the survey answers were reported in the previous chapter. This chapter will include a summary of the major findings of this study, interpretations of relevant data, and potential implications for policy and practice. This chapter will also examine the limitations of the study and implications for future research.

A mixed-mode survey technique was used, including an online survey with follow-up contact by e-mail and telephone. Face-to-face interviews were conducted with two principals who volunteered. Mixed-mode survey techniques often increase timeliness of response, increase the number of respondents, and reduce measurement error (Dillman, Smyth, & Christian, 2009). Twenty-eight rural districts met Florida’s criteria for inclusion in the study due to their designation as rural through Title VI, Part B, Subpart 2: Rural and Low-Income Schools. These districts were clustered in three separate regions of the state: the panhandle region, northern region, and in southern Florida. In these districts, 118 schools were identified that served K-3 grade children, and each of these schools was invited to participate in the study.

Discussion of Findings

The results of this study provide a description of the present state of professional development for teachers of beginning readers in Florida's rural schools. This study has the potential to inform state policy makers, district professionals, and school administrators in Florida's rural districts about the content and delivery of reading PD and its capacity to meet the diverse needs of teachers in rural schools who work with beginning readers to promote student achievement.

This discussion will address the results of the survey and interviews with principals in Florida's rural schools and will be organized according to the elements of Desimone's (2009) conceptual framework for evaluating professional development. This framework includes the essential components for effective professional development initially identified by Desimone, Porter, Garet, Yoon, and Birman (2002): (a) content focus, (b) active learning, (c) coherence, (d) collective participation, and (e) duration. Guskey's (2000) framework for evaluating PD will also be referenced in the discussion. Guskey's framework aligns with Desimone's but is presented in three components: content characteristics, process variables, and context characteristics. Content characteristics define "what" or the focus of the PD activity, while process variables include "how" the PD activity is carried out and "how" the PD activity is followed-up on. Context characteristics are the "who, when, where, and why" of PD activities.

Content Focus

Desimone's (2009) first component of effective professional development is content focus. This component was addressed with the following research questions: "What professional development activities are being offered to teachers who work with beginning readers in Florida's rural schools?" and "What was the content area focus?" These questions also align with Guskey's (2000) content characteristics or "what" PD activities are about. These research

questions were addressed on the survey by asking respondents to write in the name of PD activities and to identify the area(s) of content focus for the activity (e.g., fluency). The overwhelming response across the state was that PD activities were directly related to Common Core State Standards (CCSS). Although many responses were CCSS or a variation, the focus of the PD activities remained unclear. Most respondents did not specify whether the focus was on basic explanations of the CCSS or on practical applications for teachers to use with classroom instruction. There are many standards among the CCSS that are related to beginning reading and other literacy-related knowledge and skills, but few respondents specified whether a single standard or multiple standards were addressed in the PD activity. Did the PD focus on understanding concepts, such as text complexity, or on specific pedagogy, such as methods for selecting appropriately complex text for students and guiding them in understanding it? The limited information provided by many respondents makes it difficult to interpret the results.

Despite the overwhelming identification of CCSS as the current PD activity of choice in Florida's rural schools, the content focus still remains vague. As of this writing, the CCSS have been adopted by 46 states and the District of Columbia. It is, therefore, not surprising that states, districts, schools, and teachers are anxious and uncertain about what is expected of them. Yet, is this focus on CCSS-related PD a response to the latest educational fad or a systematic way to build capacity in rural schools? CCSS standards require as much emphasis on basic skills, such as early phonemic awareness, phonics, and fluency as in the past (Shannahan, 2012). The standards also have an increased focus on comprehension, especially of complex text (Hiebert & Mesmer, 2013). CCSS is also clear about what students should be able to master before graduation in order to be college or career ready. What remains unclear is how teachers will ensure student success and how schools are supporting teachers in this effort through PD. To be

able to comprehend complex text, children need to be able to read the text accurately and fluently, but the most commonly reported primary reading content focus was comprehension. Harvey and Goudvis (2007) report that comprehension instruction is a “means to an end” (p. 33). They state comprehension instruction is a collection of reading strategies taught to children for the direct purpose of understanding the meaning of any text read. While it is true CCSS emphasizes more complex text in classroom instruction (Shanahan, 2012), comprehension should not be singled out as the only important reading content focus. Levels of reading difficulty are often problematic and frustrating for beginning readers (Allington, 2002). It remains important that phonemic awareness, phonics, vocabulary, and fluency skills are taught along with comprehension if students are to achieve success in learning to read (Adams, 1990).

As discussed in Chapter 2’s review of PD research that targeted teachers’ knowledge, activity, and beliefs, students who are instructed by teachers with limited knowledge of teaching reading had lower scores (Spear-Swerling & Brucker, 2004). However, teachers who are professionally invested in providing the best education for their students can succeed when they have the knowledge and believe it can happen (Carlisle, Cortina, & Katz, 2011; McCutchen & Berninger, 1999; Tschannen-Moran & McMaster, 2009). The current trend in Florida’s rural schools to focus heavily on CCSS in their PD activities may mean that the ongoing problem of insufficient teacher knowledge about reading is being neglected.

Active Participation

The question that addressed Desimone’s (2009) active participation component was, “What format was used in the PD activities delivered?” This question also addresses Guskey’s (2000) component process variables, or “how” PD activities are delivered. Survey answers revealed the most commonly used formats for PD delivery in Florida’s rural schools were through active participation and teacher collaboration. These can be effective delivery formats

for increasing knowledge and skills because “learning while doing” produces better teacher knowledge and better teacher classroom practices in comparison to PD that emphasizes knowledge only (Carlisle, Cortina, & Katz, 2011; Tschannen-Moran & McMaster 2009; Vernon-Feagans et al., 2010).

Although research indicates active participation is one of the most effective components for increasing teacher knowledge and improving classroom implementation, it was represented by only 28.57% of those who responded. This number remains unfavorably low. The remaining 71.43% of respondents are relying on less effective methods of PD delivery. The practice of extended teacher collaboration among educators who share challenges of great student diversity in their classrooms has also been found to help increase the confidence of teachers in their teaching and can lead to more systematic changes at the school level (Cochran-Smith & Lytle, 1999), but only 20.48% of participating schools reported using this method. It should be noted that the survey did not request details about the PD delivery methods, so even though many respondents reported the use of effective methods, no information about the quality of implementation is available.

Despite the remarkable growth of online instruction in recent years, this survey revealed that the use of online professional development activities in Florida’s rural schools was minimal. Only 3.81% of respondents indicated that they had offered any online reading PD options to their K-3 teachers. These results are consistent with prior research that reveals a lack of technology available in rural schools (Kollie, 2007). Online instruction for educators has the potential to substantially expand access to information (Lock, 2006), video models (Dieker et al., 2009), and other PD content for teachers in rural schools (Masters, Magidin de Kramer, O’Dwyer, Dash, & Russell, 2012). Opportunities for collaboration with other professionals (McConnell, Parker,

Eberhardt, Koehler, & Lundeberg, 2012) may also be expanded, but Florida's rural schools seem to be lagging in this area.

Coherence

In Desimone's framework, professional development activities should be coherent, or consistent with teachers' goals, aligned with standards, and informed by research evidence (Birman, Desimone, Garet, Porter, & Yoon, 2002). Coherence is rooted in teachers' existing knowledge, beliefs, and strong administrative support (Brady et al., 2009). Coherence can be extended to include teachers' self-efficacy, which can affect whether a teacher feels the professional development offered can help students learn, thereby influencing the teachers' level of effort and participation in the PD activity (Ware & Kitsantas, 2007). Three survey questions were designed to address this component: "Why was this PD chosen?" "Was the PD optional?" and "Were teachers compensated for participation?" "The first question also addresses Guskey's context characteristics component.

Survey responses indicated that the predominant reason for selecting PD activities was the need for information about the new state standards. CCSS was prevalent in the PD activities that were offered this year, but there was no indication whether teachers chose this focus. One principal admitted in a face-to face interview with the researcher, "Administrators are on board with the presentation of CCSS, but teachers feel like Common Core is just another swing in education's pendulum. They know it will be replaced soon." By the same token, Kaestle (1990) reports;

Even if school reforms have limited effects and run in somewhat predictable pendulum swings, they serve two very useful purposes. They force educators to think about what they are doing, to defend it, to fine tune it, and to think about the whole enterprise they are engaged in, not just their specific daily roles. More important, school reforms encourage the public to think about public education-not just about its failings but also about its purpose and its importance. To the extent

that schools respond successfully to widespread reform sentiment, they give people a sense of having a stake and a voice in the conduct of public schools (p. 35).

Joyce (1999) revealed current NAEP reports in combination with unsatisfactory standardized test results create a sense of crisis in our U.S. education system; therefore, educational reform seems the best solution. Joyce also explained that analyses of large education reform policies made in the last 60 or 70 years has revealed a flat—neither upward nor downward—trend in student reading scores. Even with large-scale reform efforts, the reality remains that only one in three early education students learn to read proficiently on grade level. Coherence in PD could be compromised in the overwhelming attention devoted to the heightened rigor of CCSS (the latest education reform effort), in rural areas that already deal with major student achievement challenges.

Coherence may also be compromised by the fact that teachers in responding schools had little choice about participation. This was demonstrated in responses to the question “Was the PD activity optional for teachers?” Results indicated that over 80% of responding rural schools mandated participation in PD. One principal interviewed on the telephone stated, “...many of my teachers were present at the PD activity for the simple reason it was mandatory.” Research has demonstrated that PD offerings should respond to needs and interests that teachers identify, because PD is more meaningful to teachers when they have ownership of its content and process (King & Newmann, 2000).

Collective Participation

The collective participation component of Desimone’s framework is considered critical in the overall effectiveness of professional development activities offered. As King and Newmann (2000) explain, “Teacher learning is most likely when teachers collaborate with professional

peers, both within and outside of their schools, and when they gain further expertise through access to external researchers and program developers” (p. 576).

Collective participation is challenging, especially for small, isolated rural schools, and the survey revealed limited collective participation in PD activities among teachers in responding schools. Data also indicate small numbers of teachers per grade level within the identified rural schools in this study; therefore, collective participation with peers would be difficult. One school stated it had one teacher for a K-1 classroom, and one teacher each for grades 2 and 3. Sharing best practices with those in the same grade levels would be impossible. Sharing best practices across same grade levels but with other schools would also be difficult since rural schools are often many miles apart. Although the study by Vernan-Feagans et al. (2010) revealed significant improvements in student achievement through the use of expert mentoring with webcams, most rural schools do not have access to, nor do they have the budget for such technology.

In response to the survey question about the person responsible for the delivery of PD activities, a “school colleague” was recorded as the most common response (over three-quarters of all who responded). Although schools have colleagues they consider to be experts on various topics, this expertise is almost certainly measured in relative terms in comparison with the rest of the faculty. But, reliance on this relative expertise brings into question what credentials an “expert” needs in order to facilitate professional development for others. One principal explained in a telephone interview that, because of tight budgets, “One teacher would be sent to a training, return to school and present the material from the PD activity to their colleagues.” Because the activities were not designed with a “train-the-trainer” focus, it is unlikely that the PD content would be translated effectively under such circumstances.

When asked to identify the biggest obstacle associated with providing PD in rural schools, the most common responses of principals interviewed were “time” and “money.” Therefore, although PD from colleagues within the school could be considered a reasonable solution for rural schools, the quality of such PD should be closely monitored. Rural districts must be careful employ effective methods for preparing teachers to provide PD to their colleagues, developing their content expertise and their capacity to teach adult learners.

Duration

The last component of Desimone’s framework for evaluating effective PD is duration. Duration includes both actual time in PD delivery and in the span of time for follow-up mentoring and coaching. The survey question that addressed this issue was, “What was the number of hours devoted to reading PD delivery?” This study revealed that time involved in reading PD for primary teachers in Florida’s rural schools was generally of short duration, but there was a considerable range (45 minutes in one school to over 40 hours in another). The average amount of time in PD delivery in Florida’s rural schools was 11.18 hours. Garet et al. (2002) reported that 20 hours of professional development was a “tipping point” for effective sustainable instruction. It is, therefore, unlikely that the limited amount provided to teachers in Florida’s rural schools would result in measurable improvements in instruction or student achievement. In addition, The National Center for Education Evaluation and Regional Assistance (2009) revealed that 80% of elementary teachers participated in an average of 24 hours or less of PD on reading instruction, and primary teachers in Florida’s rural schools receive less than half the national average. Professional development that is sustained over time is more closely linked to improved student learning than are short term or one-time experiences (Whitehurst, 2002).

Coaching or mentoring is another element related to duration. The survey addressed this important element of effective PD by asking, “How long did the coaching/mentoring last?” This question resulted in another very wide range of responses (from 3 hours to throughout the school year). Fortunately, most of the answers indicated that coaching lasted throughout the year. A study by Vernon-Feagans et al. (2010), which focused PD research specifically in rural schools, revealed that students whose teachers participated in longer direct mentoring performed higher on student assessments than did their peers whose teachers received little coaching. Coaching and mentoring can have a wide range of positive effects on teachers including increased retention, improved attitudes, enhanced self-efficacy, and experience with a wider range of instructional strategies (Smith, 2002), so investing time in these practices is worthwhile. While results of this survey indicate 76.81% of the schools provided some type of coaching/mentoring after PD activities were delivered, the survey also revealed 23.19% of teachers received no follow-up. Follow-up coaching is considered to be a critical component of PD to promote instructional change (Moir, 2009).

The results of this survey present a snapshot of the state of professional development for teachers of beginning readers in Florida’s rural schools. The survey was designed to be brief in an effort to increase the likelihood of response but the abbreviated design limited the detail of information collected that could have been beneficial in analysis. For example, the survey asked respondents to choose how PD activities were delivered, who facilitated the PD activities, and how much time was devoted to coaching/mentoring. Yet, choices provided for these questions did not lend themselves to elaboration or detail. Much of the information collected still remains limited (i.e., the frequency of coaching provided is unclear whether “all year” refers to daily, weekly, monthly, or even less frequent coaching throughout the school year). Among other

topics of concern in the survey that were not addressed in detail were: levels of expertise of PD facilitators, the type and/or frequency of student progress monitoring for measures of student effectiveness, and what elements of teacher classroom instruction are measured with classroom walkthroughs. In conclusion, the survey used in this study provided enough information to ascertain certain facets of what is being presented as PD for teachers of beginning readers in Florida's rural schools but questions remain.

Limitations

This study has several limitations that must be considered when interpreting its results. First, although all schools that met the study's criteria were invited to participate, and the response rate of the survey was rather high, the issue of nonresponse bias must be considered. Judging from the increase in response following telephone contact, it is reasonable to assume that some schools that did not respond chose not to because they had no PD activities to report. Therefore, the estimates of time spent in beginning reading PD in Florida's rural schools may be artificially high. The response rate was lowest in the southern region of the state, so issues that are particularly relevant to south Florida rural schools may not be proportionately represented.

The findings of this study are also based on schools' self-report, which may have led to social desirability bias in the responses. In an effort to keep the survey short, some of the questions may not have required enough detail in the responses. Multiple-choice questions forced respondents to choose the answer that best described their school's circumstances, but they did not provide much information for analysis.

The survey requested only one year's worth of PD data, from June 1, 2012 to present, in order to obtain information on the current state of PD in Florida. The 2012-2013 school year coincided with the initial implementation of the new mandated reform called Common Core State Standards. Schools anticipated being held accountable for the new standards the following

year. The alignment of the survey timeline with the CCSS implementation surely influenced the results. It is unlikely a survey of the previous or subsequent year's PD would have had such a pronounced focus on CCSS.

Another limitation is that the survey only requested information about reading PD for teachers in grades K through 3, so results cannot be interpreted to apply to PD efforts in other subject areas or with teachers at other grade levels. Finally, only schools in Florida's rural districts were invited to participate, so the results cannot be generalized to other states or to urban or suburban schools.

Implications for Policy and Practice

The results of this study indicate the need for significant improvements in professional development for teachers who teach early literacy, but especially for those teachers who work in rural areas.

Survey respondents indicated that current school reform efforts- in this case, implementation of the CCSS- can have a profound impact on the selection of focus for PD efforts. This single-minded focus on preparing teachers to implement the new standards may have a lasting negative impact, because the ongoing needs of teachers to improve their methods of reading instruction and intervention are being neglected (McCutchen et al., 2002; Moats & Foorman, 2003). CCSS was the most common focus of PD across the state for PD implementation, but in southern Florida, phonemic awareness, phonics, and vocabulary programs were presented because of particular regional needs. The large population of English language learners in the area dictated these topics. For example, the state percentage of content focus for PD activities was reported as 91.55% comprehension. However, in southern Florida, comprehension was reported at only 56.25% and a vocabulary focus was at 68.75%.

Results indicated that many other features of the PD implementation were inadequate. For example, far too little time was devoted to PD to produce sustainable changes. The results of this study revealed rural schools in Florida spend far less time in PD activities than the national average of 24 hours. Access to high-quality PD in reading is important for all teachers of beginning readers, but for teachers who work in Florida's rural schools who serve large populations of at-risk students, it is paramount. In Florida's panhandle, 43.59% of PD activities were implemented during school hours, while in southern Florida, only 17.39% of PD activities were delivered during school hours. When asked if PD participation was optional for teachers, 77.27% of schools in the panhandle indicated that it was not optional, and 90.91% of schools in southern Florida reported it was not optional. In northern Florida, 75.76% of PD activities were delivered on campus, while in southern Florida, 6.06% were on campus.

This study's results also indicate that fewer hours are spent in coaching and mentoring after PD delivery. Research on the effects of ongoing coaching and mentoring follow-up affirms that it is an essential element of effective professional development. Respondents' narrow focus on CCSS meant teachers' needs for increased knowledge and skills related to the reading process went unmet. The lack of collective participation was also noted, as was the limited use of technology to address the inherent difficulties in providing PD in rural areas.

Results of this survey indicate that few of Florida's rural elementary schools utilize online PD. Using technology for delivery of professional development would seem a logical and effective method for addressing PD needs, given the isolated environment and great distances of rural schools from urban areas. The importance of advancing access to technology in rural schools should be noted.

The methods for measuring the effectiveness of PD activities for teachers in this study included a wide range of informal measures, indicating a need for more systematic evaluation. The primary method for measuring the effectiveness of PD activities for students in this study was student progress monitoring, which could be an appropriate approach, but implementation quality and systematic use of data can vary widely. State standardized testing was also reported as a measure, but these tests are typically administered at the end of the school year, so using this measure will do little to drive instruction for present students. Educational leaders need to ensure that time and money devoted to PD efforts are well spent. Consequently, Florida's rural schools should find more systematic ways to evaluate the effectiveness of PD activities.

Better educational preparation for young children before they even enter the formal school system should be implemented. As was reported in Chapter 2, the amount of involvement in parent participation and literacy-rich home environments can impact the early literacy skills of young children and help shape their future academic success (Shanahan & Lonigan, 2010). Children from rural areas who come from disadvantaged homes are often unprepared to succeed when they begin school. Poor children start far behind kids from middle- and upper-income families because they lack the experiences and basic learning skills necessary for academic success (Taylor, 2010). Efforts to improve early academic skill deficits are considered "just a game of catch up," and a large number of students never do (Taylor). Temple (2009) maintains the quality of rural schools could be improved if fewer children entered the public school system without requiring costly remediation. One solution would be to provide disadvantaged children in rural areas with better child care, preschools, and parent education.

According to the United States Government Accountability Office (USGAO) (2004), one quarter of the nation's school districts are rural, many in isolated areas with large populations of

students who live in poverty and are at a heightened risk of school failure (Paik & Phillips, 2002; U.S. GAO, 2004). Educators in rural schools face great challenges in meeting mandated standards handed down from the government for the “success of all children” and have expressed experiencing lower student morale when children cannot meet the scheduled benchmarks already set for them (Powell, Higgins, Aram, & Freed, 2009). Increasing the effectiveness of professional development is one way for school leaders to address this problem. Given the importance of reading in all other content areas, and given the importance of early literacy achievement, ensuring that teachers of beginning readers have the requisite knowledge and skills to help all children succeed can have a far-reaching impact.

Implications for Future Research

While the knowledge base on professional development is expanding, many unanswered questions remain about what constitutes effective professional development for teachers who work with beginning readers and which programs work best under what circumstances. Further research is needed to review PD activity records and assess teachers’ knowledge and skills to determine whether the PD activities provided matched the PD needs of the teachers and produced desired results.

Future research should examine PD activities offered over a period of several years. Although the current study’s focus on one year of PD data provided a snapshot of the current state of PD in Florida’s rural schools, the current reform effort (i.e., CCSS) profoundly affected the results. A longer data collection timeline would result in a more accurate and reliable picture of PD activities offered.

To provide a more comprehensive picture of early reading PD in rural schools, more research needs to be conducted. Future studies could include other areas of early instruction where reading may be addressed and could include all of Florida’s elementary schools to allow

for comparison. Future research may also include other states and other schools (i.e., suburban and urban).

Conclusion

The developers of the frameworks for evaluating effective professional development (i.e., Desimone, 2009; Guskey, 2002) are clear in their assertions that all components of their frameworks should be considered to determine whether PD will produce a sustainable change in knowledge and practice. This study finds several components of the frameworks to be missing in the PD activities presently offered to teachers of beginning readers in Florida's rural schools.

This study of PD activities offered to Florida's rural schools indicates that these schools seem to be doing well in some areas, such as active learning, by utilizing a combination of lecture and a hands-on approach, and modeling instructional lessons. At the same time, these schools lack other components of effective PD. In particular, the areas of coherence and duration are in much need of improvement in Florida's rural elementary schools. This finding is consistent with the findings of Florida's Professional Development Evaluation Protocol System.

There were strengths not immediately evident through the answers given in the survey, but these became unmistakable through the telephone and face-to-face interviews of rural school principals. During the researcher's conversations with principals of Florida's rural schools, after interviewees identified the biggest obstacles in providing PD, the next question was, "What do you consider to be the biggest strengths your school has in overcoming these obstacles?" To the researcher, the tone of each principal seemed to take on an enthusiastic quality as each described the details of how their school works together to problem-solve. Each principal was quick to cite the "feeling of family" among faculty members and how the faculty care for each other, but especially for the children. Parsons (1981) noted that small rural communities have their own special strengths rooted deeply in the community. The antiquated notion that small schools are

backward and bigger schools are better should be reconsidered. According to one principal, “We take care of our own. We know these kids better than anyone. Some of us taught their parents, too. We feel like family here. No one cares for kids more than family.”

Rural schools have many challenges and issues to face when it comes to delivering the highest quality education for the students in their care. One principal interviewed by the researcher said, “Rural school teachers care enough about their students to give it their all. You can’t ask for much more than that.” Such dedication cannot be taught through PD activities, and although it may not make up for lack of professional knowledge and skills, it does provide rural schools with an advantage over urban and suburban schools with similarly skilled teachers.

At the same time, principals expressed skepticism about the current emphasis on CCSS. Is it, as one principal quoted, “...just a swing in the education pendulum?” Kennedy (2010) coined the term “reform fatigue”—the idea that there are too many fads and reforms in education, each requiring an unreasonable amount of pressure for teachers. Kennedy reports;

Each initiative requires teachers to revise their routines and strategies and directs their attention away from their teaching and toward a new logistical problem. Often these initiatives do not alter the content of instruction, but they may nonetheless change the instructional systems within which teachers embed their instruction. (p. 596)

It is true that educational swings happen but what is missing is a clear goal of how to reach all students. Do we know enough about CCSS to dedicate so much time to PD? If we want teachers to understand what it is, then yes. If we want teachers to teach effectively using Common Core, then we must allow time for research. Could we be placing too much emphasis on CCSS in our current PD efforts? Is this emphasis taking time and effort away from other worthy areas of focus?

Schools are not just collections of curricula but living organisms that need to be proactive with a spirit of inquiry and development (Joyce, Calhoun, & Hopkins, 2001). Understanding of new reform needs to include an understanding of the processes to achieve implementation. Currently, teachers receive shallow instruction in brief workshops and are led to believe that just a little bit of change will make a big difference (Joyce, 1999). Stockard (2011) reminds us that research on identifying ways to help rural schools improve teacher knowledge and pedagogical skills should be given a high priority in order to promote student achievement. This study demonstrates that teachers working in Florida's rural schools are not receiving the professional development necessary to meet the needs of their students.

APPENDIX A
FLORIDA'S PROFESSIONAL DEVELOPMENT EVALUATION PROTOCOL SYSTEM

Planning Variables	
1-District Needs Assessment	At least annually the district identifies professional learning needs through a school-by-school analysis of disaggregated student achievement by content area and skills, behavioral data, and other districts.
2-Generating a District-wide Professional Development System	Based on identified professional learning needs, the district generates a district-wide Professional Development System is generated that is research- and/or evidence-based, specifies how the plan will be evaluated, and aligns with the Florida Protocol Standards, identified student and educator learning needs, educators' level of development, School Improvement Plans, Comprehensive K-12 Reading Plans, Title I Plan, annual performance appraisal data, discipline data, school environment surveys, assessments of parental satisfaction, other performance indicators, and the district strategic plan.
3-Research/Evidence Basis	The district's professional learning is based on research- and/or evidence-based instructional and intervention strategies proven to increase student achievement.
4-Content Standards for Student Outcomes	The district's professional learning supports implementing state-adopted content standards for student outcomes.
Delivery Variables	
1-Learning Communities	The district supports and encourages professional learning among collaborative teams of educators.
2-Content Focused	Professional learning focuses primarily on developing content knowledge and content-specific research- and/or evidence-based instructional strategies and interventions in the content areas specified in s.1012.98 F.S. and aligned with district and state initiatives.
3-Learning Strategies	Professional learning uses strategies aligned with the intended goals and objectives; applies knowledge of human learning and change; and includes modeling of research- and/or evidence-based instruction, practice, and classroom-based feedback.
4- Sustained Professional Learning	Professional learning is sufficiently sustained and rigorous to ensure learning for participants that lead to high-fidelity classroom

	implementation for student achievement.
5- Use of Technology	Technology, including distance learning, supports and enhances professional learning as appropriate and the application and assessment of that learning as appropriate.
6- Time Resources	Sufficient time within the workday is available and used for professional development.
7- Coordinated Records	The district maintains up-to-date, easily accessible records on all professional learning that provide data for certification and in-service points for all staff.
8- District Support	The district recognizes and supports professional learning as a key strategy for improving teaching quality and student learning.
9- Learning Organization	The district fosters and develops the maximum potential of all employees through professional learning.
Follow-up Variables	
1- Implementation of Learning	The district provides a follow-up support system to facilitate implementation of professional learning in the workplace.
2-Coaching and Mentoring	The district provides mentoring and/or coaching for all educators to ensure high-fidelity classroom implementation of professional learning, with the assistance continuing as needed until educators implement the learning with comfort and accuracy.
3-Web-based Resources and Assistance	The district supports the implementation of professional learning through district and school web-based resources and facilitates educator awareness of and access to district web-based resources.
Evaluation Variables	
1- Implementing the System	The district conducts an ongoing formal evaluation of the degree of fidelity with which the district's Professional Development System is implemented.
2- Implementation of Learning	The district evaluates at least 10% of the district-level professional learning to assess the level of high-fidelity implementation in the work place.
3-Changes in Students	The district assesses the impact of professional learning on student performance.

4-Evaluation Measures	The district uses summative and formative data from state or national standardized student achievement measures, when available, or other measures of student learning and behavior such as district achievement tests, progress monitoring, educator-constructed tests, action research results, discipline referrals, and/or portfolios of student work to assess the impact of professional learning.
5-Use of Results	The district reviews district- and school-level evaluation data as part of the needs assessment process for the subsequent school year's professional development planning in order to eliminate ineffective programs and strategies and to expand effective ones.
6-Fiscal Resources	The district documents that sufficient fiscal resources are used to support professional learning that aligns with school and district goals.
7- Student Gains	The district demonstrates an overall increase in student achievement as measured by the Florida Department of Education's district accountability system.

APPENDIX B
SURVEY INSTRUMENT

Professional Development in Florida's Rural Schools

Consent Page

Dear Principal,

I am a doctoral candidate at the University of Florida and I am conducting a study of professional development in Florida's rural schools. I invite you to participate in a short survey about your school's professional development for teachers of beginning readers (grades K-3). You may complete the survey yourself or designate an appropriate member of your staff to complete the survey on your school's behalf.

The results of this survey will contribute to the growing research and knowledge base in this important subject area. This research could have implications for policy and practices in Florida and, in particular, funding for reading professional development in Florida's rural schools.

This study has been reviewed and approved by the University of Florida's Institutional Review Board. If you have any questions regarding this survey, please feel free to reach me by phone at [REDACTED]. You can also reach the University of Florida's IRB office at 352-392-0433 for questions about your rights as a research participant. Respondents receive no compensation and there is no more than minimal risks for participation. You may withdraw at any time without penalty.

By clicking on the "NEXT" button at the bottom of this page, you are giving your consent to participate voluntarily in this study. Your answers and your school's identifying information will be kept confidential to the extent provided by law. Survey results will be reported as group aggregates only, and no individual school data will be reported. I will be able to link survey responses to your school, but responses are not linked to any individual. The security policy of the service provider for this web-based survey (SurveyMonkey.com) is available at <http://surveymonkey.com/mp/policy/security>. When the study is completed and the data have been analyzed, the information will be removed from the server.

The survey should take approximately 10 minutes of your time to complete. Thank you in advance for your participation and I look forward to your responses.

Sincerely,

Susan Hodges Helvenston
University of Florida Doctoral Candidate
College of Education

School Information

I would like to begin by asking you a few basic questions.

Please provide the name of your school.

Please provide the name of your district.

Professional Development in Florida's Rural Schools

How many teachers does your school employ in each of the grade levels listed below? Do not include paraprofessionals or resource teachers.

If any of your teachers have combination classes, please indicate this with decimals (e.g., both grades 2 and 3 in one room would be indicated with .5 in Second Grade and .5 in Third Grade).

Kindergarten	<input type="text"/>
First Grade	<input type="text"/>
Second Grade	<input type="text"/>
Third Grade	<input type="text"/>

Have your K-3 teachers been offered any PD related to reading since June 1, 2012?

- Yes
 No

Professional Development for Florida's Rural Elementary Schools

In the next few questions, you will be asked to provide information about READING professional development (PD) activities provided to K-3 teachers in your school.

When finished describing the PD activity, the survey will offer you the opportunity to repeat the process to describe other READING PD activities.

Please write the name of a READING PD activity that has been offered to K-3 grade teachers at your school any time after June 1, 2012.

Begin with the READING PD activity you consider of greatest importance to your school.

What was the content focus addressed in this READING PD activity. Check all that apply.

- Phonemic Awareness
 Phonics
 Vocabulary
 Fluency
 Comprehension

Professional Development in Florida's Rural Schools

What grade level(s) of students were the focus of this READING PD activity? Check all that apply.

- Kindergarten
- First Grade
- Second Grade
- Third Grade

Why was this particular reading PD activity chosen to offer your teachers?

Was this READING PD activity optional for the teachers at your school?

- Yes
- No

What format was used to deliver this READING PD activity? Check all that apply.

- Lecture (facilitator provides information, teachers listen)
- Active Participation (teachers are involved in hands-on learning, group participation, or sharing)
- Observation (watching expert teachers model instruction)
- On-line PD (facilitated through technology, such as web-seminars)
- Teacher Collaboration (colleagues meet to share, discuss, and problem-solve current educational issues)
- Text-based PD (professional reading or book study)
- In-class Coaching (expert observes participant teaching in his or her own classroom and provides feedback)
- Other
- (specify here)

Professional Development in Florida's Rural Schools

Who facilitated this READING PD activity with your teachers? Check all that apply.

- Other
- District Staff
- School Colleague
- College or University Expert
- Curriculum Publisher's Representative
- Educational Consortium Representative
- Florida Department of Education Representative
- Independent Consultant

Other (specify here)

Where was this reading PD activity facilitated?

- 0 miles away (on campus)
- 10 miles or less from campus
- more than 10 but less than 25 miles from campus
- 25 miles or more from campus

When did your teachers participate in this reading PD activity?

- Weekend
- During school hours (a substitute teacher was provided)
- Teacher workday (full day with no students)
- Summer
- Teacher workday (half-day with no students)
- Other

(please specify)

Professional Development in Florida's Rural Schools

What was the amount of time devoted to the READING PD delivery (Please do NOT include time devoted to follow-up coaching or mentoring)?

- Less than a half day
- A half day
- A full day
- More than one full day, but less than one week
- One week or more

If possible, also specify the number of PD delivery hours here.

Was mentoring or coaching provided as follow-up with this READING PD activity?

- No
- Yes

Coaching / Mentoring

Since you answered "Yes", provide a few details of the coaching/mentoring, and any information you believe to be significant.

Who provided the coaching/mentoring?

How long did the coaching/mentoring last?

What was the format used? (e.g., modeling lessons, observations with feedback)

Other additional information?

Do you need to enter information about an additional READING PD activity offered to your K-3 teachers?

- Yes
- No

Additional Reading PD activities

Please write the name of a second READING PD activity that has been offered to K-3 grade teachers at your school any time after June 1, 2012.

Professional Development in Florida's Rural Schools

Do you have anything else to say about reading PD in your school?

Do you have anything else to say about reading PD in Florida's RURAL schools?

THANK YOU!

Thank you for completing this survey for Florida's rural elementary school principals regarding professional development for your teachers who work with beginning readers. Your information will be used in this study only and will remain confidential.

If you have ANY questions, comments, or concerns, please feel free to contact me at [REDACTED]

I would appreciate the opportunity to communicate personally with you regarding strengths and weaknesses of professional development activities offered to rural schools across Florida. You are under NO OBLIGATION, but if I may contact you for a confidential phone interview or to conduct a confidential face-to-face meeting, please provide your name, phone number, and a convenient time to reach you in the box below. Your input is valuable!

**Susan Hodges Helvenston
University of Florida Doctoral Candidate
College of Education**

APPENDIX C
INSTITUTIONAL REVIEW BOARD APPROVAL



PO Box 112250
Gainesville, FL 32611-2250
352-392-0433 (Phone)
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irb2@ufl.edu

April 4, 2013

TO: Susan Helvenston

FROM: 
ira S. Fischer, PhD; Chair 
University of Florida
Institutional Review Board 02

SUBJECT: **Exemption of Protocol #2013-U-0380**
Professional Development for Teachers of Beginning Readers in Florida's Rural Schools

SPONSOR: None

Your protocol submission has been reviewed by the IRB. Based on the review, the Board determined that your study is not-human subjects' research and is exempt in accordance with the following:

45 CFR 46.102 of the Federal Regulations states that human subject is a living individual about whom an investigator (whether professional or student) conducting research obtains: (1) data through intervention or interaction with the individual; or (2) identifiable private information.

Should the nature of your study change or if you need to revise this protocol in any manner, please contact this office before implementing the changes.

IF:dl

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BIOGRAPHICAL SKETCH

Susan S. Helvenston is a native Floridian, born in Gainesville in 1959 and grew up in Live Oak, Florida. She is the youngest of six children. Her parents believed very strongly in the importance of a good education. After graduating Suwannee High School with honors, she followed her childhood dream of being a dance instructor. She owned and operated several studios and taught ballet for more than 10 years. Susan worked with children, shared the benefits of dance, helped to improve physical movement skills, while at the same time building students' self esteem. It was a labor of love. When her oldest daughter (age 5 at that time) went off to kindergarten, Susan marveled as her daughter became a "reader". She was so moved by her daughters' growth in the reading process, Susan was convinced that being a teacher had to be the most important occupation in the world.

Susan received her bachelor's degree in elementary education (Summa Cum Laude) from St. Leo College in 1994. She was hired at Cedar Key School in Levy county and taught first grade for 15 years. Her desire to extend her knowledge in teaching led her to obtain her master's degree in special education from the the University of Florida in 2004. She used her experience and philosophy of movement and music to help teach reading to young students.

Susan took on the challenge of becoming a National Board Certified Teacher in 2000. It was a lengthy, rigorous, and difficult process but was awarded the Early Education Generalist Certification in 2001. She mentored teachers in that process for eight years following her acceptance. It was that process of mentoring other teachers that made her realize how much she enjoyed working with educators helping to improve the academic lives of children.

In October of 2003, Susan was awarded a National Fulbright Memorial Scholarship. With the support of Levy county's school board, she participated in sharing best educational practices at many educational levels in Japan that year. Susan collaborated with Japanese student teachers, contracted teachers, administrators, and elected officials in Omara City, Nagasaki, Japan. It was an experience that would help shape her future. Susan reflected on her own educational philosophy and realized teachers have much to learn from their foreign counterparts. In 2008, Susan spent a summer at the University of Ireland in Galway studying comparisons in educational law and policies, which gave unique insights on how different countries around the world use their resources to reach common educational goals.

Susan's quest for higher knowledge led her to seek a doctoral degree with the University of Florida's Department of Special Education, School Psychology, and Early Childhood Studies. Her first semester in the fall of 2009, quickly convinced her that this would be another difficult challenge, but would be well worth the time and effort.

Susan S. Helvenston's goal in pursuing a doctoral degree is to become an effective resource for in-service teacher education and perhaps in preparing pre-service teachers in the areas of literacy, emergent reading and the prevention of potential challenges for students with mild disabilities. She loved teaching in the classroom but believes she can offer a greater opportunity to impact students' lives by training educators.