Creating Meaning from Collaboration to Implement RtI for At-risk Students

Submitted by

Julia Ann Diakakis

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ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

GRAND CANYON UNIVERSITY

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by

Julia Ann Diakakis

has been approved

April 29, 2014

APPROVED:

Erich W. Randall, Ph.D., Dissertation Chair

Marjaneh K. Gilpatrick, Ed.D., Committee Member

Daniel J. Smith, Ph.D., Committee Member

ACCEPTED AND SIGNED:

Henry T. Radda, Ph.D.
Dean, College of Doctoral Studies

4/29/14
Date

Abstract

The purpose of this qualitative exploratory case study based on Danielson's (2002) assertion that when teachers learn, student achievement improves was to examine how teachers created a collaborative learning experience through Professional Learning Community (PLC) concepts to implement Response to Intervention (RtI) with at-risk students. The setting was a combination junior and senior high school. Eighth grade teachers, an RtI trained guidance counselor, and a reading instructor provided the sample for the study. Reading assessment scores of lowest 25% eighth grade students provided the data for participants. This study is significant due to the need for research on shared accountability and collaboration initiatives to increase student achievement. The following research questions guided the study: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? and How does PLC collaboration on RtI implementation help teachers learn? Based on data analysis and results from journals, Concerns Based Adoption Model instrument, interviews, and researcher journal, participants constructed meaning from experiences and shared knowledge through collaboration to learn RtI implementation. The findings of this study supported and expanded research on teacher learning through collaboration and the value of PLCs along with growth in student achievement resulting from RtI implementation.

Keywords: Professional Learning Communities, Response to Intervention, Middle School, Interdisciplinary Collaboration, Teacher Learning, Student Achievement, Differentiated Instruction, Qualitative Methodology, Exploratory Case Study

Dedication

"*Knowledge is pleasant to your soul . . .* " (Proverbs, 2:10)

I dedicate this dissertation to my husband, Saki, who has been my support, strength, and motivation to pursue a doctoral degree. I know that this journey has not been easy, and no words can express my gratitude for all you have endured and for your never-ending patience throughout the entirety of the doctoral process. Your belief in my abilities when I felt discouraged pulled me through countless moments of frustration in the iterative practice of the dissertation journey. To say "thank you" seems trivial in light of all the dedication you have provided me. My gratitude is endless, as is my love.

I also owe much to my beautiful daughter who has provided me with direction and resolve to pursue higher education. Always remember dear Loula, knowledge is power and to that end, I hope I have set an example for you. Education is something you do for yourself that stays with you permanently. Use education to grow in knowledge. Always believe in yourself to pursue dreams and realize potential with determination and faith—especially in the face of the challenges and the trials of life. Challenges and trials are great opportunities to grow in spirit.

I would be remiss not to include my family in my dedication. Without them, I would not be who I am. Truly, my parents, sister, and brother have shaped me and have provided the means to pursue my dreams. Thank you for providing a loving family full of multiple opportunities and a wealth of experience. Also, thank you for believing in me. My parents were my first teachers and their lessons are present every day of my life.

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Chapter 1: Introduction to the Study

Perhaps the words of Franklin D. Roosevelt in his 1936 address at Little Rock, Arkansas, gave meaning to the pursuit of education for all students: "We know that equality of individual ability has never existed and never will, but we do insist that equality of opportunity still must be sought" (The American Presidency Project, 1999-2012, para. 28). Finding a method to reach individual students is a daunting and all too often unrealistic goal for teachers. Educators tasked with providing equal opportunities to all students regardless of aptitude and ability may find support through professional collaboration. As posited in Basham, Israel, Graden, Poth, and Winston (2010), the expectation for educators is to provide relevant learning opportunities for students of all levels regardless of specific learning needs.

The guiding research questions for this research study centered on understanding the construct of meaning teachers created from Professional Learning Community (PLC) participation and collaboration to implement Response to Intervention (RtI) with the intent of increasing student achievement for at-risk students, and how did the PLC collaboration help teachers learn to implement RtI for at-risk students. Data collected from study participants indicated that teachers' collaborative work could result in effective RtI implementation in which at-risk students could learn at higher levels. The theoretical background was that teacher learning provided the means for student growth. The study construct was to reflect primarily on Danielson's (2002) work concerning classroom environment and management as the foundations of learning for educators and students. The work of DuFour, DuFour, Eaker, and Many (2010), about PLCs within

educational organizations established supplementary knowledge for the current study research and iterates well with Danielson.

Due to departmentalization of curriculum at the study site, implementing PLC collaboration within the middle school environment presented many challenges as well as growth opportunities for teachers engaging in knowledge sharing. Equally challenging for teachers was the task of intervention strategies in interdisciplinary classrooms. Using eighth grade teachers and students, the purpose of the research data collection was to identify connections between teacher learning and student growth. Next, the research aim was to address the ongoing challenge of increasing learning gains among the lowest 25% in reading. Finally, but of equal importance was a newly adopted instructional appraisal system. One of the domains within the appraisal system rated teachers on mutual accountability and collaboration related to student achievement.

Increasing learning gains in reading raises many questions related to instructional methods and delivery. The question with regard to executing intervention strategies in core curriculum rests with teacher capacity for learning and the effect on student outcomes. The objective of this qualitative exploratory case study was to confront teacher learning through collaboration and the use of intervention strategies aimed at the lowest 25% in reading. An additional objective was the teacher appraisal domain related to mutual accountability and collaboration. The study participants derived from eighth grade teachers who shared the same students. Through interdisciplinary, interdepartmental collaboration and the adoption of RtI to address the lowest 25% in reading, the data collection concentration was how teacher collaboration affected learning RtI and how these could affect student growth in reading. Teacher collaboration meetings were

documented to track student achievement. Teacher learning through collaboration was measured qualitatively through participant interviews, researcher observations, and teacher journals.

Concerning reading, students at-risk in reading were identified through the Florida Comprehensive Assessment Test (FCAT) given yearly. Teacher learning linked to student achievement maintained value due to a newly adopted appraisal instrument that holds teachers accountable for collaboration and shared accountability. Through the development of interdisciplinary teams, the need of shared students becomes a central focus, thus encouraging shared accountability and collaboration (DuFour & Eaker, 1998). This study is important to educators due to the continuing need to provide equitable learning opportunities based on specific needs for all students. Another issue of grave importance is achieving learning gains for students in the lowest 25%. Importance in achieving learning gains due to requirements for annual progress is outlined in the 2001 No Child Left Behind (NCLB) Act of Congress. Data collected from study participants indicated that effective collaboration in an RtI environment could help improve achievement for at-risk students in the lowest 25%. This study provides value to middle school educators adopting the PLC culture with a combined interdisciplinary intervention network targeted to student achievement. In addition, based on the literature, the willingness of teachers and organizational design to integrate intervention strategies with core content curriculum remains unknown.

Prior to the study, intervention strategies to address the needs of students in the lowest 25% at the study site were taught in intensive reading classes by a teacher specialized for reading instruction. Prior research suggests that intervention strategies for

reading take place in settings designed specifically for struggling readers (Buffum, Mattos, & Weber, 2010). The research of Buffum et al. (2010) aligns to the previous means of addressing interventions within the intensive reading classes rather than through interdisciplinary instruction in core content classrooms. Additionally, school guidance counselors typically interact with reading specialists to implement interventions and to place students in appropriate settings. The study of core content teachers learning to implement intervention strategies through interdisciplinary, interdepartmental efforts and targeted collaboration fills the gap in literature. The use of PLC collaboration to construct meaning for eighth grade teachers implementing RtI for at-risk students as stated in DuFour, Eaker, and DuFour (2005), presents positive effects for teachers making marked differences in the success of students.

The remainder of the chapter provides the background of the study to explain the research focus and the history of the research focus. The problem statement and the purpose of the study state the problem surrounding the research and reflection of how the study addresses the problem statement. The rationale for methodology identifies the research design and study population. Advancement in scientific knowledge discusses how the research contributes to the current body of knowledge. The research questions describe the focus of the study phenomenon. The significance of this study provides implications of potential results. The research design is discussed in the nature of the study. The definition of terms provides definitions for understanding terms used within the study. The culmination of chapter one is the assumptions, limitations, and delimitations along with the summary and organization of the remainder of the study.

Background of the Study

The passing of NCLB in 2001 initiated educational reforms throughout the country on a large scale unlike any other reform in education, and as such created changes in governance within school districts nationwide. NCLB increased standards in public education designed to ensure successful global competition (Bushaw & Gallup, 2008). While successful in increasing standards in education, Riley and Coleman (2011) stated that NCLB presents many lessons left to learn regarding the foundations or driving forces in the future of educational organizations. With this thought comes the notion of ensuring policy makers understand fully the need for more effective means of data collection and better efforts toward educational investments (Riley & Coleman, 2011). PLC collaboration among teachers to address student needs may allow effective means of data collection along with opportunities to add value to standards in education (DuFour, Eaker, & DuFour, 2005).

High stakes testing and school rating systems resulting from NCLB brings about challenges for schools related to the need to increase student achievement. Also critical is the need for raising student achievement due to increasing demands for teacher accountability. In answer to the increased accountability placed on teachers to raise standardized test scores, the American Federation of Teachers (AFT) in 2002 developed recommendations to address high stakes testing and teacher accountability. Among the recommendations provided by the AFT (2002) is a resolution on standards-based assessment and accountability that supports the use of data-informed decision-making and collaboration among teachers to determine interventions for struggling students.

Buckley-Boyle (2013) stated the need for collegial conversations and the ability to collaborate tied to accountability as a component of the teacher evaluation system.

Finding methods to meet these challenges set the stage for continued research in professional development for teachers and strategies designed to address learning gaps among students. One of the reported trends is to utilize PLC collaboration among teachers of shared students (DuFour & Eaker, 1998). Another consideration is the use of RtI in the core content areas delivered through differentiated and targeted instruction (DuFour, DuFour, Eaker, & Many, 2010). RtI is a multi-tiered approach to targeted instruction based on student needs (Dunn, 2010).

The PLC culture may provide the diversity and multifaceted approach for successful RtI strategies. The middle school structure could benefit from the shared values and the nature of collaboration inherent in PLC culture. Johnson and Smith (2011) suggested the use of RtI in the middle school setting as the means for instructional staff to recognize the combination of issues surrounding struggling students requiring interventions. District goals affecting the study site surrounding the establishment of PLC culture in schools, along with the use of RtI as a newly adopted intervention strategy for data-informed instruction established the research model for teacher learning and student growth.

Additionally, a newly adopted teacher appraisal instrument in the district of the study site combined collaboration and shared accountability, which brought further credence to the present study. The appraisal instrument provided the development of an opportunity for teachers learning to collaborate and the use of multiple data sources to address the needs of individual students. At the study site, the establishment of PLCs and

the use of RtI among teachers provided the opportunity to address collaboration and shared accountability. The implementation of RtI was new to core content teachers in the middle school environment at the study site.

Educational research on middle school students indicates at-risk factors in students struggling in the subjects of reading and math (Bowers, 2010; Mohammed, Swanson, Roberts, Vaughn, Klingner, & Boardman, 2010). At-risk factors are predominant among eighth grade students (Bowers, 2010; Mohammed et al., 2010). As mentioned in Neild and Balfanz (2006), these students often drop out due to disengagement and inability to succeed due to deficiencies in learning opportunities. Increased opportunities in reading based on RtI strategies may fill this gap and provide remedies to deficiencies in learning. A two-year case study based on middle school students struggling with reading comprehension completed by Mohammed et al. (2010) sought statistical correlations among collaborative instruction, teacher learning, and the prospects of RtI to enhance reading comprehension. Mohammed et al. stated that there is relevance to studying middle school teachers, teacher learning, collaboration, RtI strategies in interdisciplinary content, and the effect on student achievement.

Teachers adapting to PLC collaboration and learning to use RtI for reading along with students in the lowest 25% in reading were affected by the research focus. According to DuFour, DuFour, Eaker, and Many (2010), four pillars lay the foundation for effective PLC environments: mission, vision, values, and goals, shared among school stakeholders. Along with the four pillars, and equally important to effective PLC environments are collaborative teamwork, teacher capacity, leadership capacity, and professional development (DuFour, DuFour, Eaker, & Many, 2010). PLC pillars

surrounding shared values and goals may set the stage for an active learning organization where interdisciplinary teachers address the needs of struggling readers within a collaborative setting. Once the lowest 25% are identified, RtI strategies and data for students can provide a starting point in establishing the values and goals of a collaborative team. For the study, a collaborative team consisted of eight interdisciplinary teachers. The team was defined through interdepartmental eighth grade teachers sharing the same students. Also included in the collaborative team were a school guidance counselor trained in RtI and a middle school Intensive Reading (IR) instructor.

DuFour, DuFour, Eaker, and Karhanek (2010) addressed the effective use of PLC collaboration with RtI implementation. The alignment of shared values and goals symptomatic of PLCs may add to the effective implementation of RtI in the middle school environment. The departmentalization of middle school environments in content curricula could find support to implement RtI strategies through PLC collaboration teams focused on shared students. Therefore, further studies about the implementation of PLC culture and teacher collaboration as a means to increase student performance and teacher learning may add applicability for middle school educators. In daily planning and collaboration, the use of formative and summative assessments integrated with a tiered approach for intervention allows research-based instructional decision-making in core academic content areas (DuFour, DuFour, Eaker, & Karhanek, 2010).

The Mohammed et al. (2010) case study provided primary relevance to the study of teacher collaboration and growth with student achievement due to the long-term research spanning a two-year period. The quasi-experimental study done in the natural setting of the middle school environment appeared to expand evidence of collaborative

strategic reading (CSR) as an effective intervention for students struggling in reading. According to Mohammed et al., interventions done through CSR showed student gains in reading comprehension.

Rather than using classroom teachers to conduct the CSR interventions, Mohammed et al. (2010) used a collaborative research team to instruct struggling students. Based on the use of outside instructors rather than classroom teachers assigned to the students involved in the study, there is possible lack of sufficient evidence in teacher collaboration and growth with student achievement. In the past, guidance counselors trained in RtI along with exceptional education teachers addressed the needs of the lowest 25% at the study site. Pullout programs in which students in the lowest 25% would leave the classroom, or would have a specialized course, were the primary methods of individualized instruction where differentiated strategies focused on primary indicators. Core content teachers had minimal contact with differentiated instruction and generally focused on the content only. The idea to integrate RtI and differentiation with content area instruction was innovative for middle school content teachers at the study site and was addressed through teacher collaboration.

Problem Statement

It was not known how eighth grade teachers constructed meaning from PLC participation to implement RtI in a collaborative environment with the purpose of improving student achievement among at-risk students at the study site. Shared accountability and collaboration drove the need for core content RtI implementation. In an effort to increase the reading achievement among students in the lowest 25%,

interdisciplinary, interdepartmental teachers worked as a collaborative team to differentiate instruction and provide interventions.

To focus on the problem the study presented the use of teacher collaboration to learn how to integrate RtI in content areas and the effect of teacher learning of RtI on student achievement in reading. Due to NCLB school grading, there is a requirement to increase the reading achievement of students in the lowest 25%. As a result, there seemed to be a need for more research to determine the effectiveness of interdisciplinary collaboration on teacher learning and student growth among eighth grade students. Through the study of teacher experiences tied to collaborative learning and data from student assessment scores, a more comprehensive understanding of the value of PLC collaboration and RtI was expected. The results of this study could provide school administrators, eighth grade teachers, and school stakeholders the additional guidelines to enhancing PLC collaboration along with sharing successes and pitfalls to integrating RtI to content areas. Best practices for ensuring student success also remained a primary reason to solve the problem of student achievement gaps.

Purpose of the Study

The purpose of this qualitative exploratory case study was to explore how teachers created meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement and how PLC collaboration on RtI implementation helped teachers learn. The use of PLCs to work collaboratively for implementation of RtI to improve reading was new to the study site. Targeting improvements in reading among shared students identified as at-risk in the lowest 25% reading was also new to the study site.

The motivation of this qualitative exploratory case study revolved around the connection with eighth grade core content teachers learning to implement RtI strategies. Teacher learning focused on collaborative sharing of student data and shared experiences related to student achievement in reading. Previously, these core content teachers functioned autonomously in the realm of content curriculum. Interdisciplinary instruction of reading, use of RtI comprised differentiated strategies, and the respective delivery methods aligned to the curriculum provided teachers a basis for knowledge sharing and data-informed decision-making.

The shared goal among the collaborative teacher group was to target students in the lowest 25% in reading using their seventh grade FCAT scores as the initial reference point. Another, yet secondary, consideration in this study was the collaboration and shared accountability component of the district's new teacher appraisal instrument. Teachers wishing to obtain higher ratings on the appraisal instrument needed to adjust to shared accountability regardless of the content area. The eighth grade teachers and students of this study came from an east central Florida community junior and senior high school that has a predominantly Caucasian population. To protect the identity of participants the researcher agreed not to use the name of the school used in the study.

Collective objectives addressing student achievement raises possibilities for reflective practices among teachers to enhance student performance and provide increased learning opportunities. Student success is perhaps the predominant target determining achievement within the school environment, and as stated by Lezotte (2002), "The staff in the effective school accepts responsibility for the students' learning of the essential curricular goals" (p. 4). Collaborative and reflective practices may relate

directly to professional growth and teacher learning while seeking to address instructional concerns (Lezotte, 2002). Based on study results the benefits of collaborative and reflective practices was especially true when addressing the needs of students performing in the lowest 25%.

Reading scores are often an area in critical need, and among middle school students, these needs may become amplified because of the increase in academic rigor (Florida Department of Education, n.d.). Eighth grade students may face uncertainty when reading comprehension presents an ongoing struggle. The effect of poor reading comprehension skills resounds throughout the core academic subjects of math, English, science, and history (MESH) and students in the lower 25% in reading may find independent study daunting.

A PLC model was implemented among the eighth grade teachers and meeting dates for collaboration were instituted. The eighth grade student population was the lowest 25% in reading. Professional development took place for structured and focused RtI strategies and the use of these strategies in interdisciplinary curriculum within the PLC environment. Teachers were guided to use reflective practices through meeting notes and teacher journals. Additionally, the use of student data in reading to differentiate instruction was addressed and implemented in areas with no prior evidence. The students in the lowest 25% in reading were a concern for the school and previous methods had not addressed the use of interdisciplinary teachers, RtI, or PLC collaboration to intervene and provide increased learning opportunities.

Rationale for Methodology

A qualitative exploratory case study was the best research design based on Greene (2008), who suggested a dynamic contribution concentrated on multiple views and approaches. The implementation of RtI within core content classrooms should provide dynamic experiences in teacher learning and student achievement based on the instructional delivery and the subject discipline. Multiple teacher views and approaches were likely to align with the content expertise and the corresponding instructional strategies of each teacher. These dynamic experiences in teacher learning allow the evaluation of no predesigned outcomes indicative of the nature of exploratory case study (Yin, 2003). The primary purpose of qualitative exploratory case study is to understand phenomenon from the participant's viewpoint (Merriam & Associates, 2002). Based on Merriam and Associates (2002), in which analysis of a single unit, in this case an interdepartmental team of teachers, in an institution determined furthered the use of qualitative exploratory case study.

As stated in Greene (2008), the potential for multilayered inquiry and purposeful expansion of possibilities related to addressing diversity and differences in comprehension furthered the cause for a qualitative exploratory case study. The qualitative methodology based on the social constructivist worldview seeking to understand individual experiences within a natural environment adds value to the study of human growth and experience (Creswell, 2009). This related to participant experiences in learning RtI and the use of collaboration to increase teacher learning and student achievement. The use of participant journals as a qualitative data source in the study sought to understand individual experiences.

As a qualitative exploratory case study, the researcher was the primary data collection tool through observation, interviews, and reading of participant journals (Merriam & Associates, 2002). Qualitative design through reflective journals, interviews, and researcher observation provided the construct of meaning and experiences among the team of eight middle school teachers, guidance counselor, and reading instructor as they adjusted to the PLC collaboration and RtI strategies. These qualitative data collection instruments allowed the researcher comprehensive insight related to the school setting and the use of RtI in core content subject areas. According to Creswell (2009), the social constructivist worldview found in qualitative research allows the study of interactive processes. A constructivist worldview allows open-ended questioning and understanding of participant settings and context (Creswell, 2009) which should provide individual experiences and relevancy based on the setting of the study.

Advancing Scientific Knowledge

Prior studies of teacher learning and student growth have addressed the possibility for improved student achievement and improvements in instructional design (Archer, 2010; Thompson, Gregg, & Niska, 2004) The combination of the PLC culture, specifically collaboration, and implementation of RtI with eighth grade students leaves room for additional research among existing literature (Strahan & Hedt, 2009). Qualitative studies seeking to understand teacher learning through implementation of collaboration and RtI with student growth in reading may offer new insight to the use of middle school teams in the study.

The belief that lifelong learning in teachers and shared accountability through interdependent decision-making provides increased opportunities for student achievement

as stated in Barth (2001) provided argument for the benefits of collaboration and data-informed instruction in middle school environments. The current study may provide direction to middle school teachers exploring reflective practices, data-informed decision-making, and implementation of intervention strategies through a teacher-designed model focused on shared accountability. The learning process of collaborating and sharing accountability began with previously autonomous teachers within the study site for a set of students struggling in reading. The collaborative focus on student achievement in reading established the study foundation. The knowledge teachers gained through the process of learning to use data collaboratively and learning to use RtI should add to the literature surrounding PLCs and RtI in middle schools. Additionally, the combined efforts of interdisciplinary core content teachers focused on learning gains for eighth grade students in the lowest 25% in reading should enhance the existing body of knowledge.

Research Questions

As a qualitative exploratory case study, the research was developed first to gain an understanding of how teachers constructed meaning from participation in PLCs to work collaboratively using RtI principles to improve student achievement for the lowest 25% of students. The second purpose behind the research was to understand how PLC collaboration aided in teacher learning of RtI implementation. The problem was that it was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI strategies in their classrooms to help students at-risk in reading achieve at higher levels. The purpose of this qualitative exploratory case study was to examine how teachers create meaning from participating in

PLCs to work collaboratively with at-risk students to improve student achievement. The following research questions guided this study:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

Understanding how shared accountability among interdisciplinary teacher teams affects teacher learning may add value to the establishment of PLC pillars. Additionally, understanding the potential for PLC collaboration to affect student growth may add relevance for teachers with regard to the time involved in collaboration and RtI implementation. Data-informed instruction through the differentiated strategies guided through RtI might allow teachers to intervene in core content areas. Due to an increase in shared accountability, implementing RtI in core content classes allows interdisciplinary teachers to take an active role where previously guidance counselors and reading teachers determined effective interventions for increased reading achievement.

Through qualitative data collection of PLC collaboration, the feasibility of addressing the research questions, "How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?" and "How does PLC collaboration on RtI implementation help teachers learn?" seemed conceivable. The goal was to provide educators with evidence of the construction of knowledge, or understanding, of how collaboration in an RtI environment could enhance student achievement. Using reading data of the lowest 25% eighth grade students,

interdisciplinary teacher teams targeted specific areas of concerns among shared students through RtI interventions.

Overall, the analysis of teacher understandings through patterning found in reflective journals, participant interviews, and researcher observations was expected to determine the effectiveness of collaboration and RtI effectiveness. Moreover, it was expected that an analysis of teacher understandings would provide opportunity to address the research questions: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? and How does PLC collaboration on RtI implementation help teachers learn?

Significance of the Study

The study was significant because it added to the value of collaboration and the use of RtI principles in core content areas to increase student achievement and increase learning gains. Marzano (2003) asserted that student learning and achievement linked to learning opportunities provided for students adds value to including RtI targeted strategies within the core content areas. As stated in DuFour, DuFour, Eaker, and Many (2010) past research focusing on the teaching of the curriculum should focus on increased learning opportunities for students within all curricula.

Schechter and Ganon (2012) identified that those teachers working in collaborative groups created strong interrelationships increasing opportunities to implement innovative initiatives. By eliminating the isolationism of individual classrooms at the study site, growth in collaboration and collegiality as a learning organization centered on teacher and student empowerment through knowledge

acquisition could advance. Knowledge acquisition and collaboration transpired through the inclusion of RtI strategies used to target struggling readers in core content areas.

From the area of shared accountability and collaboration on a new appraisal instrument, findings of this study may help teachers collaboratively assess student needs through progress monitoring and data-informed instruction in the area of reading. The exposure to other teachers' findings and possible constructive criticisms allows constant learning and professional development through improvement of mutual goals (Schechter & Ganon, 2012). The findings of this study could provide methods for integrating RtI strategies in the core content areas and increase teacher scores in the shared accountability and collaboration domain of the newly adopted instructional appraisal instrument. As noted in Buffum et al. (2010) overwhelming evidence is present to indicate that RtI is ideal in providing individual students the time and support needed for academic growth.

The significance of this study also related to the expectation that adopting PLC collaboration among teams of teachers may have a positive effect on student growth in reading. It was reasonable to expect that findings associating teacher learning with student growth through PLC implementation and use of RtI strategies perhaps add value to PLC culture and school-wide adoption of shared values and goals related to student achievement. As found in Bowers (2010), the disengagement of eighth grade students discussed in prior research was a crucial area of concern; disengagement may diminish through increased learning opportunities in core content classrooms.

The use of data-informed instruction to target individual student needs could prospectively affect the retention rate of this group of students to successfully complete

secondary school. Additionally, the possibility for increased success through intervention strategies and future achievement add to the significance of studying teacher learning and student growth (Johnson & Smith, 2011). Teachers' construction of meaning about the benefits of collaboration, knowledge sharing, and professional growth due to learning new strategies could deliver valuable data to educators of middle school students.

School leaders, teachers, and other school personnel may find value in this study based on the implementation of the PLC culture in the middle school environment. It appeared that the PLC culture could readily adapt to the middle school environment based on shared values and goals among teachers at the same grade level. PLCs occur readily among elementary teachers due to shared assessments already in place through curriculum models and shared planning time, which allows for collaboration and knowledge sharing. These considerations are often not collective in middle school environments.

Combining RtI strategies with PLC culture adds additional value to this study for all educators. The innovation and support possible for focused data-informed instruction through PLC collaboration might permit RtI strategies to take hold within the regular instructional model. Combining PLC collaboration with RtI may assist teachers and school leaders to address better the needs of those students in need of interventions.

For this study the specific problem of implementing RtI in an effort to increase student achievement and address shared accountability involved a team of eighth grade teachers, an RtI trained guidance counselor, and a reading instructor. The team was comprised of eight teachers, two from each of the core curriculum areas of MESH. There was no student contact by the researcher during the study period. The school setting was

a combined junior and senior high school in central Florida. Pseudonyms were used to protect the anonymity of all participants; the name of the school was not used in this study.

Reading is an area of focus throughout the educational process. As the springboard to student advancement throughout school years, and eventually life, concentration on this particular area may enable struggling readers to find strategies to aid in successful reading comprehension as well as increased achievement in all areas. It was likely that through increased opportunities for success in reading this study could add significant value to students. As noted in Bender and Waller (2011), through teacher learning via collaboration and intervention strategies driven by data, students enjoyed reading gains, had increased learning opportunities, and found instruction that fitted their individual needs.

Implications of the study if the results did not support the research questions varied. For example, the actual implementation of RtI and use of data-informed instruction may not be present in individual classrooms, thus showing no results. On the opposing side, students may also receive outside instruction, such as tutoring, which could skew the results and not relate to teacher learning. Teachers' understandings of collaboration, RtI, and learning gains in reading could differ significantly and provide inconclusive results. Some content areas may lend greater ease toward RtI implementation more than others may, which could add to results not supportive of the research questions.

Nature of the Study

The research method for the study was a qualitative design. The rationale for qualitative methodology derived from a desire to obtain a comprehensive understanding of the qualitative aspects of teacher learning through personal and collaborative experiences related to RtI and student learning. Creswell (2009) stated that qualitative design allows the maintaining of focus on participant learning or construction of meaning.

Qualitative research allows a natural setting in which participants construct meaning or address an issue over a period at the study site rather than in a lab setting (Creswell, 2009). As cited in Creswell (2009), multiple sources of data such as observations, interviews, or other documents define the data collection in qualitative research. Data collection in qualitative research allows the researcher to be the key instrument rather than reliance on survey instruments or questionnaires (Creswell, 2009).

The researcher collected qualitative data through interviews, teacher journals, and observations of PLC meetings. Coding of teacher journals, interviews, and observations was based on patterning and repetition of themes. Qualitatively, the study of teacher learning and reflections of the learning process added value to the implementation of the PLC culture, collaboration, and RtI to address the needs of students in the lowest 25% in reading.

Population and sample. A junior and senior high school in central Florida provided the sample of eighth grade teachers. The school name was never used to protect students and teachers and ensure anonymity for all involved. The school was in the

process of adopting a school-wide PLC culture; as a result, combining PLC culture with RtI implementation to increase reading scores was welcomed.

There were no existing data to create an understanding of the connection in teacher learning with student growth in the school at the time of the study. The school seemed to value the opportunity to establish PLC culture and teacher collaboration. Eighth grade teachers shared the same students, which provided opportunity for collaboration and RtI strategy implementation. Student reading growth is critical at this age and often predicts success in high school and at-risk for drop out (Archer, 2010).

Data collection. Researcher observations to track teacher learning and collaboration were recorded during PLC meeting attendance in a predesigned rating list similar, but with different observable traits to the Concerns-Based Adoption Model (CBAM) format used in the Rickey dissertation (2008). The generic statement format provided an unbiased observational tool. The categories used for pattern and theme coding were CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum. The analysis of these data was ongoing because of the cyclical, emergent nature of collection and outcomes with the modified CBAM instrument. The data collection period for this study was six weeks. Additional instrumentation included participant interviews and participant journals.

Definition of Terms

The following terms are relevant to the study. These terms are some frequently used terms within educational organizations and research. Throughout the study, the terms were used in the context of these definitions:

Collaborative teams. Teachers working interdependently with common values and goals to share knowledge and accountability (DuFour, DuFour, Eaker, & Many, 2010).

Concerns-based adoption model (CBAM). The CBAM is applicable when experiencing change among a group of people. Measurement of the evolution of levels of concern based on questioning and use of the experienced change is accomplished using the CBAM (Loucks, Newlove, & Hall, 1976).

Data-informed instruction. The use of student performance data to address problem areas and support instructional decision-making (Institute of Education Sciences (IES), 2009).

Differentiated instruction (DI). Tailoring instruction to meet the individual needs of all students (Tomlinson, Brimijoin, & Narvaez, 2008). Individualized instructional standards based on student achievement level meant to propel students forward (Levy, 2008).

Florida Assessments for Instruction in Reading (FAIR). FAIR is a standards-based assessment given three times a year to Florida students. The Florida Center for Reading Research (FCRR) (2009), defines FAIR as, ". . . assessment system provides teachers screening, diagnostic, and progress monitoring information that is essential to guiding instruction."

Florida Comprehensive Assessment Test (FCAT). The Florida standards-based assessment given to all students in grades 3-12. Students must pass the 10th grade FCAT as part of the graduation requirements. "The Florida Comprehensive Assessment Test, which measures student success with the Sunshine State Standards, will include assessments in mathematics (grade 10 and retake), science (grades 5, 8, and 11), and writing (grades 4, 8, and 10) in the 2010-2011 school year. Historically, in accordance with the Student Progression Planning Guide, the FCAT measured the Sunshine State Standards in reading and mathematics (grades 3-10), science (grades 5, 8, and 11), and writing (grades 4, 8, and 10)" (Florida Department of Education [FLDOE], n.d.).

Intensive reading (IR). IR is focused reading instruction for students scoring in the Level 1 and 2 ranges on FCAT Reading. Intensive Reading instruction is required for these students. The FLDOE 2011-2012 Student Progression Plan states, "For each year in which a student scores at Level 1 on FCAT Reading, the student must be enrolled in and complete an intensive reading course the following year. Placement of Level 2 readers in either an intensive reading course or a content area course in which reading strategies are delivered shall be determined by diagnosis of reading needs" (FLDOE, 2011).

Interdisciplinary teams. Interdependent team consisting of teachers from core academic content areas: math, English, science, and history (MESH). These teacher teams establish goals to promote the achievement of the common students shared throughout the disciplines (DuFour, DuFour, Eaker, & Many, 2010). In the circumstance of this study, the shared common students among the eighth grade interdisciplinary teacher teams afforded the overarching goal of achievement in reading.

Intervention strategies. Additional support and time for learning to ensure success of every student (DuFour, DuFour, Eaker, & Many, 2010). Intervention strategies were employed when difficulty was experienced in acquiring skills and knowledge essential to reading achievement. Intervention strategies should follow the criteria of systematic, practical, effective, essential, and directive (DuFour, DuFour, Eaker, & Many, 2010).

Middle school. Middle school typically includes grades five through eight or six through eight. Middle school is, as defined by abbreviations and definitions from FLDOE (n.d.), "A separately organized and administered school intermediate between elementary and senior high schools, which might also be called a middle school, usually includes Grades 7, 8, and 9; Grades 7 and 8; or Grades 6, 7, and 8". In central Florida, middle school typically consists of grades six, seven, and eight. In this study, eighth grade teachers and students were the focus.

Progress monitoring and reporting network (PMRN). PMRN is an online data base network for monitoring student progress on FAIR and other standards-based assessments. FCRR (2009) defines PMRN as, ". . . data management system hosted by the Florida Center for Reading Research." The reports generated by the PMRN can be used to plan reading instruction and to evaluate progress toward achieving Florida's goal of No Child Left Behind" (FLDOE, n.d.).

Professional learning community (PLC). PLC is a school culture based on four pillars where shared values and goals provide the driving force behind a learning organization based on collaboration and collegiality (DuFour, DuFour, Eaker, & Many, 2010).

Response to intervention (RtI). RtI is a three-tiered approach to providing strategies to address targeted areas and aid students to meet the core curriculum standards for their grade level (Dunn, 2010). "The purpose of RtI is to systematically provide every student with the additional time and support needed to learn at high levels" (Buffum et al., 2010, p. 14).

SMART goals. "Team goals that are Strategic specific, Measurable, Attainable, Results oriented, and Time bound" (Conzemius & O'Neill, 2001, pp. 89-90; DuFour, DuFour, Eaker, & Many, 2010, p. 178).

Assumptions, Limitations, and Delimitations

The following assumptions were present in this study:

1. It was assumed that participants in this study were not deceptive with their answers to interview questions, journal entries, and PLC collaboration participation. It was also assumed that teachers would find value from learning to use RtI in core content areas to address the needs of students in the 25% within the PLC collaborative groups, interview responses, and journal entries. The rationale for this assumption was based on a perceived collective desire for increased student achievement.
2. Based on the new teacher appraisal system component of shared accountability, it was assumed that this study would be an accurate representation of the present situation in central Florida of using core content to address the needs of students in the lowest 25% in reading. The rationale of this assumption was based on the use of middle school teachers implementing

RtI in an interdisciplinary collaborative team based on PLC foundations and the component of shared accountability on the teacher appraisal.

3. It was assumed that the findings of this study would provide professional development opportunities and potential transfer regarding areas of concern for teacher learning and student growth in the middle school environment. This assumption was grounded by the need for increased accountability through the new teacher appraisal system for student achievement.
4. It was assumed that the involved teachers would maintain fidelity in the instrumentation and monitoring of student growth. This assumption was based on the acceptance of the nature of this study and the willingness to participate through agreements.
5. It was assumed that the CBAM instrumentation used in this study would provide accuracy and understanding to the research. This assumption found relevance due to prior use of similar instruments in existing educational research.
6. It was assumed that study participants would provide accurate answers to interview questions through accurate recall of experiences, observations, and documentation of student data. This assumption derived from the use of agreements to participate in the study.
7. It was assumed that collaborative meeting guidelines would be followed with proper documentation of student data and intervention strategies to be implemented in all core content areas. Integrity of student data provided

relevance for this assumption through proper documentation and application of strategies and interventions.

The following limitations were present in this study:

1. The exploration of eighth grade middle school students was limited to only one combination junior and senior high school in one Florida county. Ideally, more than ten teachers should be included to provide a further representative sample. Accordingly, the findings of this study should be interpreted with caution.
2. Lack of sustained time limited the scope of this study. The study period was limited to 6 weeks.
3. Another limitation derived from the teachers. Active pursuit of learning to collaborate, use data for decision-making, and employment of intervention strategies varied among the teachers involved in this study.
4. The actual changes present in the process of teacher learning had inconsistencies based on individual teachers. As a result, the measure in teacher learning may not be accurate.
5. Teacher perceptions of learning varied, which is a potential limitation to the relationship of teacher learning to student growth through PLC collaboration.
6. Collaborative team members differed in implementation of strategies.
7. Student data presented a limitation due to variances in teacher instructional delivery.

8. Limitations occurred due to ineffective use of intervention strategies when core components of systematic, practical, effective, essential, and directive were not considered in method of instructional delivery.

The following are the delimitations present in this study:

1. The sample of teachers and students was from a small junior and senior combined high school.
2. The number in the teacher sample was small and consisted of core content eighth grade teachers, an RtI trained guidance counselor, and a reading instructor at the same school.
3. The standardized assessments derived from the Florida Department of Education.
4. The targeted, differentiated RtI instruction was based on FCAT reading results.

Generalizability of study findings were limited, but will provide the foundation for future studies to move beyond to include multiple schools, or multiple school districts. Future studies could obtain a more generalized sampling of teacher learning and student achievement in a professional learning community model to implement RtI for the lowest 25% in reading. Consequences to inability to generalize the study might relate back to the study sample as a barrier because only eighth grade core content teachers were used and FCAT data for student achievement provided the initial data source for teachers.

The school setting used in the study provided additional consequences to the ability to generalize due to the school structure as a junior and senior high school, thus

preventing future studies reenacting the setting and sampling to obtain a similar set of results. Using different grade levels, larger samples, and other state assessments might create circumstances where generalizability is difficult. However, as an exploratory case study, the use of teachers at the same school was justified due to the involvement of a close examination of a group of teachers at one school (Hays, 2004). Additional justification derived from Hays (2004), is the time bound snapshot of a set period indicative of case study research. This time bound snapshot is difficult to recapture (Hays, 2004).

Summary and Organization of the Remainder of the Study

The study of teacher learning and student growth through PLC collaboration and RtI strategies provided key indicators of processes involved and the effect on reading scores for the lowest 25% of eighth grade students. The study is divided into five chapters. The research questions provided the framework for the study and overall structure for all chapters. Chapter 1 introduced the study with the identification of the problem. It was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI strategies in their classrooms to help students at-risk in reading achieve at higher levels.

A brief narrative of a literature review as suggested in Creswell (2009) that suggested a need for further research was discussed. Key points of chapter 1 included the nature and background of the study, along with the problem statement and purpose for the study (Creswell, 2009). Chapter 1 included the rationale for choosing qualitative exploratory case study methodology, how the nature of study could advance scientific knowledge, and the study significance. Definition of terms used in the study provides

knowledge to the general reader. Assumptions, limitations, and delimitations are included within chapter 1 ending with possible generalizability barriers related to the study.

Chapter 2 is the literature review of this study, which addresses the research on teacher learning and student growth. Emphasis focuses on the importance and critical nature of the eighth grade student at -risk for drop out. A review of the culture and necessary components of PLCs also required a review of literature, along with the structure of RtI, differentiation of instruction, and reading comprehension. Chapter 2 is broken into three themes: PLCs, RtI, and Reading Comprehension. Subthemes within each category targeted middle school and collaboration.

The purpose of chapter 3 is to provide the methodology used in this study with considerations for data collection methods, instrumentation used, and methods for data analysis. Validity and reliability of each qualitative instrument are presented. Additionally, the choice and use of data analysis methods are detailed.

The purpose of chapter 4 is to provide the data collection and analysis of the study. The purpose of chapter 5 is to provide the summary, conclusion, and further recommendations of the study.

Chapter 2: Literature Review

The purpose of the literature review is to clarify the theoretical foundations and the justification for the study related to teacher learning and student achievement. The role of this literature review is to comprehend the relationship that PLC collaboration could have about implementing RtI in core content areas with the intent of raising reading scores of the lowest 25% among eighth grade students. The purpose of this qualitative exploratory case study was to understand how teachers created meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement. The general problem statement was that it was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI strategies in their classrooms to help students at-risk in reading achieve at higher levels. The specific problem of implementing RtI in an effort to increase student achievement and address shared accountability involved a team of eighth grade teachers, an RtI trained guidance counselor, and a reading instructor. Eighth grade students scoring in the lowest 25% in FCAT reading provided the team the necessary data for RtI implementation.

The literature review serves the purpose of analysis of prior research that is relevant to the study concerning student achievement in reading within the middle school environment. Furthermore, the literature review communicates the use of PLC collaboration and RtI methods, or techniques, to improve middle school student reading levels. The structure of the literature review contains three themes: Professional Learning Communities, Response to Intervention, and Reading Comprehension. The running thread within each category surrounded middle school environments.

Key words provided the initial search of literature within peer reviewed journals and books related to the topics. Known experts in education wrote the books studied for the review. Computerized databases such as ERIC, PsycINFO, ProQuest, Academic Premier, and Google Scholar provided many of the peer reviewed articles and journals.

Background

Perhaps public education, citizens, and politics may intertwine to create one of the largest impacts on American society. According to Moe (2009), the American government has placed public education as a top priority but there are no answers regarding why many American schools appear ineffective and partially incapable of successfully promoting academic achievement. The creators of the No Child Left Behind (NCLB) Act of Congress in 2001 hoped to increase standards in public education while also ensuring successful global competition (Bushaw & Gallup, 2008).

While successfully increasing standards in education, Riley and Coleman (2011) stated that NCLB standards present many lessons left to learn as foundations or driving forces in the future of educational organizations. Some of these lessons revolve around addressing the needs of students flagged as struggling readers through effective data-informed instruction and intervention strategies. In an effort to address the needs of students, the work of Danielson (2002) adds value based on the concept of increased student growth when teachers learn from each other in collaboration and professional development. Danielson's theory that students show little or no increase in achievement when teachers are not engaged in professional development that is directed at knowledge acquisition adds relevance to the need for teacher learning. Precisely, it is the initiative

for teachers to learn effective methods of data-informed instruction and intervention strategies incorporated within the core content classrooms to increase student growth.

Shortcomings of NCLB may persuade educators to explore the value of whole learning organizations steeped in knowledge sharing indicative of PLCs. Redundancy of knowledge through knowledge sharing is important to learning organizations because dialogue among teams promotes and creates commonality in information shared, or assimilated (Jensen, 2005). Through dialogue, new perspectives may add to the growth of innovation and creation of new knowledge. Continual discourse and sharing of knowledge in an educational organization may also provide methods for stakeholders to address problems, or situations that may arise in nurturing student achievement.

The PLC practices of collaboration and collegiality centered on shared values and goals may encourage learning and knowledge sharing. Levine and Marcus (2007) affirmed the essential component of collective discourse and learning in aiding teachers in identifying areas of inefficiencies and inadequacies with regard to promoting student growth. Levine and Marcus theorized the benefits of teacher collaboration on teacher learning and closing the achievement gaps in students. Literature studied about PLCs in schools and teacher collaboration allows insight into gaps in research related to the qualitative central phenomenon of teacher learning and student growth.

Student achievement goals rank number one in educational accountability bringing about a heightened awareness of internal accountability over external accountability (Elmore & Fuhrman, 2001). Elmore and Fuhrman (2001) declared the sharing of common values within individual school cultures as the predominant reason for internal accountability taking precedence over external accountability. A factor of

consideration derives from responses from external controls as a springboard for significant changes in existing instructional methods (Elmore & Fuhrman, 2001). Ultimately, educational organizations seem driven by legislative acts on federal and state levels. According to Moos (2005), educational organizations perceived as key cultural and social institutions are accountable to management, social, political, public, professional, and moral expectations, or standards.

Existing literature about the topics of PLC collaboration, RtI, and reading achievement linked to academic success provide the foundation for exploration and evaluation. Within the exploration of literature on PLCs, focus is on the middle school environment and teacher collaboration. Existing literature on knowledge sharing and learning organizations add to the body of knowledge on PLCs. The exploration and evaluation of RtI literature focuses on the middle school environment, data-informed instruction, and interdisciplinary collaboration. Literature about reading and the link to academic achievement centers on the at-risk for graduation related to the middle school student along with the importance of reading comprehension toward a workforce ready population.

Several states have adopted revised instruments for teacher performance appraisals to address internal and external accountability for student achievement. Perkins-Gough and Jacobs (2003) stated that regardless changes or refinements in education, cross-disciplinary literacy enables students to do better overall; as a result, internal and external performance levels will increase. The revised, newly adopted Florida teacher performance appraisal links Florida Educator Accomplished Practices (FEAPs) with the work of Marzano and Danielson (FLDOE, 2012). Teacher performance

appraisals revised to include intervention strategies, teacher professional growth, and collaborative team building to enhance student performance has become reality in a central Florida school district. Due to these changes in performance appraisals, teachers tasked with professional growth planning, collaboration and mutual accountability components, linked to student achievement, provides an ideal opportunity to study teacher learning related to PLC collaboration and student growth.

Instructional staff involved in the PLC practices of collaboration, collegiality, and resulting knowledge sharing may provide students struggling in critical academic areas, such as reading, increased learning opportunities. Within the increased opportunities, RtI as a collaborative effort may also provide differentiated instruction based on individual needs. Is it possible that a teacher learning to implement RtI within a PLC collaborative team as a key component to a new evaluation system could effectively minimize the gap for eighth grade students struggling in reading? Another consideration rests with the Common Core State Standards (CCSS) initiative. Through CCSS and increased emphasis on literacy, and integration of CCSS in content areas, there seems to be an expected increase in teacher collaboration among core content teachers (Morgan et al., 2013).

In a longitudinal study performed on grades and graduation rates, Bowers (2010) showed that the middle school grades are critical in identifying students at-risk for drop out. Grades 8 and 11 present the most vulnerable years for drop out due to grade retention and inability to graduate on time (Bowers, 2010). In Florida, the student progression guide states that eighth grade students must pass the FCAT Reading and Math at a Level 2 or above to receive promotion to ninth grade (FLDOE, n.d.). In determining promotion to ninth grade, which is high school, eighth grade reading and math scores data are

potentially critical to effective instruction. Bowers found that 4.4% of eighth grade students studied dropped out due to retention, or inability to survive and effectively function within the school experience.

According to Bottoms (2006), 45% of students entering ninth grade felt unprepared for high school studies. Low commitment levels to education and school seem to relate often with lower levels of academic achievement and retention in one or more grade levels. Students with low grade point averages (GPA) and a history of below passing grades show higher levels of disengagement in school (Janosz, Le Blanc, Boulerice, & Tremblay, 2000). Students struggling in eighth grade may quickly fall into the low GPA category due to unpreparedness for increased rigor of ninth grade and high school. Additionally, the requirements for graduation brought about a greater risk to continue to the middle school student struggling in key academic areas. An example of this is that high school sophomores with a GPA lower than 1.6 remain more inclined to drop out due to academic difficulties and poor test scores (Institute of Education Sciences (IES), 2009). Retention of middle school students and finding additional means of addressing the needs of those struggling academically propel the investigation of possibilities surrounding intervention, data-informed instruction, and teacher collaboration.

Achieve, Inc. (2006) cited poor academic progress due to student struggles with instructional methodology and curricula, along with low assessment scores, low grades, and falling behind in credits, as indicators often precipitating the decision to drop out of school for many at-risk students. In a recent survey, 76% of students considering dropping out of school stated that school was not interesting, while 42% stated that they

felt they were not learning enough to justify staying in school (Achieve, Inc., 2006). These findings seem to corroborate with statistical numbers of students who drop out of school. In another data study from a federal research project, 51% of students who made the decision to drop out of school did so due to dislike of the school environment (Achieve, Inc., 2006). The same findings from Achieve, Inc. found that 44% of students made the decision to drop out based on failing grades or the inability to catch up in grade level in order to graduate on time.

According to McCall (2003), individualized instruction may provide the necessary assistance in academic achievement. Test scores, classroom grades, and other signifiers often signal the need for intervention (McCall, 2003). The earlier the intervention occurs, the likelihood of recovering student engagement increases (McCall, 2003). Literature centered on the integration of collaboration and RtI to increase eighth grade reading learning gains among the lowest 25% is limited. Literature on RtI implementation by interdisciplinary teams to address reading achievement among eighth grade students is limited. Another limitation in the literature appears to be the use of interdisciplinary collaboration to learn how to implement RtI strategies in core content areas. Implementing RtI requires the use of data-informed decision-making, which implicates collaboration among colleagues as a significant factor for success (Harlacher & Siler, 2011).

As a basis for this study, the gap in existing literature on PLC collaboration and RtI implementation in eighth grade core content areas provided applicability for additional investigation to the present body of research. Creswell (2009) stated that gaps in literature may derive from past research deficiencies or lack of evidence within topics

of study. These deficiencies may signify a need for further exploration (Creswell, 2009). The review of literature indicated that the use of teacher collaboration and RtI implementation is a common practice in elementary instructional delivery but is minimal to nonexistent in secondary disciplines. The problem the research addressed was that it was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI in their classrooms to help students at-risk in reading achieve at higher levels. The research centered on the apparent increase in at-risk for drop out among eighth grade students, which provided further argument to the need for further study.

Theoretical Foundations

The theoretical foundation of this study finds application based on Danielson's claim that when teachers learn, students show growth in achievement. Initially a researcher living in Washington D.C., Danielson became an educator because of concerns for students living in her neighborhood where schools struggled to provide for all students (Danielson, 1996). Danielson (2002) addressed the relationship between teacher learning with student achievement through the idea that students would not have increased opportunity to learn when teachers were not also advancing in knowledge and skills. This concept stems from Danielson's stance that student success should not mirror socio-economic background through low expectations or unchallenging curricula. The success of students requires a paradigm shift by educators (Danielson, 2002). The shift requires teachers to model critical thinking through collaborative efforts to learn new skills (Danielson, 2002). Professional development through PLC culture embedded in the

shared values, shared goals, shared vision, and shared mission of the school places student learning as the priority (Danielson, 2002).

Danielson (2002) recommended the teaming of core subject teachers in the middle school environment along with the integration of support instructional staff to accommodate the needs of middle school students. Danielson further stressed the vulnerability of the middle school student based on the rapid developmental changes taking place in this stage of life. Teachers modeling lifelong learning in a collaborative environment may transmit a positive attitude to students and address the needs of middle school students in the midst of adolescent experiences. The notion that teachers can learn from each other in a collegial and collaborative environment presents numerous opportunities for growth, which in turn promotes student learning. Student performance and attitudes toward learning gained are influenced by the school culture, especially at the secondary level (Danielson, 2002).

This study of teacher learning and student growth theorized that students would show improvements in achievement based on increased teacher expertise in the area of RtI. The basic premise was that teachers increase their knowledge base through peer collaboration and professional development and the transference of this acquired knowledge to the classroom would increase student achievement. The movement toward schools as learning organizations and the increased use of PLCs to promote learning, collaboration, collegiality, and shared accountability added relevance to the investigation of the relationship between teacher learning and student growth.

Furthermore, this study produced new opportunities to study Danielson's (2002) concept of teacher learning and student growth within a small community school setting

new to the combined PLC and RtI concepts. Additionally, the use of the new teacher appraisal system provided further opportunity to explore how teachers construct meaning from PLC participation to implement RtI in collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students. Increasing the lowest 25% in reading for eighth grade was a collective objective. The problem of how eighth grade teacher learning in RtI implementation in the core content areas through PLC collaboration related to student growth among the lowest 25% in reading provided the foundation of the study while addressing concerns of shared accountability.

Danielson (2005) advocated the promotion of collaboration among teachers as a method for planning development, communications, and overall staff development. Collaboration among teams of teachers may require training to develop collaborative effectiveness particularly in the area of communication (Danielson, 2005). As mentioned in Danielson, many teachers become well versed in classroom communication with students but lack the ability to establish the active listening skills needed for collaboration with colleagues. The establishment of active listening skills, along with the ability to develop curriculum and share data, presents significant dynamics in teacher learning when newer methods such as RtI are implemented in core content classrooms. DuFour (2004) stated the need to "focus on learning rather than teaching, work collaboratively, and hold yourself accountable for results" (p. 6).

Providing additional substance to Danielson's claims for teacher learning and student achievement growth, Levine and Marcus (2007) suggested the establishment of PLCs as an avenue where teachers may take ownership while learning and articulating with colleagues to address the needs of students. Teacher collaboration provides an

approach for closing the achievement gap among shared students (Levine & Marcus, 2007). The concept that teacher learning could occur through collaboration in PLCs with shared outcomes presents opportunities to learn new practices seemingly relevant to increasing student achievement. The idea was to share approaches and to work together in learning RtI and apply various strategies, which could improve student performance. According to Levine and Marcus, the engagement of shared discussion, inquiry, and experimentation regarding the implementation of new strategies, or approaches, presents a more likely internalization and comprehension of learning. DuFour (2004) averred the confrontation of all student data as a crucial step to assessing student progress, as well as a valuable tool for sharing instructional results.

According to Darling-Hammond and Richardson (2009), student learning and teacher learning improves when there are concentrated, content-focused collegial opportunities. Darling-Hammond and Richardson furthered these claims with the concept of increasing student learning through practice and instructional transformations made possible through PLC collaboration among teachers. Transformations in instruction are likely to occur in learning RtI as an application for differentiated, focus application toward student achievement. Darling-Hammond and Richardson stated that there is positive and productive support resulting from PLC collaboration when learning and implementing new concepts, practices, and strategies.

PLC collaboration may provide the capacity for sustained teacher learning through shared experiences and research gleaned through instructional practices. When teacher learning occurs in collaboration, student growth occurs through application of professional development, which in turn allows for relevant and engaging interventions

for underachieving students (Darling-Hammond & Richardson, 2009). The use of collaborative learning in interdisciplinary middle school teams might show significant increases in student achievement for students performing below grade level, or struggling in content areas. Focused targeted instruction occurring in all core content classrooms based on data-informed decision-making among teams could provide the increased opportunities to engage students.

Furthering the need for investigating the theoretical foundation of this study was to apply the findings of Danielson (2002, 2005) to the eighth grade team of teachers new to collaboration and shared accountability for learning and student achievement. The application of PLC collaboration and RtI implementation related to Danielson's (2002, 2005) stance that student learning opportunities link to teachers seeking learning opportunities. The use of PLC collaboration as a culture for professional development for teachers and the platform for teacher interaction allows identification of teaching practices needing improvement (Danielson, 2002). Also relevant and unknown in this school setting was the combined effort of interdisciplinary curricula integrated with reading performance. The teachers were new to RtI implementation in the core subject areas. The stages of teacher learning throughout the study will benefit educational research in addressing the initial structuring of PLC and RtI in middle school while also focusing on the school-wide initiative to increase learning gains in reading scores among the lowest 25%.

Through knowledge sharing and collaborative efforts to provide the lowest 25% with intervention strategies, interdisciplinary teachers could grow in skill and expertise. The personal and professional growth of teachers could produce learning gains in this set

of eighth grade students. Combined knowledge and adjustments in teaching strategies and delivery could provide excellent opportunity for increased expertise and mutual accountability in student achievement regardless the subject taught. A review of literature based on the use of PLCs, RtI, and the significance of reading achievement in middle school provided insight into the theoretical foundations of the study.

Review of the Literature

The review of literature for this qualitative exploratory case study addresses several themes. Qualitative studies from a social constructivist point of view provide relevance based on teacher experiences and self-reflection. The themes are present in the following order: Professional Learning Communities, Response to Intervention, and Reading and Academic Achievement. PLCs, RtI, and Reading are the general themes with middle schools, interdisciplinary teaming, and data-informed instruction as subthemes. Based on a newly adopted appraisal system, the current trend addressed in this study was the use of PLCs to establish shared accountability and collaboration among school stakeholders; this focus was especially pertinent for teachers held accountable for student achievement. Of further importance, under NCLB is the requirement for schools to show that students are making adequate yearly progress (AYP). AYP is determined in part by the results of standardized achievement tests (Klima, 2007). The standardized test used in Florida for AYP is the FCAT. As mentioned in Klima (2007), these standardized tests are used as a comparison of students and schools, which encourages teachers and school leaders to acknowledge the high stakes involved. In this acknowledgement comes the innovative brainstorming and researching on how to address the issue of not making AYP. Another consequence of the high stakes

FCAT test is the financial impact. Students performing well on FCAT bring financial reward to the school, while poor performance bears the scar of a penalty (Florida Association of School Psychologists, n.d.).

Themes and trends in research. Justifications for the themes of the literature review derived from the use of PLC collaboration among interdisciplinary middle school teachers to implement RtI strategies for shared students in the lowest 25% in reading. According to Buffum et al., (2010), students need directed and systematic intervention strategies at the inception of a condition indicating a problem. Learning to use RtI differentiated strategies targeted toward reading achievement provided the foundation in this study for teacher learning affecting student growth.

DuFour, Eaker, and DuFour (2005) noted that school improvement and the development of PLCs remains a popular concept in moving school stakeholders toward a learning organization for all. While research on PLC collaboration among teachers in middle school exists, the nature of interdisciplinary structure inherent in the middle school environment often creates difficulties with finding time to collaborate. According to Thompson et al. (2004), research on the effects of teacher collaboration on student achievement has encompassed qualitative and quantitative research. Thompson et al. (2004) stated that in a 1989 study, Rosenholtz was the first to provide a large-scale statistical analysis of the relationship between teacher collaboration and student achievement in several elementary schools. Prior to Rosenholtz (1989), as detailed in Thompson et al., case studies were conducted by Little in 1982 where collaborative practices were inherent in schools showing successful student achievement on standardized tests. Additionally, based on the review of the literature, use of RtI strategies

implemented in core content areas is limited, thus adding to the value of this study. Moreover, limited in research is the combined effort of core content, interdisciplinary, teachers to target deficiencies in reading.

A thorough review of literature was conducted on PLCs and RtI as related to middle school environments and middle school students. Also thoroughly reviewed through the literature were differentiated instruction, teacher learning, student growth, reading in middle school, and the use of qualitative exploratory case study. Peer reviewed journals, government publications, and literature written on the main themes of this study were obtained through various resources. The resources used included, but were not limited to, ProQuest, EBSCOhost, Educational Resources Informational Center (ERIC), academic databases through Grand Canyon University library, educational journals, state education departments, and educational research based books from renowned educational researchers.

Methodology. The review of literature addresses studies using different study methods and designs. Mixed methodology provides a bridge to connect qualitative and quantitative practices through a more thorough cover of areas missed when using traditional methods of qualitative or quantitative research (Johnson & Onwuegbuzie, 2004). Qualitative methodology transfers an inductive design while quantitative methodology allows deductive basis for review (Creswell, 2009). Exploratory case study provides an opportunity to study a phenomenon, or phenomena, involving people in organizations (Toloie-Eshlaghy, Chitsaz, Karimian, & Charkhchi, 2011). In an effort to study the phenomenon of teachers constructing meaning in PLC participation to collaborate on RtI principles with the intent of improving reading achievement among the

lowest 25% eighth grade students, qualitative exploratory case study methodology was the chosen process.

Qualitative research is not without drawbacks, such as a need for sufficient time, the ability to be flexible in structure, and remain unbiased when collecting and analyzing data (Hatch, 2002). Exploratory case studies begin with theory related to literature (Toloie-Eshlaghy et al., 2011). The theory obtains validity through the exploration of the phenomenon, or phenomena, within the real life situation, or organization (Toloie-Eshlaghy et al., 2011). Drawbacks to exploratory case study include the process of focused analysis and reporting related to the scope of the research questions and the phenomenon (Yin, 2009). It is easy to become immersed in outside influences that rival the explanation of the phenomenon (Yin, 2009). However, the driving focus surrounding teachers in their natural setting as teachers constructed meaning from PLC participation and use collaboration to implement RtI principles superseded the drawbacks of qualitative exploratory case study.

Qualitative research allows the researcher to focus on the meaning that participants have about a particular issue or problem (Creswell, 2009). As mentioned in Creswell (2009), this ability to focus on the participants furthered the central reason of learning about problems or issues from the viewpoint of participants rather than ideas of the researcher. The study focus on participant viewpoints present in qualitative research allowed the researcher to report multiple perspectives on PLC participation and collaboration to implement RtI principles for students in the lowest 25%.

Guiding parameters of the study were to examine through qualitative measures how teachers constructed meaning gained from PLCs to work collaboratively with the

goal of increasing achievement for the lowest 25% based on reading scores. The PLCs were designed to help teachers work together in a collaborative environment using RtI principles to meet the learning needs of the lowest 25% students. The teachers in this study were new to PLC collaboration and RtI used in core content classes.

The qualitative data collection occurred through reflective journals kept by the teachers, researcher observations of collaborative meetings, researcher journal, and teacher interviews. Through the data collection utilized in qualitative methodology for this study, results provided a focused snapshot of how teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students. It was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI strategies in their classrooms to help students at-risk in reading achieve at higher levels.

The determination to use eighth grade reading scores to identify at-risk students was twofold. First, NCLB school rating and retention of secondary students related to increasing learning gains and decreasing the learning gap among the lowest 25% in reading is a shared concerned among eighth grade teachers and other school stakeholders. Learning gains among this student population may have an instrumental effect on school grade and high school retention. Second, the shared accountability of the new teacher appraisal instrument presented an opportunity for core classroom teachers to learn RtI implementation to address the needs of eighth grade readers while also increasing individual appraisal scores. The qualitative findings of this study may develop the

understanding of learning organizations in educational institutions and the relationship in knowledge sharing through collaborative PLC culture on student outcomes.

The enhanced understanding of the role of PLCs and collaboration using RtI principles to enhance student learning for the lowest 25% added purpose to this study. The possible connection between teacher collaboration and intervention strategies with increased reading scores of students in eighth grade added purpose to the study of teacher learning and student growth. If PLC collaboration provided a solid foundation for teacher learning, the opportunities for growth in student achievement could increase greatly. Student achievement remains a primary concern, and the importance of PLC collaboration on teacher learning and the positive effects on student growth presents exciting possibilities for the middle school environment. The importance of student growth in middle school may have positive effects on high school success and workforce ready graduates. Moreover, the possibility for positive effects on the overall school grade, which results from the NCLB is of value to school stakeholders.

Evidence indicates that simply putting teachers in the core academic together as middle school teams lacks effectiveness in increased student achievement (Reed & Groth, 2009). Reed and Groth (2009) stated the need for middle school teachers to learn to use data to plan instruction on a collaborative basis. The shared goals and vision inherent in the PLC concept may provide interdisciplinary teachers with the initial integration necessary for true collaboration. As best practices toward the result of student achievement, DuFour and Eaker (1998) stated that schools transformed into PLCs were necessary if the goal is to produce results that are more effective for teacher learning and student growth. Senge (2000) expounded on the idea that vision drives learning, and as

such, a shared vision within a collaborative team may lead to success. As stated by Reed and Groth (2009, p.15), "To collaborate is to function as a goal-oriented team that jointly builds knowledge."

A clear vision may provide the core to trust, which may build commitment toward common goals and objectives (Senge, 2000). In the case of the collaboration of middle school teachers, commitment to common goals and objectives could enhance learning opportunities for students in an effort to increase student achievement in reading among the lowest 25%. The road to collaboration and the establishment of shared vision may entail the effective use of dialogue. Senge (2000) and Barth (2001) stressed the use of dialogue as the means of learning to process collectively and create new possibilities through collective analysis and combined experiences through explorations void of assumptions.

Lai, McNaughton, Timperley, and Hsiao (2009) stated the importance of embedding interventions for reading comprehension as part of the instructional process when using PLC collaboration. Another consideration for embedding intervention strategies and PLC collaboration relates to middle school at-risk populations. Ziomek-Daigle and Andrews (2009) studied the use of RtI and teacher collaboration, which could prove viable in targeting the at-risk middle school student. The support offered to students at the middle school level through RtI and collaboration provides benefits beyond academic achievement, such as the lack of attendance by many at-risk or disengaged students (Ziomek-Daigle & Andrews, 2009).

Perhaps the use of interventions and targeted instruction for increased learning opportunities might assist in decreasing the at-risk population among middle school

students. Ehren, Deshler, and Graner (2010) stated that middle school students do not have sufficient interventions to meet effectively their needs regarding lack of literacy achievement. RtI allows secondary schools, which includes the middle school, a framework for addressing the needs of students struggling in literacy (Ehren et al., 2010). Another consideration mentioned by Ehren et al. is the importance of a strong, highly qualified core instructional faculty and program. The basis for collaboration among interdisciplinary teachers may shed light on the importance of literacy with reading comprehension at the forefront of concerns. Ehren et al. further stated the significance of collaboration as the key to success when implementing intervention strategies such as RtI.

Professional learning communities. The chosen theme of Professional Learning Communities derived from the research questions: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students, and, how does PLC collaboration on RtI implementation help teachers learn. In an effort to understand the qualities of effective PLC environments and the use of collaboration, a review of literature surrounding PLCs ensued. The review provides a discussion of the use of PLCs in educational settings. Based on the research questions, middle school environments and teacher collaboration along with knowledge sharing and learning organizations became subthemes. The subthemes related to PLCs as the venue for the middle school environment regarding development of teacher collaboration, knowledge sharing, and learning organization attributes.

Professional Learning Communities (PLC) successes within schools are likely dependent on the school culture and leadership, along with other internal characteristics such as professional development and systematic trust (Williams, Brien, Sprague, & Sullivan, 2008). The team structure of the PLC culture promotes a collaborative environment with a whole systems approach to student learning. Through changes made with a PLC culture, instructional staff may need to revise previous outcome based learning strategies to include the use of data to make key decisions on assessments and learning interventions (Williams et al., 2008).

According to DuFour, DuFour, Eaker, and Many (2010), effective PLC cultures rest on the four pillars of shared mission, vision, values, and goals. Within these four pillars emerge the sharpened focus and priority set for the fundamental purpose of the school, direction of the school, guided behavior and collective commitments, and targeted timelines for establishing progress (DuFour, DuFour, Eaker, & Many, 2010). AllThingsPLC (n.d.) dated the history of PLC concept to the 1960s; however, prevalence grew among educational researchers throughout the 1980s and 1990s. Educational researchers such as Rosenholtz (1989), Fullan (1995), and Wehlage and Stone (1996) proposed varying models of the PLC culture as conducive to student and teacher learning. Effective school characteristics indicative of PLC culture center on shared values, collegiality, collaboration, reflective practices, continual inquiry of instructional practices, professional development, and mutual commitment to student learning (AllThingsPLC, n.d.).

Thompson et al. (2004) posited the origins of PLCs in the work of Mary Follet in 1924 and Burn's work on transformational leadership in 1978. The notion that businesses

operate as a combined community of learners sharing knowledge set the stage for PLCs and the organization as a learning environment for all members (Thompson et al., 2004). Fullan (1995) suggested that the PLC model equated to a systems model, which includes the capacity for systemic change. Hord (1997) expanded the learning organization to the realm of education through the concept of continuously seeking and sharing of knowledge among teachers and school administrators in an effort to benefit every student. Furthering effects of schools as systems models geared toward learning for all, Barth (2001), stated that teacher and student learning occurs simultaneously or learning does not occur.

Doing away with the traditional isolation of teaching may present the biggest hurdle for developing the PLC culture and establishing the core PLC value of collaboration. According to DuFour and Eaker (1998), breaking the mold of teacher isolation often requires time and considerable effort. However, once collaboration becomes a mainstay and shared value, teachers find expansion of knowledge along with tools for better decision-making (Barth, 1990; DuFour & Eaker, 1998). This would seem to suggest increased possibilities for student achievement. DuFour and Eaker, along with Barth (2001), stated the enhancement of student achievement and learning gains due to reflective and shared dialogue indicative of PLC collaboration and collegiality. Sharing ideas and knowledge further promotes learning for all and adds value to teacher learning, not to mention the growth of the school as a learning organization (Borko, 2004; Conzemius & O'Neill, 2001; Silins & Mulford, 2002). Ultimately, it appears that collaboration among educators sets the foundation for the school as a learning organization.

Professional development seems to be a key indicator of how successful the PLC culture will be within a school. Primarily the trust necessary among school stakeholders should be present so that professional development and implementation grow to be well facilitated and researched (Conzemius & O'Neill, 2001; Williams et al., 2008). The promotion of effective instruction to enhance student achievement is perhaps the primary goal of any professional development. Additionally, the presence of a PLC culture may have the capacity to engage teachers further due to shared vision and goals. Schmoker (2006) alluded to the PLC concept as the most effective means of improving instruction and student achievement. Perhaps Schmoker based this idea on the shared knowledge and use of dialogue as a means of professional development. Shared knowledge equaled improvements generated in the PLC collaborative environment (Schmoker, 2006).

Quintessentially, Williams et al. (2008) stated that, an effective PLC culture makes effective use of data to guide interventions and communication among all stakeholders, which in turn enhances decisions made. The ability to use data as a tool for learning indicates a link to school improvement and student growth (Conzemius & O'Neill, 2001). Setting standards to raise low student scores and turn low performance around hinges on collaborative teams of educators willing to embrace all data (Conzemius & O'Neill, 2001). The use of data as a process for reflection of instruction lays the foundation for school wide learning (Conzemius & O'Neill, 2001).

Utilizing the SMART goal process for decision-making through data brings another component of successful PLCs. SMART goals as defined in Conzemius and O'Neill (2001, pp.89-90) and DuFour, DuFour, Eaker, and Many (2010, p. 178), encompasses the following characteristics: "specific and strategic, measurable, attainable,

results-oriented, and time bound." Using SMART goals allows practical and targeted performance levels, which are data-informed and reflective (Conzemius & O'Neill, 2001). SMART goals seem to provide best practice instruction and measures of assurance when applied to collaborative results oriented instruction. Results-oriented goals such as SMART goals provide effective means of measuring long-term performance rather than using process-oriented goals (Conzemius & O'Neill, 2001; Schmoker, 2006; Senge, 2000).

Middle school environments and teacher collaboration. Erb (2007) suggested that teachers in middle schools structured as teams are more likely to learn from each other and make differences in student achievement. Improvement in schools connected to PLCs and the collective knowledge and capacity reign as a shared commitment among all stakeholders (Erb, 2007). Pounder (1998) suggested that the organization of interdisciplinary teams within middle school environments involve dialogue and reflection. The formation of interdisciplinary teams might have the capacity to allow teachers to leave the isolation of the classroom and content area and engage in dialogue concerning student performance or instructional strategies.

Perhaps the idea presented by Schmoker (2006) that teacher isolation is the foe of school improvement relates to the limited use of collaborative knowledge sharing as a means to increasing teacher learning and student achievement. Without the collaborative knowledge of other teachers with regard to student achievement, effective strategies may remain unknown. Schmoker stated that the point of comparison gained through collegial collaboration allows the proliferation of shared results and increases in professional best practices. Interdisciplinary grouping and collaboration within middle schools remains an

exemplar for successful PLCs (Erb, 2007). The ability to share student data and implement strategies across the disciplines may offer increased learning gains for students.

Promoting collaboration among interdisciplinary teachers sharing the same students brings about challenges to past practices indicative of specified curricula. For example, math teachers may find the idea of incorporating targeted instruction for reading strands daunting at best. The question of how teachers at the middle school level make changes in classroom practices through teaming provided the structural framework for the Strahan and Hedt (2009) qualitative and quantitative case study examination.

Interdisciplinary teaming and professional growth provides the value to educational research centered on the middle school structure in the Strahan and Hedt (2009) examination. Strahan and Hedt posited that the professional growth of teachers through collaboration allows learning experiences, which appear to broaden teacher perspectives on student learning across academic disciplines. These findings add value to the idea that interdisciplinary collaboration may assist in student growth to decrease gaps in learning. However, the use of targeted instruction for a specific standard across the disciplines seems to be lacking (Strahan & Hedt, 2009). Perhaps the use of data directed toward consideration and logic of instructional practices in the process of collaborative reflection revealed in Conzemius and O'Neill, (2001) could maximize targeted instruction.

Additionally, further studies show that continued teacher growth relates to collaboration and collegiality (Barth, 2001; Danielson, 2002; DuFour, DuFour, Eaker, & Many, 2010; Marzano, 2003; Strahan & Hedt, 2009). Expansion of expertise seems to

occur when instructional strategies developed through collaboration with colleagues intertwines with instructional methods. In the scope of studies, Strahan and Hedt (2009) suggested that improvements in instruction and teacher growth through collaboration in middle schools demonstrate increased possibilities for student learning. Again, the use of reflective dialogue centered on data may add to the focus on individual student performance.

The use of common planning time among middle school teachers provides the focus of combined qualitative and quantitative research (Strahan & Hedt, 2009). Middle school students appear to enjoy greater success in academics when interdisciplinary grouped teachers have common planning time. The importance of common planning time centers on the promotion of teacher collaboration and curriculum development (DuFour, DuFour, Eaker, & Many, 2010; Mertens, Flowers, Anfara, & Caskey, 2010).

Common planning allows teacher teams to keep track of individual student needs (Mertens et al., 2010). Based on the Center for Prevention Research and Development research studying middle school interdisciplinary teams with high levels of common planning, low levels of common planning, and no common planning, higher levels of common planning teams produced higher levels of effective classroom practices (Mertens et al., 2010). DuFour, DuFour, Eaker, and Many (2010) and Mertens et al. (2010) maintained the use of common planning as promising to making positive differences for teachers and students. The field of middle school teaming and the benefits of common planning may require additional research to show the significance of collaboration on student achievement. Mertens et al. contended the positive impact on interdisciplinary

collaboration within the middle school environment. Mertens et al. further suggested the need for continued research to document the effectiveness of common planning.

In a narrative examining the relationship between professional learning communities and knowledge sharing, Wood (2007) suggested the role of teachers as creators of pedagogical knowledge. Teachers from an elementary school and a middle school in a poor region of a mid-Atlantic urban area provided the sampling for the five-year observational study. Wood found through studying collaborative teams of teachers that meetings with the qualities of protocol, shared leadership, and teacher learning opportunities allowed knowledge sharing and transference to students. These teachers also seemed to learn from each other and actively seek pedagogical knowledge for increased learning for students (Wood, 2007).

Many researchers suggest the positive benefits for teacher learning and student growth through collaboration and knowledge sharing (Wood, 2007). Whether the PLC culture is the catalyst does not seem to be relevant to common planning or the collegial practice of team collaboration. The ultimate outcome of teacher learning and collaboration in some form is increased knowledge and expertise, which may relate to increased student achievement when transference to instructional practices takes place (Wood, 2007). The middle school environment may bring about challenges to interdisciplinary teaming and collaboration and it was unknown how to best integrate core content collaborative efforts. The vastness of the unknown best practice for integrating interdisciplinary middle school collaborative teams provides fertile ground for further study. The benefits of finding time to collaborate in the middle school scheduling

may foster professional growth in teachers and allow increased opportunities for students (Mertens et al., 2010; Strahan & Hedt, 2009).

Knowledge sharing and learning organizations. Reflective dialogue among teachers and school leaders may prove a powerful strategy not only in the initial stages of improvement planning but also throughout the journey of the change process when implementing improvement plans such as a PLC culture (Conzemius & O'Neill, 2001; DuFour, DuFour, Eaker, & Many, 2010; Thompson et al., 2004). A PLC culture is built on the idea of a fully functional learning environment steeped in collaboration and shared purpose (DuFour, DuFour, Eaker, & Many, 2010). Another account by DuFour, DuFour, Eaker, and Many (2010) that adds benefit to leadership authority and accountability exists in the findings established through educational research on precision of purpose and effectiveness. Effective school leaders may provide the driving force behind clarity and precision in purpose. To add further value to precision of purpose and effectiveness is the connection found between higher levels of student achievement and clarity of function, or comprehensible purpose, among teachers (DuFour, DuFour, Eaker, & Many, 2010).

Senge (2000, 2006) offered the notion of learning organizations where the intrinsic motivations to learn are continuously cultivated. Focusing on collective learning and development of a learning organization may enhance leadership through stewardship, communication, and instructional leadership. The idea that schools developing as learning organizations enlist school stakeholders to focus on common goals such as student achievement furthers possibilities for knowledge sharing (Senge, 2000). Senge (2000) and Schmoker (2006) offered the concept of educators embracing the goals for

increased student achievement, which is the ultimate goal of successful performance, with improvements that lead to breakthroughs in intellect and emotion. Essentially, leaders and teachers in educational learning organizations conceivably represent the model in learning through development and participation of all knowledge sharing, relationship building, shared vision, shared goals and desirable outcomes, and mutuality.

Schools learning through collaboration and knowledge sharing may offer students the best in learning opportunities. This idea adds value to the study research questions: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students, and how does PLC collaboration on RtI implementation help teachers learn? Transformation of thinking through dialogue and relationship building perhaps involves teachers and additional educators within a school to extend beyond the traditional curricular models to address differentiated instruction. Team learning defined a key discipline of Senge (2000) in Five Learning Disciplines, which when aligned with the PLC concept, presumes promise for teacher learning and student achievement. Extension of school as a place to learn becomes a reality through teacher modeling of lifelong learning which cultivates a community that embraces all as support for students to reach higher levels of achievement (Senge, 2000).

While the design experimentation method of Herrenkohl, Kawasaki, and Dewater (2010) studied teacher-researcher collaboration, relevance rests in the importance of in-depth teacher collaboration and learning. The questions of how collaborative efforts of teachers affected student learning, and teacher efficacy and identity laid the foundation in Herrenkohl et al.. The data analyses supported the findings, which showed significant

promise in the area of professional development for teachers, and teacher collaboration benefits for learning. This design experimentation of Herrenkohl et al. was included in national summaries and examples for the benefits to pedagogical applications and student learning occurring because of adult collaboration and knowledge sharing. Conzemius and O'Neill, (2001) stated the need for establishing skillful collaboration through professional development. The requirements given in Conzemius and O'Neill are:

1. Problem Solving Skills: Outlining problem; understanding root causes; and devising resolutions
2. Decision-Making Skills: Establishing consensus; defining authority and methods of choices; and utilizing matrices for conclusions
3. Communication Skills: Reflective listening, advocacy, and analysis; reciprocal feedback; conflict resolution
4. Group Process Skills: Team structure; team progression observations; management of conflict
5. Meeting Skills: Establishing agendas; rotation of roles; idea generation (p. 69)

Exploration of practices and curriculum design among collaborative teacher teams remain activities for study. However, the requirement of training for effective collaboration as a guideline could possibly allow higher results toward studying teacher growth and student achievement, as well as, sustainability. This added significance to the phenomenon on which the research questions derived. The centralized study emphasis was defined as PLC collaboration and the relationship with teacher learning and student growth, PLC collaboration on RtI implementation, and teacher perceptions on RtI

effectiveness in core content areas. Deuel, Nelson, Slavit, and Kennedy (2009) stressed the need for protocols to ensure productive collaboration. DuFour (2004) suggested that commitment and hard work are key components to implementing practices necessary for effective and lasting PLCs. Additionally, as mentioned in DuFour and Deuel et al. the collective efforts of teachers abet the advancement of student achievement rather than the traditional decisions made within individual classrooms.

Another justification for considering the requirement for training is sustaining momentum within collaborative and collegial teams. Momentum may pose an obstacle with teachers overwhelmed with a myriad of responsibilities tied to standardized assessment. Hindin, Morocco, Mott, and Aguilar (2007) designed a narrative study around the exploration of sustained collaboration, teacher learning, and knowledge sharing. The questions concerning extent of participation in collaborative groups, reflections on teaching practices, knowledge exchange, levels of knowledge sharing, and contributions to teacher learning and participation guided the collection of data in Hindin et al.. The teacher population sample used was a group of middle school educators comprised of two reading teachers, four language arts teachers, and four special education teachers. The findings of the study did not result in improvements for student learning, or teacher learning. The suggestion was that the teachers did not relate challenges of teaching, or expertise in areas of instruction. It seemed that additional research might uncover the missing factors for open knowledge sharing. Shared accountability may add relevance for teachers to sustaining continued growth and professional development related to collaboration for student achievement (Hindin et al.,

2007). This concept led to the possibility of PLC collaboration and RtI implementation related to student growth respectively for this study.

Mulford (2006) presented evidence for student achievement through results from the Australian Research Council funded Leadership for Organisational Learning and Student Outcomes (LOLSO). Mulford sought to find relationships between organizational learning and student achievement in a mixed methods case study design. The LOLSO study found that organizational learning and better student outcomes rely on factors such as collaboration, shared mission, innovation, and relevant professional development (Mulford, 2006).

Much of the LOLSO study focus was on the qualities of leadership in teachers and school administration, which enable successful organizational learning and knowledge sharing. Missing from LOLSO were the qualities of interdisciplinary teaming among teachers who share the same students. Positive relationship building between teachers, school leaders, and students seem to produce improved student learning and may yet provide meaningful learning opportunities for all stakeholders.

Based on the LOLSO findings relating learning organizational values and knowledge, or expertise sharing, certain factors may need to be in place for open collaboration and transference to classroom instruction. Additionally, school leadership and the ability to promote teacher leadership allow significant collaboration and teacher growth (DuFour, DuFour, Eaker, & Many, 2010; Mulford, 2006). Adding to the body of knowledge, student achievement showed improvements in the LOLSO study as outlined in Mulford (2006). Also worth noting is that Herrenkohl et al. (2010) included researchers as members of the collaborative teams which added an outside factor to the

process of knowledge sharing and collaboration among teachers. Perhaps based on studies centered on learning organizations and shared information, it is safe to assume that a level of trust among collaborators increases the level of knowledge sharing. The methods of establishing the level of trust among core content teachers in a collaborative setting is unknown due to previous autonomy and classroom isolation.

Summary of professional learning communities. The review of literature added to the understanding of establishing a PLC collaborative environment within a middle school. The use of common planning time to meet for the sharing of knowledge and promotion of teacher learning is fundamental for success in PLC collaboration. Finding time to collaborate with colleagues in a setting promoting collegial learning and trust might break existing barriers across the disciplines.

Response to intervention. The chosen theme of Response to Intervention derived from the research questions: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?, and, how does PLC collaboration on RtI implementation help teachers learn? In an effort to recognize the characteristics of RtI implementation in the departmentalized middle school environment, and the use of collaboration to learn RtI, a review of literature surrounding RtI resulted. The review provides a discussion of the use of RtI in middle school settings. Based on the research questions, middle school environments, interdisciplinary collaboration, and data-informed decision-making became subthemes. The subthemes relate to the use RtI among interdisciplinary teachers using data-informed decision-making to address the needs of shared students in the lowest 25% in reading.

RtI as an implemented model for intervention-based assessment has roots in an Iowa school district that initiated RtI strategies in 1985 to address students with specified learning disabilities (Dunn, 2010). Dunn (2010) posited RtI as an alternative assessment model to intelligence tests and other similar methods of determining academic achievement. The use of RtI in this manner derived from the reauthorization of the Individuals with Disabilities Education Act (IDEA) of 2004 (Dunn, 2010). RtI allows for periodic assessment with curriculum-based measures and data-informed instruction based on the student's level of responsiveness to accumulative-concentrated interventions (Dunn, 2010).

An RtI model created by Fuchs and Fuchs best describes the three tiers of RtI (Dunn, 2010). Tier 1 comprises the majority of students in general education classes where the classroom teacher assesses reading growth through a series of universal screening measures designed to assess decoding, fluency, and comprehension skills (Dunn, 2010). Tier 2 appears to address the needs of students not achieving reading growth in Tier 1.

Tier 2 places students in small group settings (Dunn, 2010). With a lower teacher to student ratio, Tier 2 is designed to allow intensive and differentiated instructional delivery. As noted in Dunn (2010), students in need of more intensive, one-on-one instructional intervention move to Tier 3. Additional instructional sessions at Tier 3 appear to offer individualized measures to improve reading success. In the event that reading recovery or lack of response to intervention at Tier 3 occurs, recommendations for special education classes might ensue (Dunn, 2010).

According to Sansosti, Telzrow, and Noltemeyer (2010), the challenges of implementing RtI within middle schools reside in the validation of interventions and the sustainability of intervention strategies. PLC culture may provide a viable foundation for middle schools to meet challenges with RtI sustainability. Sansosti et al. mentioned the vulnerabilities in measures and criteria used for instructional interventions, along with reliable measures of student responsiveness to potential interventions as obstacles. Sansosti et al. recommended the exploration of variables either assisting or impeding RtI implementation or maintenance within the middle school environment.

Data collection and analysis as major considerations in RtI require corresponding and procedural systems (Sansosti et al., 2010). The screenings used may include standards-based assessments and progress monitoring based on differentiated instructional along with explicit instruction in content areas. Another concern surrounding RtI rests in valid and reliable data collection in which instructional staff not certified in reading or language arts instruction may require additional professional development (Sansosti et al., 2010).

In an era of high stakes testing and accountability, along with the responsibility of meeting the needs of every student, RtI may provide a viable solution for all (Buffum et al., 2010). Buffum et al. (2010) posited that the ability to provide immediate and targeted attention to students as a provision all schools should strive to accomplish. The National Association of Secondary School Principals (NASSP) (n.d.) advocated strategies for educational reform that provide the framework for student-centered school designed to meet the challenges of every student. The NASSP action plan consists of six core steps in a comprehensive change process. The NASSP plan also seems to focus on collaboration

and team leadership ensured to not only implement change, but also perhaps more important, sustain change.

Step 1 of the NASSP (n.d.) change process is to gather and analyze school data in the areas of demographics, academics, assessments, and behavioral categories. Analysis of these categories may provide the background knowledge and correlations needed to determine strengths and weaknesses within the educational organization. Once the priorities have been determined through careful data analysis, Step 2 explores possible solutions designed to increase student performance; these solutions then become the focus of school leaders (NASSP, n.d.).

Step 3 assesses readiness for change among all stakeholders and focuses on building capacity within the school environment (NASSP, n.d.). Step 3 may also determine the need for further team building and professional development to meet student needs. Careful creation and articulation of a school improvement plan defines Step 4 (NASSP, n.d.). Step 4 appears to comprise the involvement of all stakeholders in a shared vision where goals are established and incorporated into all facets of the school. Full implementation of the plan with continuing monitoring, assessments, and adjustments defines Steps 5 and 6 of the NASSP (n.d.) change process. The continuation and adjustments of the steps based on individual school needs and data analysis may require shared vision, collaboration, team leadership, and leadership modeling in professional development.

Marzano (2003) affirmed student learning and achievement as linked to the number of prospects available for students to acquire knowledge. As stated in DuFour, DuFour, Eaker, and Many (2010), past research focusing on the teaching of the

curriculum should now focus on opportunities for individual students learning the curriculum. The idea is to eliminate the isolationism of individual classrooms and grow in collaboration and collegiality as a learning organization centered on teacher and student empowerment through knowledge acquisition. The collegiality and collaboration afforded through the shared values of PLCs could add connective tools to RtI and student performance. DuFour, DuFour, Eaker, and Many stated that research shows that setting goals through interventions through articulated protocol allows progress in student learning and reflection of the RtI strategies in determining future steps.

Another possible effect of PLC collaboration and RtI implementation at the middle school level may reside in earlier identification of students needing additional assistance, or possible at-risk factors. DuFour (2004) identified that an additional function of PLCs is the ability of immediate intervention as soon as students show difficulty. Teachers collaborating may significantly increase the immediate attention that many students require. Saphier, as cited in DuFour et al. (2005), indicated the power of the RtI pyramid to go beyond the typical stages of intervention strategies. Furthermore, Saphier, as stated in DuFour et al. found that collaborative teams provide structure to identifying at-risk students and implementing of RtI strategies.

Buffum et al. (2010) addressed redesigning the tiers of RtI to target the standards that all students must master. Constructing standards based on individual students, levels of proficiency occur through teacher collaboration, and collective data analyses (Buffum et al., 2010). Buffum et al. mentioned the importance of scaffolding content and the importance of teachers in recognizing the value of direct, differentiated, and explicit instruction for individual students. This view on instruction may be especially critical for

students demonstrating gaps in learning content, processes, or over-reaching generalized concepts, particularly in reading.

Middle school environments. Implementing RtI in middle school environments presents challenges not found in elementary schools where shared planning and self-contained interdisciplinary instruction is the norm. Middle school structure often segmented by core academic instruction may rely on designated instructional staff or pullout programs to apply intervention strategies. RtI strategies used in the core area classroom by discipline specialized basic education teachers may present tremendous opportunities for teacher learning which led to the research question number one parameters of teacher perception using PLC collaboration and RtI effectiveness within core content areas. Darling-Hammond and Richardson (2009) stressed the need to reach toward higher-order discernment and functioning for teachers as well as students.

A key point related to higher-order discernment mentioned in Rust (2012), stressed CCSS and the preparation of students for the workforce or post-secondary education. Through CCSS, the focus centers on defining teacher and student expectations for learning (Rust, 2012). The CCSS furthered higher-order functioning for teachers and students through the acquisition and retention of curriculum content through targeted cognitive processes and learning strategies (Rust, 2012). Through active learning, such as RtI strategies applied to core curriculum such as CCSS, teachers are likely to grow and rethink the plausibility of targeted instruction for student needs. Active and ongoing learning experiences for teachers allows transformations within instructional practices and approaches to data-informed decision-making that translates into targeted instruction

equaling learning for all (Buffum et al., 2010; Darling-Hammond & Richardson, 2009; Deuel et al., 2009).

Johnson and Smith (2011) evaluated a case study from Cheyenne Mountain Junior High (CMJH) in Colorado. The Johnson and Smith evaluation provides critical information for implementing RtI in the middle school environment. CMJH addressed the question of how to implement RtI within the middle school environment where teachers were specialized in core academic curriculum. CMJH began the implementation of RtI with an examination of assessment data to determine areas in need of the greatest support. A simple screening method identified students reading below grade level. The RtI tier level for intervention was determined based on the severity of reading deficiency; however, the initial focus of CMJH was strengthening Tier 1 instruction using a PLC framework (Johnson & Smith, 2011).

The principal of CMJH formed PLC teams based on content areas and designated each team with the task of researching instructional methods focused on differentiated instruction, development of common assessments, collective design strategies, and improved instructional strategies (Johnson & Smith, 2011). According to the Johnson and Smith (2011) study, deployment of technology to provide immediate feedback using clickers, along with courseware allowed for differentiated instruction, which developed through the research of PLC teams at CMJH. Expansion and development of interventions on all three tiers, honing of progress monitoring and data based evaluation systems, along with scrutiny of screening methods apparently allowed CMJH to maintain its then current status as a high performing school grounded in PLC culture and shared vision (Johnson & Smith, 2011).

Prior to the work of Johnson and Smith (2011), Sansosti et al. (2010) contended that the available research on RtI in secondary schools remains minimal. To that end, Sansosti et al. conducted a qualitative study that used school psychologists as an audience to relate the implementation of RtI in secondary school settings. According to Sansosti et al. many school psychologists receive training in intervention strategies while core content area instructors receive minimal professional development in RtI strategies. Sansosti et al. provided an initial step to implementing RtI in middle school environments. In a sampling of 20 secondary schools from four counties across a Midwestern state, the findings indicated that four themes resonated in implementing and sustaining RtI. Systems characteristics, systems structures, evidence-based procedures, and professional development needs were the four themes found to be important to sustaining RtI in secondary schools. Addressing each of these themes and understanding the challenges of RtI implementation and sustainability in secondary school settings remains complex. School-wide training based on the requirements established in Conzemius and O'Neill (2001) may provide assistance in addressing the themes found in the work of Sansosti et al..

Sansosti et al. (2010) recommended a need for additional qualitative studies to provide a more comprehensive picture of RtI in secondary schools. Focused on a low socio-economic school environment, a case study description of the implementation of RtI at Alice Birney Middle School provided a setting for Brundage, Beckmann-Bartlett, and Burns (2010). Alice Birney is located in North Charleston, South Carolina and serves an 85% predominantly minority student population, with 81% qualifying for the free and reduced lunch program. RtI is a concern for this middle school due to only 10% of the

student population scoring in the proficient range on the state accountability assessment. Data collected from more than 200 students determined the intervention strategies and needs. Corrective reading groups designed and scheduled into 90-minute blocks targeted reading comprehension. Student data, studied every week by a core team in charge of monitoring student growth, determined future placement to higher levels.

Based on data from current research, the trend in teacher learning and student achievement suggests the value of collaboration to study student data regularly (Darling-Hammond & Richardson, 2009). PLCs provide a venue conducive to continual data analysis and knowledge sharing related to student progress. The time intensive nature of implementing RtI using a core team at Alice Birney, while challenging, produced average increases in standardized test scores (Brundage et al., 2010).

Implementing and sustaining RtI in the middle school environment may prove challenging for a myriad of reasons. The overall synopsis seems positive when time and consistency are present. Also, advantageous is the use of a plan such as that used in Johnson and Smith (2011), or Brundage et al. (2010). While school psychologists could provide useful input with RtI, based on findings from Johnson and Smith and Brundage et al., it appears that collaboration works best when teachers from specialized areas and interdisciplinary areas pool together. School environmental factors present levels of concern in the middle school setting and may ensure or deter sustainability (Sansosti et al. 2010). The use of RtI among core content teachers with no previous RtI experience remains relatively uncharted in the middle school environment.

Interdisciplinary collaboration. Gerzel-Short and Wilkins (2009) stressed the importance of collaboration in the process of RtI implementation and sustainability. The

use of basic education teachers from different disciplines, special education teachers, reading instructors, and other educational specialists may provide crucial collective knowledge for improving student outcomes. The combined efforts and levels of expertise available through such collaboration perhaps allow targeted interventions to address individual student needs. Allington (2011) addressed the inefficiencies of core reading programs in meeting the needs of students struggling in reading. As a directive of Allington the use of reading material spanning the disciplines is more effective because there is more chance for student interest and self-direction. Ivey and Fisher (2005) advocated interdisciplinary collaboration to create meaningful and targeted instruction along with literacy rich material used in all subject areas.

Interdisciplinary collaboration among middle school teachers may also present problems with planning and structure. As an example of implementation of PLC collaboration, DuFour and Eaker (1998) suggested the establishment of teacher teams comprised of teachers teaching the same grade level. In addition to teacher collaborative teams within the same grade level, interdisciplinary teams may focus on shared students (DuFour & Eaker, 1998). Reed and Groth (2009) stated that there is not sufficient evidence to show that interdisciplinary collaboration could have a positive impact on student achievement. The functionality of the interdisciplinary teaming is dependent on collaboration and the promotion of integration of curriculum (Reed & Groth, 2009). Professional development may address the issues of integrating the disciplines in middle school collaborative teams (Reed & Groth, 2009).

Noteworthy to interdisciplinary integration in a middle school cross-curricular study, is the collaboration on using state standards to select research based instructional

and assessment strategies for lesson planning (Reed & Groth, 2009). The significance of findings from Reed and Groth (2009) is the use of commonality of lesson planning among all teachers as the shared value and goal for collaboration. Finding a commonality, such as shared accountability for collective students, among teachers may also promote the use of RtI across the curriculum.

Murawski and Hughes (2009) assessed RtI as a new method for learning disability and at-risk identification. Murawski and Hughes highlighted the use of teacher collaboration and co-teaching as methods to improve the implementation of RtI. The Murawski and Hughes research used what was known for RtI, collaboration, and co-teaching in an examination of systematic change within the secondary school environment. Murawski and Hughes stressed the critical importance of aligning RtI with teacher collaboration and co-teaching. RtI implementation requires support to ensure a clear understanding of how RtI should look in the classroom and collaboration may provide the necessary support (Murawski & Hughes, 2009). Additionally, the paradigm shift that occurs when implementing RtI in the secondary schools is founded through the support in teacher collaboration (Murawski & Hughes, 2009).

Fuchs, Fuchs, and Compton (2010) posited the concept that RtI in the middle school takes on new meaning in universal screening. This concept finds basis on the well-established deficits apparent in students of middle school (Fuchs et al., 2010). The model for RtI in the middle schools conceptualized by Fuchs et al. allows new opportunities for teachers to improve student performance and overcome deficits. Using research data from the National Longitudinal Transition Study-2, showing students with large academic deficits and the relation to high school dropouts brought Fuchs et al. to the conclusion

that RtI in middle schools and high schools carries meaningful intensive interventions. Fuchs et al. stated the importance of programmatic research to answer the questions, which may occur in a modified middle and high school setting.

Myers, Simonsen, and Sugai (2011) proposed to evaluate RtI applied to professional development in teachers. Participating teachers received training in "school wide positive behavior support" (Myers et al., 2011, p. 36). This behavior support training related to RtI as applied to social behavior specific praise given to students. Myers et al. measured the rate of praise statements from teachers and the possible effects the praises had on intervention strategies and student behavior. The data analyzed in Myers et al. showed a decrease in student problem behavior, which increased appropriate behaviors shown during interventions.

RtI and teacher collaboration presents challenges in the middle school, or secondary school, environment due to increased autonomy as seen in Murawski and Hughes (2009). The established deficits often found in middle and high school students as presented in Fuchs et al. (2010) encourages renewed interest in implementing RtI in secondary schools and the need for support. Perhaps the support derived from co-teaching, collaboration, or school-wide training enables interdisciplinary groups of teachers to provide increased opportunities for student growth. Nonetheless, these concepts require further study in the middle school environment with core content teachers and interdisciplinary teaming.

Data-informed decision-making. Data availability related to the increased accountability required of public education enables data-informed instruction (IES, 2009). With increased accountability for student achievement, some school districts have

reformed the instructional appraisal instruments to include collaboration and shared accountability, which aligns with research question number one of the current study. Perhaps data used for decision-making related to instruction applies to the shared accountability indicator.

The use of data as a gauge for shared accountability and instructional decisions may be especially true of data when used collaboratively in interdisciplinary teams of middle school teachers. The mindset of sharing students and sharing concern for those students could provide meaning on a deeper level for interdisciplinary collaboration. Smith, Johnson, and Thompson (2012) likened the use of student data with a sort of global positioning where teachers and students have a clear understanding of academic progress and standing. According to Institute of Education Sciences (IES) 2009 report, data provides a viable means for assessing student growth toward objectives. The use of data presents challenges in the areas of interpretation for insightful and logical instructional changes (Deuel et al., 2009; IES, 2009). Deuel et al. (2009) found that improving instructional practices aimed at student learning gains requires collaborative analysis of all data.

The IES report (2009) provided guidelines in using data information to improve student achievement through instructional changes. Among the IES guidelines is to study all available student data in an effort to modify curriculum based on interventions and differentiation of instruction. Smith et al. (2012) averred the sharing of instructional methods, which shows promise in raising levels of student proficiency as another example of the value of data analysis and data-informed instruction.

The IES report (2009) offered numerous recommendations for using student achievement data to drive decisions made for instruction. Among the recommendations is the use of multiple sources of data and collaboration among teachers (IES, 2009). Assessment data examined in an interdisciplinary collaborative team may aid in strategic learning targets for shared students. Stiggins (2004), as cited in DuFour, Eaker, and DuFour (2005), suggested the positive effects of collaboration on increased assessment accuracy and descriptive feedback. Lezotte and Snyder (2011) suggested the need for teachers in collaborative teams to adapt instruction and implement strategies based on frequent monitoring of student progress. Summative and formative assessment monitoring presents teachers with valuable sources of data for strengths and weaknesses of students (Lezotte & Snyder, 2011).

As continual monitoring across the disciplines, teachers may provide students with targeted and immediate intervention strategies. As part of the use of data sources, assessments may increase involvement in the RtI process across disciplines when collaboration exists. Schools implementing RtI may consider these recommendations when targeting intervention strategies.

A study done by Bianco (2010) provided the enhancements to data-informed instruction through RtI. Already four years into the initiation phase, the practice of RtI as a system of tiered intervention began to take hold in the Bianco study. Professional development for staff members reviewed protocols and best practices for RtI. To endorse RtI further, the district carried out research to find appropriate measures for eliciting information brought about through data-informed instruction. According to Bianco an issue with RtI and data-informed instruction rested with fidelity and treatment of

implementation. Bianco stressed the importance of instructional alignment with progress monitoring and best practice protocols based on prior research findings. Conzemius and O'Neill (2001) speculated the need to use data as a learning tool and a motivator for improvement.

Bianco (2010) surveyed teachers on an anonymous basis to obtain feedback on the diverse features of RtI and found fidelity in the implementation of RtI and the appropriate and effective use of data as areas of concern. The teacher feedback showed a concern for the fidelity of data collection and the use of data to guide instruction (Bianco, 2010). Bianco found that the areas of assurance of fidelity in tiered instruction, as well as RtI implementation, require tracking, support, and models for instructional execution. Unless data is collected properly with individual student outcomes at the core from a variety of sources, analyzed with student learning in mind, and utilized to differentiate instruction, data may prove meaningless and lacking in fidelity (Anfara & Donhost, 2010; Bianco, 2010; Mokhtari, Thomas, & Edwards, 2009). The establishment of a data dashboard may alleviate the cause for concern with data collection fidelity. Taking into consideration the use of logic and reflection in data analysis further promotes fidelity (Conzemius & O'Neill, 2001).

Perhaps well worth considering with RtI and the differentiation of instruction, is the inquiry into further data such as family circumstances, socio-economic status, and other personal information. Conzemius and O'Neill (2001) advocated the use of all available data—not just assessment data. Typically, many middle school core content teachers focus on data relating to the subject area rather than comprehensive student data.

The idea is for all members of the collaborative team to obtain a complete picture of the lowest performing students prior to differentiation and targeted interventions.

Mokhtari et al. (2009) raised the question of how effective use of data helped to raise students' reading scores. The use of professional development brought about increased reading performance throughout a previously underachieving school in Mokhtari et al.. The establishment of PLCs also lead to changes in reading instruction, which has a positive effect on reading scores (Mokhtari et al., 2009). Collaboration may provide efficient methods for data analysis and the use of data to drive decisions related to instruction. Teacher collaboration and continuous data review and inquiry allow reflective practices for instructional strategies (Mokhtari et al., 2009).

The question of data-informed decision-making in schools with regard to school improvement defined several case studies reviewed by Anfara and Donhost (2010). Specifically, Anfara and Donhost used the United States Department of Education (USDOE) report on use of educational data. Five stages of data-informed instruction highlighted by Anfara and Donhost provide purpose for middle school teachers, and as such, these stages supply beneficial information for educators.

Stage 1 of the five stages is organizing for success, which allows the formation of teacher, teams to analyze and organize data (Anfara & Donhost, 2010). Interpretation of data gives meaning to the second stage of building assessment literacy among teachers and other staff through training and practice (Anfara & Donhost, 2010). Anfara and Donhost (2010) identified the use of a variety of data sources as the third stage to data-informed decision-making and promoted the use of multiple assessments outside the state accountability tests. Aligning data systems as stage four supports the use of a data

warehouse, which allows the use of multiple databases throughout a school district (Anfara & Donhost, 2010). The fifth stage requires the alteration of instruction, which may be the primary avenue to student learning, and data analysis (Anfara & Donhost, 2010).

Anfara and Donhost (2010) found that links between data and alterations in instructional practices are absent from a great deal of research. A shift in paradigm may present data as a method for increasing student outcomes on an individual basis rather than using data for the sole reason of diagnosing at-risk. Anfara and Donhost stated that there are gaps in literature from a lack of accountability in using data for decision-making and lack of student involvement in the process. Middle school students are capable to use benchmarks to set goals, which empower students to take charge of their education (Anfara & Donhost, 2010).

Anfara and Donhost (2010) stated that there is a need for more research to understand the deployment on using data-informed instruction at the middle school level; most educators could learn to analyze effectively and discern data for instructional purposes. Time and structure, along with collaboration, may provide the basis for data-informed decision-making (Anfara & Donhost, 2010; Mokhtari et al., 2009). Literature on integrating student data to differentiate instruction within core content areas is lacking and in need of further study. This lack within the literature pertains to interdisciplinary collaboration, which justifies further the significance of research in this area.

Summary of response to intervention. The review of the literature of RtI provided knowledge of RtI structure and implementation for student achievement. Teacher collaboration and data-informed decision-making add to successful RtI

implementation and increased student performance. RtI in the middle school environment is not without challenges based on the interdepartmental structure of middle school. Establishing collaborative teams of cross-departmentalized teachers sharing the same students provides a starting ground for data-informed decision-making for RtI.

Reading and academic achievement. The chosen theme of reading and academic achievement derives from the research question: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? In an effort to understand the importance of reading and academic achievement with middle school students, a review of literature surrounding reading and academic achievement ensued. The review provides a discussion of the significance of reading on academic achievement. Based on the research question, at-risk for graduation and reading comprehension are subthemes. The subthemes relate to the importance of reading on student achievement, retention in school, and graduation rates.

National Assessment of Educational Progress (NAEP) (2009) pointed to reading scores, which indicated large needs across America in middle school literacy. NAEP (2009) reported that in 2003 only 30% of the nation's eighth grade students were reading at proficient levels. In addition to the NAEP report, studies indicated that the primary risk reason for graduation relates directly to literacy levels. The question of middle school students struggling in reading adds to concerns for high school performance when the curriculum at that level applies more rigor and student accountability.

Ivey and Fisher (2005) and Schmoker (2006) elaborated on the correlation between reading on a deeper level and development of intellect. Ivey and Fisher stated,

"Getting to the bottom of older readers' comprehension and motivation difficulties requires careful, ongoing assessment of instructional practices and students' literacy needs . . . not the product of strategies alone but a fusion of self-efficacy, interest, and strategic knowledge," (p. 9, para. 2). The need to turn reading instruction away from purposeful reading such as decoding and fluency outcomes toward deeper reading through strategic means may require daily opportunities across the curricula (Schmoker, 2006). Strategies within the RtI model could provide such opportunities in all content disciplines. Schmoker stressed the ideal strategic reading environment as one that occurs daily with pen in hand. Opportunities to reread and synthesize text while drawing inferences allows students to think critically; thus, development of intellect and discernment become more likely (Schmoker, 2006). Continued opportunities to read for purpose, and to read text that makes sense on a personal level, allows students to take initiative and advance toward self-efficacy (Ivey & Fisher, 2005).

From the IES (2009), the relationship between reading proficiency and graduation links to educational attainment and earning capacity. NAEP (2009) also stated empirical analysis, which shows that reading proficiency is a large factor in graduation rates. NAEP used standards based reading scores from eighth graders in 1998-1999 to aggregate into specific feeder high schools in South Carolina schools. The ninth grade cohort, school year 2002-2003, from the eighth grade reading scores defined the 171 high schools in South Carolina with usable data. The statewide average of this cohort graduating was a little over 51% (NAEP, 2009).

At-risk for graduation. Bowers (2010) affirmed the importance of early identification of students at-risk for graduation. As stated in Swanson (2010) "7,200 is

the number of students when calculated on a daily basis, who don't graduate from high school on time," (p. 22, para. 1). Additionally noteworthy and somewhat alarming is that in the U.S. 8th graders reading below grade level is 68% (NAEP, 2009). Middle school students' academic performance plays a significant role in determining at-risk for graduation (Bowers, 2010). Eighth grade and mid-point through high school seem two critical periods in the decision to leave school. In a longitudinal study, Bowers studied two Midwestern school districts to determine dropout rates and identification of potential dropouts; the results pointed to the potentially dangerous school years for drop out as grades eight and 11.

Middle school students at-risk for dropout may struggle in reading, and as a result, may fall behind their cohort. Archer (2010) examined the Lexile reading growth of at-risk middle school students. In Archer, reading consultants determined patterns in reading growth of middle school students who gave no answers on the Oral Reading Frequency (ORF). Research based on the ORF did provide Archer with answers to reading growth. As a result of ORF and curriculum based measurements (CBM), Archer found that over 60% of the middle school students were reading at elementary levels.

Archer (2010) studied seventh and eighth grade students' data from an urban middle school in the western United States for a period of 5 years to determine Lexile reading growth. Archer found an array in Lexile growth using preliminary growth norms for at-risk middle school students. Using beginning of the year reading levels provided Archer with critical information to reading growth. Evaluating growth supplies students and teachers with advantages in setting goals for the future (Archer, 2010).

According to the 2005 National Governors' Association (NGA) study, many students remain at a third grade level in literacy, which indicates struggling readers are more likely to drop out of high school. NGA identified research and best practices to improve the literacy achievement of adolescent students. Focus on adolescent literacy at the state level is a strategy addressed by NGA, along with raising literacy expectations across the curricula. NGA stressed the importance of literacy across the disciplines and alignment within standards that are explicit to meet real-world demands. State and district levels should require early identification of struggling readers in order to provide interventions as needed (NGA, 2005). Professional development designed to build the capacity for literacy instruction can strengthen instructional strategies and implementation of interventions (NGA, 2005). The use of data sources and tools to provide longitudinal reading achievement information remains at the core of effective instructional practices for struggling readers (NGA, 2005).

Comprehension instruction and disconnection between reading instruction and content curriculum presents barriers in reading achievement for adolescents (NGA, 2005). This appears particularly true at the middle school and high school levels. Additionally, there seems to be lack of interdisciplinary support for reading literacy and reading comprehension instruction. NGA (2005) advocated the use of explicit instruction in comprehension along with embedding and reinforcement of instruction within content curriculum. Ongoing assessment of student progress and tracking are additional elements associated with improving literacy in middle school and high school grades (NGA, 2005).

Ness (2009) stated a problem exists with middle and high school students understanding the literacy concepts in core academic areas. Ness stated that evidence of

the beneficial outcomes of reading comprehension instruction to students on all levels shows in the body of research. Reading comprehension improves for middle school students when teachers explicitly teach guided and independent reading strategies in content areas (Ness, 2009).

From the findings of Ness (2009), which show that applied reading comprehension instruction in social studies classrooms exceeds that of other classes, the need to encourage content area teachers with professional development in effective reading comprehension instruction seems valid. Professional development aimed at providing methods for integration of explicit reading instruction within content areas may meet the needs for secondary teachers implementing RtI.

Expounding on Ness (2009), Romance and Vitale (2011) used a cross-sectional study of diverse students from Iowa to investigate science and reading comprehension. In Romance and Vitale, the Iowa Tests of Basic Skills (ITBS) subtests served as the indicators for student growth. Romance and Vitale found that content area learning in science did improve reading comprehension. The implications of this study point to a curricular approach, which integrate literacy and content instruction as providing direct benefits to student achievement (Romance & Vitale, 2011).

As indicated in Archer (2010), using student data to study Lexile reading growth allows students and teachers to implement strategies and set goals for achievement. Intervention strategies and goal setting may assist middle school students in increasing reading comprehension thus promoting the opportunity for future academic success. Integrating reading comprehension strategies with science curriculum offers promise as found in Romance and Vitale (2011).

Integration of reading also adds promise to interdisciplinary teaming with RtI strategies differentiated toward specific strands in reading and adds value to the current study question relating to PLC collaboration and teacher perception of RtI effectiveness in core content areas. Based on Ness (2009) and Romance and Vitale (2011), integrating reading comprehension and all content curricula may benefit middle school students identified as at-risk for graduation, or performing within the lowest 25%. The potential to prepare middle school students for the increased rigors of high school through interdisciplinary measures may address the high school dropout findings in NGA (2005) report. Combining Lexile reading growth with core content curriculum may offer middle school students with the ideal opportunity to increase reading comprehension.

Reading comprehension. Perhaps the primary concern for reading comprehension is advancement toward a workforce ready population. As mentioned in Charles and Dickens (2012), the purpose of CCSS initiative provides the expectation for career and college readiness for students of varying degrees and differences in learning. CCSS also allows individualized and data-informed decision-based instruction for all students (Charles & Dickens, 2012). Measures taken to identify students struggling in reading in early school years may increase success in the workforce. The NGA 2005 report outlined the successful plan of a Fairfax County, Virginia high school. All eighth grade students entering the high school received screening for reading performance. As documented in NGA (2005), the data from the screening showed that three-quarters of the students entering ninth grade scored one standard deviation below grade level. Additional data showed that 24% of the students scored three years below grade level (NGA, 2005). The principal of the Fairfax County high school addressed the integration

of reading comprehension with core content subjects through professional development and job embedded activities (NGA, 2005).

Other states provided literacy plans to align with curriculum in middle and high schools designed for literacy instruction across the curriculum (NGA, 2005). Additionally, intervention strategies to support struggling readers seem to provide individualized intensive instruction while adding to preventive and prescriptive measures in state and district level plans. Interdisciplinary teacher collaboration adds to the models for addressing the needs of middle and high school students reading below grade level (NGA, 2005). The national focus on literacy among middle and high school students seems to indicate the critical need for tracking students and setting forth policies to address adolescent literacy.

Researching the use of intervention strategies with middle school students, Vaughn et al. (2010), sought to fill the gaps in research concerning middle school students struggling in reading. The question of the effects of interventions for struggling readers at the secondary level guided the Vaughn et al. study. Additionally, in Vaughn et al. researcher-based interventions found more success than other intervention strategies. The implementation of focus on reading in middle school instruction added value to the current study. As mentioned in Vaughn et al., unlike elementary curriculum, formal reading instruction is absent from the middle school. Providing support to schools for reading interventions and addressing dropout prevention measures, along with more intensive interventions raises areas for further examination (Vaughn et al., 2010).

Furthering studies on the need for reading interventions, qualitative and quantitative data provided the data for the Humphrey (2009) report on concerns with

middle grade reading. The background for the Humphrey report was the need to develop strong middle school readers. The mission of building strong reading skills appears to become more complex after elementary school. Humphrey evidenced the need for access, emphasis, time, support, and skilled reading instructors to reach middle school students struggling in reading.

Increasing high school graduation rates remains an issue and reading skills seem to play a role in retention and academic success. Using differentiated instruction to acknowledge the reading level and interests of every student should be the responsibility of all teachers (Subban, 2006). The findings of Humphrey (2009) indicates disagreements among middle school educators with regard to the identification of struggling readers through close contact with feeder elementary schools, licensed reading instructors, and support for reading intervention programs. Overall, as recommended in Humphrey and Subban (2006), the promotion of a school-wide reading commitment focused on increasing reading skills in a similar fashion to programs found at the elementary level encourages differentiation at the core of intervention.

There seems to be an apparent need to address middle school reading. Perhaps lacking are instructional methods to increase opportunities and overcome deficiencies for struggling readers at this stage. Integrating reading instruction with content area curriculum presents educational organizations in states and districts with considerations in professional development (Humphrey, 2009; Ness, 2009; Vaughn et al., 2010). Other areas of consideration center on the time allowed within content classrooms for explicit reading instruction (Ness, 2009). Utilizing additional personal data and data from feeder schools may provide useful initial student information (Conzemius & O'Neill, 2001;

Vaughn et al., 2010). Based on the studies of Humphrey (2009), Ness (2009), and Vaughn et al., (2010) careful attention in middle school years to the link between reading comprehension and high school retention may increase achievement levels in high school.

Summary of reading and academic achievement. Based on the review of the literature surrounding reading and academic achievement, literacy remains a concern when addressing student achievement. The use of RtI in the critical stage of middle school could produce positive results with graduation rate and the pursuit of post-secondary education. Related to the research question, how teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students, the importance of reading on the overall academic performance provides relevance to the study and establishment of PLC collaboration to implement RtI.

Summary

Danielson's (2002) theory that student achievement grows when teachers learn attained support in the body of literature. The theory of this current qualitative exploratory case study was that students performed better when teachers actively and collaboratively involve themselves with professional development opportunities in the use of RtI. The increased mutual accountability for student performance provided opportunities to research this theory in a middle school environment. The literature reviewed on teacher collaboration, response to intervention, and the relationship reading has to student achievement might further substantiate opportunities for research. Based on the review of literature, middle school remains an area lacking in teacher collaboration

and use of RtI in interdisciplinary classroom settings. Additionally, core content teachers collaborating on targeted instruction designed to increase reading scores among eighth grade students could add to the body of knowledge.

The middle school setting seems to allow increased opportunities to study teacher learning with regard to collaboration and RtI implementation. This seems to hold true when the content area teachers become involved in increasing reading outcomes for those students struggling in reading. As mentioned in Vaughn et al., (2010), reading instruction at the middle school level is lacking; this lack brings credence to RtI implementation. The qualitative teacher data in collaboration and learning to implement RtI in content instruction from the current study provides substance for middle schools.

An omission in literature on the use of RtI in core content areas through interdisciplinary collaboration provided the impetus of this current study in teacher learning and student growth. It was not known if RtI implemented by core content teachers affects student growth in reading. The professional growth of each content area teacher learning to implement RtI was not known.

The collaboration and shared accountability measure within the newly adopted performance appraisal system promoted data-informed instruction and intervention strategies in all subject areas. Furthermore, it was not known how the new appraisal system would connect to teacher learning and student growth. Through the current qualitative exploratory case study on the relationship between teacher learning and student growth through collaboration and RtI implementation, the feasibility for extending the body of knowledge and prior research became apparent.

Additionally, the focus of all content area teachers on increasing learning gains in reading for eighth grade students extended prior research on RtI implementation. As stated in Buffum et al., (2010), targeted instruction through RtI might answer to the individual learning needs of all students. Another concept mentioned in Buffum et al. relates to the time to learn combined with strategic goals allowing students to be successful at higher levels.

Previously implemented through guidance counselors and teachers specialized in intensive reading instruction, research on the use of RtI in core classroom was lacking within the literature. Gaps in the literature surrounding use of data derived from teacher collaboration to implement RtI methods led to the study research questions. The study research questions presented an opportunity to address gaps and tensions in the literature surrounding teacher learning and student achievement related to PLC collaboration, RtI implementation, and reading.

The purpose of Chapter 3 is to discuss the methodology and study design to focus on the relationship between teacher learning and student achievement among eighth grade teachers. Chapter 3 provides information on the general problem of lack on how eighth grade teachers construct meaning gained from participating in PLC collaborative relationships to apply in their classrooms to help students at-risk in reading achieve at higher levels.

Chapter 3 defines the methodology approach, research design, population and sample selection, instrumentation, and sources of data. Specifically, chapter 3 outlines the instruments used to collect for qualitative data, along with the methods for analyzing the

data. Validity and reliability of instruments, data collection and analysis procedures, ethical considerations, and limitations conclude Chapter 3.

Chapter 3: Methodology

Previous chapters provided information on the introduction to the study and the findings in the literature review. Chapter 3 entails a detailed outline of the methodology approach for the study. The purpose of this qualitative exploratory case study was to examine the relationship between teacher learning through knowledge sharing and collaboration of core content teachers with student achievement. An eighth grade environment in central Florida set the stage for this study.

Using eighth grade teachers and students, the parameters of the research design was to examine how teachers create learning through knowledge sharing and collaboration to implement Response to Intervention (RtI) with at-risk students. Next, the researcher addressed the ongoing challenge of increasing learning gains among the lowest 25% in reading. The guiding question for the current research was how do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? The secondary research question was how does PLC collaboration on RtI implementation help teachers learn?

Based on prior research from the literature review, the researcher developed the research questions for this current study to assist the need for research within the middle school environment with an interdisciplinary team of teachers sharing the same students. The research questions provided guidance for the researcher and support to the theory of teacher learning and the correlation to student growth:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

The purpose of this chapter is to outline the methodology, design, data sources, data collection procedures, and data analysis used in this research study. The current qualitative exploratory case study examined how teachers constructed meaning gained from PLC participation to work collaboratively implementing RtI with the goal of improving student achievement for the most at-risk students with the intent of raising reading scores among the lowest 25% at-risk students. Qualitative data were collected through interviews, teacher-kept journals, researcher journal, and observations of PLC meetings.

The teacher journals, interviews, and observations were coded based on patterning and themes. The patterns and themes were based on the research questions and the review of the literature with the intent to gain insight between collaborative meetings and personal experiences. Following the transcription of the data, coding of patterns and themes ensued prior to analysis of the data. Data analysis procedures derived from Hatch (2002). Data analysis began with coding with the themes, which derived from the literature review in mind and patterns of importance.

Occurrences of themes were highlighted and organized. Once themes were organized, they were placed in a Microsoft Excel spreadsheet to provide the researcher with the ability to expose characteristics within patterns. Qualitatively, the study of teacher learning and reflections of the learning process adds value to the implementation

of the PLC culture, collaboration, and RtI to address students in the lowest 25% at-risk students in reading.

Baseline student data derived from the previous school year's FCAT data aided teachers in PLC collaboration and the identification of the lowest 25% at-risk students in reading. Subsequent data that teachers used was gathered from FAIR assessments and reading assessments. These data aided teachers with RtI differentiation strategies. The study of student data and the increase or decrease in student scores over the period of the current study added relevance to combined teacher efforts in data-informed instruction and RtI strategies within core content areas.

In the proposal of teacher learning, it was anticipated that the current study might enhance knowledge related to the impact of teacher collaboration and RtI strategies applied to students who are scoring in the lowest 25% on the FCAT. A team of eighth grade teachers in the areas of MESH, an RtI trained school guidance counselor, and Intensive Reading (IR) instructor comprised the study group. Student data for reading underwent review and assessment in collaborative meetings to determine the individual needs of students. Teachers worked collaboratively to establish intervention strategies and document progress. Scores from the seventh grade FCAT reading and other relevant reading assessments provided the initial data and a starting point for entering eighth grade students.

The potential for an increase in the lowest 25% student reading scores raised the question of connections drawn from MESH, guidance counselor, and IR teacher team collaboration through PLC culture. Along with the construct of meaning for teachers involved in PLC collaboration, possible growth in teacher learning through collaboration,

specifically the potential for knowledge sharing amongst the MESH team, could increase student achievement. Combined efforts along with gaining knowledge in curriculum areas might increase the likelihood of teachers outside of the field of Language Arts implementing RtI strategies to increase reading scores. The question of how collegiality and collaboration of the school culture indicative of PLCs promotes eighth grade student achievement and adds to teacher learning resided at the core of the study. Professional growth for teachers identified another key aspect in the current qualitative exploratory case study. The collaboration among a cross curricula team of eighth grade teachers provided room for professional growth, which could influence student outcomes.

Statement of the Problem

It was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI strategies in their classrooms to help students at-risk in reading achieve at higher levels. The specific problem of implementing RtI in an effort to increase student achievement and address shared accountability involved a team of eighth grade teachers, an RtI trained guidance counselor, and a reading instructor. Shared accountability and collaboration drove a need for core content RtI implementation. In an effort to increase the reading achievement among students in the lowest 25%, interdisciplinary teachers worked collaboratively to use data-informed decision-making to differentiate instruction.

The possible association in teacher collaboration and intervention strategies with increasing eighth grade students' reading scores added purpose to the current study of teacher learning and student growth. Prior to the current study, more research was needed to understand teacher construct of meaning deriving from PLC collaboration and the

effectiveness of interdisciplinary collaboration on teacher learning and student growth among eighth grade students. Methods for raising reading scores among the lowest 25% eighth grade students provided the researcher with an opportunity to examine the use of interdisciplinary teacher collaboration and implementation of PLC culture and RtI strategies to achieve this growth.

Previously, a reading teacher and a reading coach focused on the reading scores of this set of students while other teachers focused solely on content area specific instruction. The idea of putting together a collaborative team of teachers in core academic fields who shared the same students to learn the use RtI might show marked improvements in student achievement. Teacher leadership growth and learning utilized for effective PLC collaboration provided a snapshot of the competencies and skills needed for RtI implementation and cross curricula reading instructional delivery. Raising reading scores of eighth grade students was deemed critical because learning gains increase the overall school grade based on the NCLB and FLDOE school guidelines.

The power of combining PLCs with the use of collaborative RtI strategies as an instrument adds to possibilities for increased student performance and team decision-making, along with the potential for marked instructional improvements (Fogarty & Pete, 2011). Commitments to the PLC school culture along with collaborative engagement in RtI strategies provide essential factors in successful changes in reading instruction (Bender & Waller, 2011). An added benefit to the current qualitative exploratory case study involved the initial onset to implement a PLC culture and RtI in the middle school effectively through shared planning and set meetings for teacher collaboration.

According to Sansosti et al. (2010), the challenges of implementing RtI within middle schools reside in validation of interventions and sustainability of intervention strategies. PLC culture may provide a viable foundation for middle schools to meet challenges with RtI sustainability. Sansosti et al. mentioned the vulnerabilities in measures and criteria used for instructional interventions, along with reliable measures of student responsiveness to potential interventions as obstacles.

Sansosti et al. (2010) recommended the exploration of variables either assisting or impeding RtI implementation or maintenance within the middle school environment. These insights may develop into areas of concern with across the curriculum instruction focused on reading. Tying data-informed instruction for reading with other disciplines could allow tremendous opportunity for teacher learning through knowledge sharing and innovation.

Research Questions

Yin (2009) presented the notion of including a qualitative question that poses a central concept, which allows participants to describe their experiences. The qualitative research question begins with what or how and uses investigative verbs (Creswell, 2009; Hatch, 2002). The current qualitative exploratory case study commenced with a qualitative methods question, which tied the construct of experiences related to teacher PLC collaboration with learning how to implement RtI to enhance student achievement among the lowest 25% at-risk students in reading.

Qualitative data for the current exploratory case study focused on how the basis for teacher learning may reside in shared knowledge and expertise along with increased opportunities to provide differentiated reading strategies to students. There were changes

to instructional delivery due to the exchange of data, ideas, and combined knowledge. The central research question for the phenomenon of teacher experiences and learning related to PLC culture collaboration and teacher learning.

The research questions are as follows:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

Research Methodology

As a research methodology, the qualitative approach suits a situation in which there is a desire to understand how a group works (Creswell & Clark, 2011). Qualitative methodology, often used for case study, seems to allow focus on a single concept, or a phenomenon (Creswell, 2009; Yin, 2003). A benefit to qualitative approach is the ability to establish meaning within a group through shared patterns (Creswell, 2009; Hatch, 2002). Qualitative approach provided insight into teacher learning through collaboration. The use of open-ended questioning in participant interviews and reflections from participant journals allowed the collection of personal experiences.

Conversely, as noted in Creswell and Clark (2011), a quantitative approach best suits when determining treatment against a control group. The collection of numeric data to support or refute the study hypothesis in an unbiased manner presents strength to quantitative approach (Creswell, 2009). Another consideration with quantitative approach lies in the statistical analysis of collected data, which further verifies theoretical foundations within the study (Creswell, 2009). As mentioned in Connelly (2009) mixed

methods design has the advantage of combined quantitative and qualitative processes, which allow for narratives as explanations of statistical measures. Mixed methods design often requires the knowledge of an experienced researcher and a larger amount of time to collect and analyze data (Connelly, 2009).

Due to the interest in understanding how teachers construct meaning from PLC collaboration to implement RtI, a qualitative approach was the chosen method for the current exploratory case study. Qualitative method approach could provide the insight of participant experiences present in a natural setting. Understanding how humans construct meaning and define meaning based on experiences outlines the purpose of qualitative research as cited in Hull (1997). Furthering the choice of methodology, the qualitative methodology is based on the social constructivist worldview, which seeks to understand individual experiences within a natural environment while adding value to the study of human growth and experience (Creswell, 2009; Hatch, 2002; Yin, 2003).

The purpose of this qualitative exploratory case study was to examine how teachers create meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement. The use of PLCs to work collaboratively for implementation of RtI to improve reading was new to the study site. Targeting improvements in reading among shared students identified as at-risk in the lowest 25% reading were also new to the study site. As an expected addition to the construct of teacher meaning, the current exploratory case study examined how teachers connected teacher learning through knowledge sharing and collaboration of core content teachers with student achievement. The PLC culture and the idea of collaborating on interventions for reading were new to the team of teachers, thus presenting an opportunity for teacher

learning. The use of RtI was a new method of differentiated instruction to this team of teachers, perhaps more so to those not teaching reading skills.

Through qualitative data collection, which involved teacher experiences and researcher observations of meetings, a narrative of teacher learning provided further depth to analysis. According to Creswell (2009), qualitative data analysis should use triangulation. Triangulation is the use of multiple methods to collect data, which adds meaning and depth to the qualitative study (Creswell, 2009). Peim (2009) suggested the need to neutralize process and procedures with qualitative research in the field of education. Observations, interviews, focus groups, and text studies are commonly used data gathering methods for qualitative research. The type of analysis chosen likely depends on the type of data collected. Often educational research employs narrative processes through qualitative research. The use of qualitative data to study the meaning teachers derived from PLC collaboration, RtI strategies, and eighth grade reading scores allowed narrative and descriptive processes.

Data Collection

Qualitative data were collected through teacher journals, researcher journal, participant interviews, and observation of teacher collaboration. Teacher journals were collected and analyzed for personal experiences in learning, RtI implementation, interdisciplinary collaboration, and shared accountability for reading growth among the lowest 25%. Researcher notes of meetings in a researcher journal and the observation tool, Concerns Based Adoption Model referred to as CBAM, were used to distinguish the use of data to target instruction and the use of PLC parameters on collaboration. Participant interviews consisting of open-ended questions and participant responses were

digitally recorded. The research questions were designed from a set of questions in the work of DuFour, DuFour, Eaker, and Many (2010) that centered on interdisciplinary teams (p. 123), as well as, the literature review on RtI and Reading. The research questions acted as a guide to the interview questions.

Researcher observations of PLC collaborative meetings were recorded on a modified CBAM format, which used themes and patterning of stages of concern. The themes were structured and predetermined based on components of PLCs, RtI, and Reading. Emerging themes were noted on the CBAM. The generic statement format provided an unbiased observational tool. The categories used for theme coding were CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum. Using Microsoft Excel as a tool to organize data, the analysis of this data was ongoing due to the cyclical, emergent nature of collection and outcomes with the modified CBAM instrument.

Predicted results related to the research questions. Based on the theoretical foundation of Danielson (2002), teacher learning was expected to have a positive effect on student growth. Danielson addressed the relationship of teacher learning with student achievement through the idea that students will not have increased opportunity to learn when teachers are not also advancing in knowledge and skills. Professional development through PLC culture embedded in the shared values, shared goals, shared vision, and shared mission of the school places student learning as the priority (Danielson, 2002). Danielson recommended the teaming of core subject teachers in the middle school

environment along with the integration of support instructional staff to accommodate the needs of middle school students.

Research Design

The research design aligned the current qualitative exploratory case study with the core component of teacher construct of meaning through PLC collaboration with learning RtI with the intent to raise reading achievement for eighth grade students in the lowest 25%. The design of the current qualitative exploratory case study is a concurrent triangulation approach. As stated in Creswell (2009) the use of concurrent triangulation strategy allows the collection of all forms of data at the same time to observe possible convergences.

Use of multiple data collection resources for qualitative methods strengthened the study through merging of data, which showed integration (Creswell, 2009; Morse & Niehaus, 2009). According to Creswell (2009) along with Morse and Niehaus (2009), triangulation allows well-validated and verifiable results while also allowing for a shorter data collection period. Additionally, case study allows the description of the specific case through triangulation of varied sources of data collection (Toloie-Eshlaghy et al., 2011).

The span of data collection involved in the current study comprised a six-week period, which further justified a concurrent triangulation qualitative exploratory case study design. The collection of data at one site added additional weight to the research design in the current qualitative exploratory case study. Creswell (2009) stated the advantages of concurrent triangulation design, and of particular relevance to the current study was the ability to collect data simultaneously at one site.

The nucleus of the current study was examination of how teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students. PLC participation allowed teacher learning through knowledge sharing and collaboration of core content teachers with student achievement. Furthermore, the current study was based on a need to understand how the relationship between teachers learning to use RtI differentiated strategies in core content areas and their experience on the use of PLC participation and collaboration enhanced reading achievement for the lowest 25% students. Table 1 displays a visualization of the data collection tools used to explore how teachers construct meaning learning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students.

Table 1

Exploration of Teacher Learning and Student Achievement.

Research Questions	*Measurements*
R_1. How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? R_2. How does PLC collaboration on RtI implementation help teachers learn?	• Observation of PLC Collaborative Meetings • Participant Journals • Participant Interviews • Researcher Journal

Population and Sample Selection

A combination junior and senior high school located in central Florida was the study site and geographic location of the participant population of teachers and student scores. Between the years of 2006-2010, the median household income of the school

community was $50, 934 (The United States Census Bureau, 2012). According to the Florida School Rankings, the school ranked seventh in combination junior senior high schools in the State of Florida with 99% at-risk graduation rate, 25% of the population is minority and 19% receive free and reduced lunch (FLDOE, n.d.). In the school year of 2010-2011, 63% of the lowest 25% students made reading gains on FCAT (FLDOE, n.d.).

The school was in the process of adopting a school-wide PLC culture and combing this culture with RtI to increase reading scores. There were no existing data to determine the connection of teacher learning with student growth at the time at this school. The school seemed to welcome the opportunity to establish PLC culture and teacher collaboration; this appeared to be significant among the middle school faculty.

Eight eighth grade teachers, which comprised the PLC team, were recruited to be study participants. The participant groups consisted of male and female teachers, who shared the same students and had common planning, which allowed room for collaboration and RtI strategy implementation. The teacher participants ranged in age and years of teaching experience. An intensive reading teacher for middle school students and an RtI counselor were also recruited to participate in the study. All teachers held a minimum of a Bachelor's Degree in the area taught, or a state certification in the area taught. Specifically, one team consisting of four eighth grade teachers in the areas of math, English, science, and history (MESH), RtI trained school guidance counselor, and Intensive Reading (IR) instructor comprised the study group. The RtI trained counselor and the IR instructor attended all team meetings. The sample size of teachers consisted of 100% of the eighth grade teacher population at the study site.

The lowest 25% in reading used by the teacher participants consisted of those scoring in the lowest 25% on the seventh grade FCAT Reading test given in March 2012. The students falling in the lowest 25% were approximately 17% of two hundred fifteen eighth grade students. Twenty-nine students comprised the lowest 25% for teacher PLC collaboration focus. Student reading growth is critical at this age and often predicts success in high school and at-risk for drop out (Archer, 2010). Justification for the student focus group derived from the researcher's role as a school administrator and the school improvement plan of the study site, along with the newly adopted instructional appraisal instrument. As a school administrator, the researcher possessed a direct investment in teacher appraisal scores and student achievement. The school initiative was to raise test scores of the lowest 25% in eighth grade reading and show annual learning gains as a result. Another school initiative was to promote PLC collaboration among all teachers.

Eighth grade core content area teachers, an intensive reading teacher, and a guidance counselor trained in RtI were solicited electronically to participate in this study through a letter of intent as seen in Appendix A. A standard consent form was provided to teachers as seen in Appendix B. The researcher retained the original letters of intent and consent forms in a secure location for the duration of the study. The total number of solicitation letters and consent forms was ten for all participants. No compensation was provided to participants. The results of the study had potential to provide valuable information to all participants; furthermore, the results were made available to participants. Information on individual teachers was never divulged or shared with anyone. Each participant received a generic pseudonym type of identifier such as

Participant A and any identifying data were kept in a secure off-site location. All data are to be destroyed within a minimum period of three years after the end of the study. Destruction of data will occur through shredding of all journals and deletion of all electronic data.

Participants remained anonymous. Each teacher was coded with a letter, such as TP-A through TP-J, for researcher purposes. No direct contact occurred with students, so there was no need for consent forms. The teacher participants used student data to drive the PLC meetings. Permission to conduct the study was obtained by the involved school district as per district guidelines. Appendix C displays the permission form from the involved school district. An approval letter to conduct research was obtained from the school site. Appendix D displays the site approval letter.

The group of teachers met three times over a six-week period to collaborate and plan for interventions in reading instruction across the curriculum. The belief was that these meetings would provide insight into teacher learning and reflective practices. Selection of teachers at the study site related to this group of teachers expressing interest, showing support in PLC culture, and combining RtI in an interdisciplinary effort to raise the reading scores of the lowest 25% on FCAT reading among eighth grade students. The concept was that students shared amongst these teachers would allow for focused research and data collection.

Setting and sample size rationale. For this study, the school site and teacher sample seemed adequately described for the purpose of addressing the problem statement, it was not known how eighth grade teachers constructed meaning gained from participating in PLC collaborative relationships to apply RtI strategies in their classrooms

to help students at-risk in reading achieve at higher levels. As a qualitative exploratory case study, cluster sampling determined the sample size. According to Teddie and Tashakkori (2009), a cluster sample unit is a group found within a population. The cluster sample represented the case of PLC collaboration and RtI implementation in an effort to raise test scores among eighth grade students in the lowest 25%. As a cluster sample, the eighth grade teachers represented an interest to the site as well as the district in terms of mutual accountability and collaboration. Teddie and Tashakkori described representative sampling as small and purposive in addressing the research questions.

A concern at the school was raising achievement for the lowest 25% in reading at the eighth grade level. The eighth grade level corresponds to the at-risk graduation rate based on cohorts and FCAT school grading. There was a direct interest for all eighth grade teachers, school administrators, and other school stakeholders. As a qualitative exploratory case study, the use of teachers at the same school was justified due to the involvement of a close examination of a group of teachers at one school (Hays, 2004). Another justification as found in Hays (2004) is the time bound aspect of case study research.

The participant group of eighth grade teachers shared the same students and the same preparatory, also denoted as planning, time. As a result, collaboration on the student target group was feasible and attainable. The teacher sample size was located at the same school and may be a limitation for this study due to inability to generalize the study to other schools and districts; however, the data obtained in this study may provide important fundamental knowledge and background on the connection between teacher learning RtI through PLC collaboration and student growth for future studies. The student

number used by the teacher participants was twenty-nine eighth graders in the lowest 25% in reading based on seventh grade reading FCAT scores from spring of 2011. Additionally, reading scores provided teachers with attainable goals across the disciplines due to the integration of reading in all academic areas.

This study was relevant to the school district involved. It was expected that this qualitative exploratory case study might provide direction for other middle school teams participating in PLCs implementing RtI strategies in core curriculum, PLC collaboration, and data-informed instruction as part of shared accountability. Students in the lowest 25% were significant based on the shared accountability among teachers and the use of RtI to decrease the learning gap. Future studies may move beyond to multiple schools, or multiple school districts, to obtain a more generalized sampling of teacher learning and student achievement in a professional learning community model to implement RtI for the lowest 25% in reading.

Sources of Data

The central phenomenon of this study was based on teacher learning through PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students. Concurrent triangulation allowed integration of qualitative data collection methods to show utility of findings for core content middle school teachers. Additionally, a variety of personal experiences from teacher participants through exploratory case study design added vision and directness to the research questions based on reflective and personal data. The student scores for teacher PLC participation and collaboration derived from the lowest 25% among the eighth grade students.

Qualitative instrumentation included interviews, researcher observations using a modified CBAM instrument, researcher journal, and teacher journals. These instruments provided the researcher the ability to discern what themes and patterns gained importance regarding teacher construct of meaning in PLC participation, collaboration, learning RtI based on interview responses, and observations of PLC collaboration within a natural environment, and journal entries. Researcher observation data were measured through patterning key indicators: CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum, along with patterns of stages of concern. Tally marking based on occurrences in each category provided observer data during meetings. Additional data derived from the researcher journal notes taken during the observations.

The Concerns-Based Adoption Model (CBAM) instrument was an existing instrument and considered reliable based on prior use in other research related to teacher learning and collaboration. As an instrument used in observations, this instrument was tested in the past qualitative educational research of Rickey (2008). While this instrument was modified to target specific observable traits for this study, the overall instrumentation and rating on the CBAM was similar to that of Rickey. A copy of the CBAM instrument used by Rickey does exist.

Rickey (2008) used the CBAM was used to measure levels of concern based on stages from personal to interpersonal on a scale of 0-6. In Rickey's qualitative action research study, the researcher and participants used the CBAM to assess the levels of concern revolving around new approaches toward professional development. Although

modified for this study, Rickey's CBAM instrument provided the basis for the idea of recording observable traits. For this study, the modified CBAM assisted the researcher in tracking teacher learning and participant reflection, as well as tracking occurrences of themes and patterns present in PLC collaboration. The generic statement format provided an unbiased observational tool. Using the modified CBAM design, researcher observations made during formal weekly meetings used categories designed for theme and pattern coding: CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum in addition to the stages of concern. These categories found basis through the research questions for the study:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

Each team member kept a reflective journal to record personal growth and learning that occurred because of PLC team collaboration and use of RtI. Agreements based on trust established the use of the journals to record individual experiences implementing RtI in the teacher's discipline area. Meeting minute logs kept by some of the participants further validated the use of teacher journals to reflect on the support of PLC collaboration, shared accountability, and data-informed decision-making to assess personal learning. The meeting minute logs were to assist teachers and were not to be

used by the researcher. Consent forms and adherence to a plan for research further validated the data collected through qualitative instruments.

Teacher journal data were evaluated for themes and patterns on teacher learning based on individual experiences, either positive or negative, when implementing RtI in core curriculum. Additional information from teacher journals provided the researcher with individual and reflective views of PLC collaboration and shared accountability. These individual journal entries included individually kept meeting minute logs from each teacher. Interviews were measured based on teacher experiences within the themes and patterns of collaboration and teacher learning.

Validity and Reliability

The use of exploratory case study design in a qualitative method added to validity and reliability due to the multiple sources of data and the structured CBAM format used by the researcher. Creswell (2009) stated the strength of triangulation as validation and verifiable based side-by-side integration of multiple instruments. The benefit of side-by-side integration found in concurrent triangulation design allows ease in comparisons of qualitative data (Creswell, 2009). The time of the case study was not anticipated to affect the accuracy of data. However, the use of intervention strategies directed toward student outcomes needed to be delivered in a timely manner in order to achieve results related to student achievement. Additionally, the validity and reliability of data were supported using qualitative data derived from tested instrumentation.

Using the multiple qualitative instruments provided insight into the research question. The qualitative methods question upon which this research was grounded, "How do teachers construct meaning from PLC participation to implement RtI in a

collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?" obtained insights into teacher reflections on learning and strategies to promote student achievement through the multiple qualitative instruments. Reliability was determined based on the use of multiple instruments and sources of data due to the ability to corroborate the initial findings aimed at the research question. Additionally, reliability was obtained through the correlation of multiple sources of qualitative data.

Validity and qualitative design instruments. The following qualitative exploratory case study design instruments were used in the study:

Interviews. According to Creswell (2009), open-ended interview questions are valid sources of data based on the allowance of participants to response in a more personal manner. Creswell further defined interviews as qualitative data collection procedure where "the researcher conducts face-to-face interviews with participants" (p. 181). Interview questions were based on the following research questions: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? and How does PLC collaboration on RtI implementation help teachers learn?

Researcher observations. Providing support on the validity of researcher observation, Creswell (2009) stated support for observing activities and behavior of participants at the research site taken by the researcher in qualitative observations. Researcher recordings may be structured or unstructured based on questions the researcher wants to answer (Creswell, 2009). The Concerns-Based Adoption Model

(CBAM) instrument was an existing instrument and considered reliable to assess stages of concern as well as occurrences of themes and patterns of PLC collaboration based on prior use in other research related to teacher learning and collaboration.

As an instrument used in observations, this instrument had been tested in past qualitative educational research of Rickey (2008). The overall instrumentation and rating on the CBAM was modified from that of Rickey through the addition of themes and patterns as previously mentioned and as seen in Appendix F. A copy of the CBAM instrument used in Rickey exists; this instrument provided the basis for the idea of recording observable PLC themes and patterns along with stages of concern. The modified CBAM assisted in tracking teacher learning and participant reflection. The categories designed for theme and pattern coding on the CBAM instrument derived from the study research questions. The literature review was an additional factor in determining categories for the CBAM.

Participant journals. Creswell (2009) posited the use of participant journals as a valid method of data collection for qualitative studies. Journals allow the researcher to gather information based on the words and experiences of the participants (Creswell, 2009). Furthermore, journals allow insight and narrative to the study, which adds to the value of the study in an unobtrusive manner (Creswell, 2009).

Researcher journal. As mentioned in Hatch (2002), researchers need to attend to a variety of nuances within the observation and interview setting. As result, field notes, or a journal to capture descriptions of the observational, or interview setting provides accuracy to data collected (Hatch, 2002). Field notes may be kept in the form of a journal where key points are written and filled in later with detail (Hatch, 2002). A researcher

journal was kept in which nonverbal and other significant cues were logged during interviews and PLC observations.

Reliability and qualitative design. Consistency with all interviews and employing certain procedures ensures reliability with participant interviews (Creswell, 2009). Gibbs (2007) provided the following measures for reliability:

1. Transcripts should not contain evident mistakes made during transcription.
2. There should be no shift or deviation in the definition of codes. Adherence to code definitions occurs through consistent and constant comparison of data with codes. Use of a codebook is recommended.

   (p. 101)

These measures were followed with regard to participant interviews, participant journals, and researcher observations.

Data Collection Procedures

The data collection procedures were divided into several categories. The first category regarded the approvals needed to conduct the study. The second category comprised data collection sources and instrumentation. Third were the data collection procedures followed by categories addressing the validity and reliability for each instruments used in the study.

Approvals to conduct the study. Approval from the Academic Quality Review (AQR) and Institutional Review Board (IRB) at Grand Canyon University (GCU), approval from the school site principal, and site participants contained all qualitative data collection procedures. This measure was taken to provide consideration to those granting approvals.

Grand Canyon University Institutional Review Board. Permission, or approval, to research, Appendix G, was obtained from the Institutional Review Board at Grand Canyon University prior to data collection.

Study site. A letter of informed intent/consent for research, Appendix D, along with an executive summary of the study was given to the principal of the school site. The school site not named in any manner to protect all staff and faculty at the site.

Participant informed consent. Each participant was given an informed agreement/consent form, Appendix B, allowing the researcher to interview, observe, and analyze reflections from a personal journal. All information was kept confidential and teachers were assigned a number to prevent any personal connection to their identities.

School district. Permission, or approval, to research at the school site was obtained from the school district of the school site used in this study as seen in Appendix C. An executive summary of the proposed study provided to the office of Testing and Accountability along with an application to research is on file with the school district. The researcher never had contact with students.

Data collection sources and instrumentation. Strahan and Hedt (2009) found that analyzing observations and interviews with collaborative groups of teachers and the relation to middle school student achievement through an exploratory case study provided valuable evidence of professional growth. The insights possible through participant input through qualitative exploratory case study could prove valuable to the school as we work toward creating a school wide professional learning community culture. Anderson, Nelson, Richardson, Webb, and Young (2011) also found evidence of

the contribution of the researcher observations to understand better the relationship between teacher and student relationships in middle school.

First, the recruitment of the entire population of eighth grade teachers, RtI trained guidance counselor, and reading instructor at the study site occurred through an email, Appendix A. All teachers solicited responded favorably so the teacher sample consisted of all of the eighth grade teachers, RtI trained guidance counselor, and reading instructor at the study site. An informed consent form, Appendix B, followed the recruitment email. The informed consent letters were collected in person from the participants at the study site to ensure validity of participant signatures. The rights and well-being of all participants were protected through confidentiality measures. Any identifiers were removed from observations, interviews, and journals.

All data collected were stored on a password-protected file on a password protected hard drive, as well as, removable file storage, also password protected, to allow transportation of data collected at the study site. Additionally, password protection ensured security of the electronic tools for data analysis. The researcher was the sole individual with access to any data collected to protect study participants further. Upon completion of the study, the data were stored on the password protected hard drive and removable file storage, for a minimal three-year period and then destroyed. The hard drive and removable file storage were reformatted to ensure data destruction. Justification for the three-year period rests in the possibility that questions may arise pertaining to data collection. Destruction was through a complete deletion of all data from the password protected hard drive and removable storage.

Qualitative sources and instrumentation targeted the research questions of the study:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

Interviews. Participant interviews provided a source of data for all of the research questions. The interviews took place during the final week of the study in an effort to glean a comprehensive understanding of participant experiences with PLC collaboration and RtI implementation. Appendix E provides the interview questions adapted for RtI and reading from interdisciplinary team questions (DuFour, DuFour, Eaker, & Many, 2010, p. 125).

Instrumentation for participant interviews. Participant interviews lasted no more than 60 minutes. This provided sufficient time to explain the purpose of the interview and the study elements, as well as, provide time for the participant to feel comfortable with the setting and the researcher. The participants were given an introduction to the researcher and the overall study topic. The participants were given a copy of the interview questions. The time, date, setting, brief description of the study was recorded for each interview. Because the researcher is an administrator at the study site, the location was conducted in a nonthreatening and comfortable environment such as a library, or place chosen by the participant.

The interview questions and participant answers were recorded using two digital audio recorders. Researcher field notes allowed further documentation of interviews and

allowed the researcher to write notes related to nonverbal cues. Interview questions derived from the research questions, which derived initially from a literature review on PLCs, and align to the work of Danielson (2002) and DuFour, DuFour, Eaker, and Many, (2010).

Interview guidelines provided the researcher with structure and increased opportunity for successful interviewing. Hatch (2002) outlined guidelines, which will afford the basis for the study interview process with all teacher participants. The following interview characteristics described in Hatch provided overall parameters in all interviews: respect, genuine interest in the participant, attentive listening, and encouragement to share valued knowledge and experiences.

An explanation of the research purpose gave the participants background knowledge of the study. All open-ended interview questions allow participants to respond without interruption and without bias in specific directions or judgment (Hatch, 2002). Participants were asked to provide the researcher with suggestions as a closure to the interview as encouraged in Hatch (2002). Immediate transcription of all interviews allowed for early analysis and immediate feedback for any possible areas for improvement in future interviews (Hatch, 2002).

Researcher observations. Researcher observations of PLC collaboration meetings looked for occurrences of themes and patterns in behavior as a source of data for the research questions. The modified CBAM was used during the observation. There were a minimum of three observations for the team, which took place over the study duration. The researcher sat off to the side of the room and observed the collaboration meetings. The date, time, setting, and participants present was recorded for each meeting observed.

The observation instrument allowed the researcher to record observable occurrences of themes and patterns of behavior related to the stages of concern. Appendix F displays the modified CBAM and the observable traits. A researcher journal was kept to record additional data.

Instrumentation for researcher observations: Concerns-based adoption model. Researcher observations used the modified Concerns-Based Adoption Model (CBAM) format as an observation instrument, which was an existing instrument to record themes and patterns. The patterns based on stages of concern, the themes based on PLC collaboration traits, and RtI aligned with the research questions. The themes were CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum. A researcher journal was kept for nonverbal cues and other extraneous data observed in the course of the collaboration meeting.

Participant journals. Participant journals provided a source of data based on themes of PLC collaboration and personal experiences implementing RtI for the research questions. The journals were collected during the final week of the study at the time of the participant interview. Central to the journals were the participant experiences related to PLC collaboration and learning RtI.

Participant journals were used as an instrument to gain further insight into the effects of PLC collaboration on learning RtI, along with targeted instruction of reading strands in core curriculum instruction, personal growth and learning through PLC collaboration, and perceived student growth. Patterning was based on themes from the

CBAM, and key words such as RtI implementation, PLC collaboration, learning, student achievement, and accountability. In addition, summaries of teacher experiences were used to address each research question.

Researcher journal. The researcher journal provided additional data regarding the observations and interviews. Settings were recorded, as were nonverbal behaviors throughout the observation and interview process. The journal notes were used to add depth to the data from interviews and CBAM.

Data collection procedures. The basic premise of this qualitative exploratory case study was to collect data from eighth grade teachers related to construct of meaning in PLC collaboration and RtI implementation with the intent to raise reading scores of the lowest 25%. Additional to the data collection was the exploration of PLC collaboration on learning RtI to target the lowest 25%. A possible connection drawn between student growth and teacher learning through collaborative efforts ensued based on shared learning of RtI strategies. Eighth grade students in the lowest 25% in reading were the target group used by participants. The decision to use eighth grade students in the lowest 25% in reading was based on the seemingly higher incidences of at-risk for drop out and disengagement present at this age and a school wide initiative to decrease the achievement gap in reading among these students.

Participant interviews. Participant interviews provided a source of data for all of the research questions. A meeting time, date, and place was given to participants. Participants were versed on the aspects of the study in an agreement form given to each participant at the start of the study. Upon agreement of time, date, and place, the participant and the researcher convened for the interview. The interview time lasted

approximately 60 minutes and took place in a public place of the participant's choosing at the study site to avoid intimidating factors of any nature. Eight participants chose their classroom, one participant chose her office, and one participant chose the school conference room. The interviews were one-on-one between the researcher and the participant.

The researcher audio taped the interview in its entirety and took notes in a researcher journal for additional data on nonverbal cues. The participant was told that the researcher would also record nonverbal behavior and additional notes regarding the interview setting in a journal. At the beginning of the interview, the researcher recorded the date, time, setting, and brief description of the study along with the number code assigned to the participant. The researcher asked each research question in Appendix E. While the expectation of 60 minutes for interview time would be sufficient, there were no time constraints for answering questions. The interviews were given a substantial block of time to eliminate pressure for the participant and researcher.

Researcher observations. Researcher observations of PLC collaboration meetings studied occurrences in PLC collaboration themes and patterns in stages of concern as a source of data to answer the research questions. The researcher attended all PLC meetings held during the six-week time of the study. The researcher did not dictate the number of meetings. The number of meetings was dependent on the necessity of the teacher teams. A team eighth grade teachers representing each of the core disciplines of math, English, science, and history was present along with the RtI trained guidance counselor, and the Reading instructor. The meeting place was at the school site and the PLC collaborative team determined the specific location. The researcher sat off to the

side of the room where the PLC meetings took place in an effort to observe all meeting participants in an unobtrusive manner. Data collection from researcher observations used the modified CBAM instrument. Tallies were marked for each observable theme category. The PLC collaboration themes for observation were CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum. Each time one of the themes was observed a tally was marked next to the category. Patterns of behavior linked to the stages of concern. Occurrences of stages of concern were also marked with a tally as they were observed. The PLC collaboration themes and stages of concern are seen in Appendix F. The researcher kept field notes of nonverbal behavior for further data collection to provide a more complete picture of the PLC meetings.

Participant journals. Participant journals provided a source of data based on PLC collaboration themes and patterns related to RtI implementation and teacher learning for the research questions. Participants were provided a journal method with the corresponding assigned number for the individual to log daily, or weekly, experiences related to PLC collaboration, RtI implementation, and student achievement. Participants kept journals for a six-week period. At the end of the study, the researcher collected the journals and using a researcher journal looked for repetitions in themes and patterns related to the research questions. These repetitions were narrated based on frequencies and patterns among all participants. Notable differences were also narrated and related to the research questions. Journals were kept by the researcher in a location away from the school site and destroyed after analysis and conclusions. Analysis and conclusions of all

participant journals and researcher journal took place in chapters four and five of the study.

Researcher journal. The researcher journal provided a source of data, which enhanced the CBAM, and the interview data through the notes detailing settings and nonverbal behaviors. Additionally, side conversations overheard during the observations provided richness to the overall meaning constructed by teachers participating in the PLC collaboration. The nonverbal behaviors related to knowledge sharing and data-informed decision-making preceded the eventual emergence of additional themes.

Qualitative validity for participant interviews and interview questions. Validity for participant interviews and interview questions was maintained using the same questions for each participant, same recording procedures, and through use of a nonthreatening environment chosen by the participant. The researcher provided the participants with the questions prior to the actual interview. Scheduling the interview was done to accommodate the participant's schedule and without coercion. To ensure validity each participant was given ample time to answer each open ended question. Additionally, as outlined in Teddie and Tashakkori (2009), each participant was asked the same questions. There was no deviation of questions or format for each participant. Transparency occurred through maintaining a setting chosen by participants, introduction to the interview, questions, recording format, and closure of the interview. Appendix E includes the interview questions.

Qualitative validity for researcher observations and CBAM. Validity of the CBAM has been established through previous studies involving adult learning. Dr. Deborah Rickey used the CBAM instrument previously in her study on adult learning. As

mentioned in Rickey (2008), the CBAM was developed by Loucks, Newlove, and Hall in 1976 for comprehension and assessment of individuals involved in practices that are foreign, or new to them. The observation categories were adapted to the research questions of this study. The participants knew category themes and the method of data collection. Appendix F contains the modified CBAM instrument used during observations. The use of a researcher journal provided additional validity to awareness to the details of each observation and the general framework of each PLC meeting.

Qualitative validity for participant journals and collection of journals. Validity of participant journals derived from the personal and independent reflections and recollections of individual participants. The research questions were given to each participant and journal entries recorded personal experiences related to the research questions. Additional information entailed insights gleaned through the RtI learning process and PLC collaboration related to instructional methods and PLC collaborative meetings.

Qualitative reliability and participant interviews and interview questions. To assure reliability, interview questions remained the same for all participants thus assuring the reliability of consistency. The procedures for interviewing did not deviate. The format was the same for all interviews. The location was chosen by the participant. There were no follow-up questions.

Qualitative reliability and researcher observations and CBAM. Based on cautions from Loucks et al., (1976), the CBAM reliability is contingent upon the capability of the researcher. To provide greater reliability to the use of the CBAM as an observational tool, the researcher used a journal to add further observational notations.

Aside from researcher notes, the modified CBAM was the only observation tool used in all meetings. Using tallies to mark occurrences of themes and patterns of the stages of concern in each of the three observations provided reliability when validating researcher notes taken during observations. Nothing deviated in the way of procedures. The researcher did not take part in the meetings, but acted as observer only. The use of a researcher journal added reliability to building memory of each observation and the general framework of each PLC meeting.

Qualitative reliability and participant journals and collection of journals. Each participant was given a copy of the guiding research questions to guide journal entries. Instructions on keeping the journals were not individualized. The only instructions given regarded to not discussing entries with other participants. Journals were given to the participants and were collected in the exact same manner from each participant at the end of the study at the time of the participant interview.

Data Analysis Procedures

Yin (2009) provided four general strategies for case study analysis: theoretical propositions, case description, use of qualitative and quantitative data, and rival explanations. Theoretical proposition as a data analysis protocol relies on the initial theory, or proposition on which the study is developed. Yin cited theoretical proposition as the preferred method based on the shaping of the research question as a guide. Case description may assist when identification of causal links occur and may consist of quantitative analysis (Yin, 2009). Mixing qualitative and quantitative data for case study analysis develops the importance of both forms of data and requires experienced

knowledge in research (Yin, 2009). Yin suggested the use of rival explanations for case study analysis when contrasting explanations exist within the study.

The theoretical foundation of this study found application based on Danielson's claim that when teachers learned, students showed growth in achievement. This qualitative exploratory case study was analyzed using the theoretical proposition from Danielson (2002) that when teachers learned, students showed growth in achievement. Teacher learning was addressed through PLC collaboration to learn RtI implementation with the intent of raising reading scores of the lowest 25% eighth grade students. Furthermore, the idea was that teachers would create meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement. Analysis related to the PLC collaboration themes surrounding the modified CBAM instrument where all data were coded and linked to the following: CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum. Additionally, emergence of any new themes was recorded and analyzed based on data collection instruments.

Due to the nature of this study, analysis of data collected focused on the theoretical foundation that when teachers learn, students show growth in achievement (Danielson, 2002) and as a secondary focus the PLC research of DuFour, DuFour, Eaker, and Many (2010). The research questions developed based on the use of PLC collaboration to learn RtI for improving student achievement in reading. The research questions based on the theoretical foundation:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

Qualitative data collected from participant interviews, participant journals, researcher observations, and the researcher's journal were relevant to the research question based on the guiding theoretical foundation of the study phenomenon related to the relationship of teacher learning and student growth. The use, and choice, of the qualitative instruments derived from the research questions. Data analysis through transcriptions of interview responses, themes occurrences and frequencies, and patterns of stages of concern presented relevance to the research questions and the theoretical foundation. Through data analysis, all findings related to the research questions and the theory that when teachers learned, students showed growth in achievement. Detailed systematic analysis procedures are outlined within each heading related to data collection.

SocioCultural Research Consultants, LLC (SCRC), developed Dedoose out of a need to meet the needs of researchers using case study, qualitative, and mixed methodology (SCRC, 2012). Dedoose allows the case study researcher to build visualizations capable of exposing patterns based on coding and ratings. Dedoose software was used to analyze collected data from all tools. Dedoose allowed the researcher a workspace to connect the four data sources with each predetermined theme. The first step in Dedoose was to describe each data source and the research questions. Codes were then established using first the predetermined themes and then emerging themes once those were identified. Data from each participant based on data source was

placed in the Dedoose workspace. The codes were linked to each data source and the research questions. Then each piece of data related to the codes was analyzed for frequency among all participants, and relation to the research questions. Dedoose allows exporting of frequency tables to Microsoft Excel. Using Dedoose, data was exported to Microsoft Excel to create tables for each predetermined theme for ease of analysis. Multiple views were available using frequency tables. Each is transparent allowing adaptation to the research question, as well as, allowing associations between sets of qualitative data.

Qualitative analysis and participant interviews and interview questions. Following each interview, the digital audio recording was transcribed. Using Microsoft Word, the transcription was coded based on the predetermined themes (CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum) and emerging themes. These transcriptions were imported to Dedoose. Following the coding based on themes, transcriptions were tied to each of the research questions. Tables were created in Excel to organize data by themes. The researcher kept the transcription during the span of the study.

Qualitative analysis and researcher observations and CBAM. Based on the theme categories (CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum) and patterns of stages of concern, which link to the research questions, frequencies were tallied and

copied to the Dedoose workspace. These were then electronically recorded using tables in Microsoft Excel. The data were analyzed for occurrences, patterns related to the research questions within the Dedoose workspace, and the tables created in Excel.

Qualitative analysis and participant journals and collection of journals.

Following analysis within the Dedoose workspace, a table created in Excel was used to analyze themes within participant journals. The researcher used highlighting to mark references to the predetermined themes (CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum) and emerging themes. The researcher reread the journals for additional data while also marking the predetermined themes and emerging themes in the margins of the journal pages. The narrative also related the personal experiences of all participants. Tables were made with summary narratives to provide a comprehensive snapshot of journal entries related to predetermined themes and emerging themes. Table 2 displays the relationship between the research questions, instruments, and analysis.

Table 2

Relationship of Research Question, Instruments, and Analysis

Research Question	*Phenomenon*	*Qualitative Data*	*Analysis*
R1. How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students? R2. How does PLC collaboration on RtI implementation help teachers learn?	Teacher growth and individual experiences with PLC collaboration and RtI implementation	Coding of predetermined PLC themes from Participant Journals, Researcher Observations using CBAM, Transcriptions of Participant Interviews, Researcher Journal, Test Scores	Repetition of predetermined PLC themes and emergence of new themes through markups in participant journals entered into Dedoose software and then Microsoft Excel. Markups of repetitions of PLC themes in researcher journal and from participant interview transcriptions entered into Dedoose software and then Microsoft Excel.

Ethical Considerations

Researcher bias was addressed using a coding process in the observational data collection, triangulation of data using a variety of collection instruments, and teacher input through personal journals. These multiple sources of data reduced the possibility for researcher predisposition. The researcher did not participate or facilitate but rather acted solely as data collector and observer.

Teacher and student confidentiality received the highest consideration through anonymous coding of participants only accessible to the researcher. The researcher guaranteed teacher confidentiality and provisions for withdrawal in writing through an explicit letter detailing the research, which was given to each participant as seen in Appendix B. Student data did not receive attachment to any name due to the nature of the study to focus only on score increases in the lowest 25% in reading. The student data was used by participants. The researcher made no student contact. The 1979 Belmont Report established three tenets for research (Steneck, 2007) that provided guidelines to prevent coercion and risk to study participants. The Belmont Report guidelines are:

1. Respect for participants without coercion from the researcher in decision-making minimal, or no risk to participants with optimal beneficence toward all; and
2. Equal distribution of benefits without prejudice regardless race, gender, mental capacity, or any other perceived disadvantage.

   (Steneck, 2007, p.42)

An informed consent agreement form to maintain complete confidentiality was provided to each teacher participant. In addition, the involved school district and the school site of the case study signed an informed consent form. Anonymity of teacher

participants was guaranteed through the informed consent agreement. All identifiers were replaced with a generic such as Participant A, Participant B, etcetera. As previously mentioned, no student contact or involvement of any nature occurred and teacher contact remained limited to initial guidelines for using RtI, explanation of study background, interviews, researcher observations, and collection purposes only.

The researcher collected qualitative data from the teachers. Teacher involvement consisted of keeping meeting logs for individual and team use, reflective journals, and responses to interview questions. Teacher involvement also included the use of RtI strategies to target the lowest 25% in reading. There were no foreseeable risks to any of the participants in this study based on the anonymity and lack of physical or mental endangerments.

The school and school district names received protection with pseudonyms in all documentation related to this study. There was no use of any identifiers, which could relate to the names of teachers, students, school, or district. All data remained confidential through use of protected electronic devices, such as password-protected data drives stored in the home of the researcher. All participant information was destroyed after the study was completed. FCAT and FAIR data were accessible to the researcher but should not pose any future ethical issues related to the study.

The researcher was an assistant principal at the school site for the study. This ethical concern was considered regarding conduct as an observer and collector of data through maintenance of confidentiality of participant information and adherence to district and state guidelines for conducting research. To help alleviate bias, the researcher had no personal relationship with any of the teacher participants, or financial gain with

the study site or district because of the study. Participation from teachers at the school site was strictly voluntary and coercion to participate was addressed in writing through the informed consent agreement and the recruitment email. Researcher bias through adherence to the use of qualitative data obtained from data collection instrumentation provided safeguard measures.

Student data were protected using assessment data only with no attachment to student names. Another ethical consideration was the compliance with the conducting and administration of the school environment along with the purpose of the school district. This consideration was addressed through the application to conduct research as required by the school district. As stated in Creswell (2009) the following suggestions will be elements in all consent forms:

1. The following will be identified: researcher, sponsoring institution, purpose of the research, benefits to participation in the study, and the degree and type of participation involvement.
2. Explanation of how participants were chosen.
3. Indication of any risks involved in participating in the study.
4. Confidentiality guarantee for participants.
5. Assurance of withdrawal from participation at any time.
6. Provision of contact names, email addresses, and phone numbers if any questions should arise.

(p. 89)

Furthermore, a summary of results and conclusions was made available for all participants. There was no proactive stance from the researcher regarding the study

findings. No labor was exploited through means of bribery or other unethical means, such as position authority, in the publication of the study, and detailed procedures were provided without duplication from any other publication or study.

Limitations

Using qualitative exploratory case study design indicated that limitations might occur in the merging data within qualitative themes. The data collection, instruments, methods, and data analysis procedures limited this study due to lack of adequate time to conduct a longitudinal study. These limitations were not expected to affect the results of the qualitative exploratory case study.

In this study, the priority was given to the multiple sources of qualitative data to gain a more comprehensive perspective of teacher participant construct of meaning. Limitations of this study centered on the small teacher sample. Additional limitations included the short time span, the small school population, and the demographic region of the school. Using a small combined junior and senior high school could significantly limit the relevance of the findings to schools similar in size and demography. However, this study allows expansion to larger schools and school districts. According to Yin (2009), case study data analysis that relies on theoretical foundation allows transfer to different settings.

The study was limited to one site and one grade level and a participation group of ten; however, based on the movement toward instructional appraisal systems with shared accountability, and the growing trend toward PLC collaboration, the potential for generalization within the school district and beyond outweighed this limitation. The results of this study were expected to provide useful information to all participants with

regard to collaboration and professional development related to student achievement in middle school grades. Also of use was the combined effort of RtI implementation within core content areas.

Summary

Chapter 3 described the qualitative exploratory case study methods approach and research design to study construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students. Using concurrent triangulation, the methods, data instrumentation, data collection, and data analysis presented a viable research study for understanding the meaning that teachers gain from PLC participation and collaboration to implement RtI and the effects on student achievement and the use of PLC collaboration for teacher learning. The data collection process of the study involved qualitative data collection through participant interviews, researcher observations, and participant journals. Interviews, researcher observations, and participant journals are valid in the use of data collection (Creswell, 2009). After analysis, Microsoft Excel provided the data summary tool using tables and charts as an analytical strategy.

Ethical considerations to the study added further regard to the research methodology. Measures taken to protect teacher confidentially through informed consent agreements also provided assurances of ethical considerations. Consistency was maintained in all aspects of the study. A summary of results and conclusions were made available for all participants.

Limitations due to sample size and study duration were not expected to deter the purpose of this research. This research provided educators relevant evidence regarding

teacher learning and student growth in the areas of interdisciplinary PLC collaboration. Implementation of RtI and focus on shared accountability added relevance, which outweighed limitations. While possible limitations due to integrating data were present, multiple qualitative data were expected to provide a broad viewpoint from the overlapping of data.

Chapter 4 affords the data collection procedures and the analysis of qualitative data. A detailed description of findings analyzed as related the research questions provide the reader with a comprehensive view of evidence on teacher construct of meaning regarding PLC participation and collaboration to implement RtI with the intent of improving reading achievement for the lowest 25% eighth grade students. Chapter 5 delivers a summary of results, a conclusion, and recommendations for future studies.

Chapter 4: Data Collection and Analysis

The purpose of this qualitative exploratory case study was to examine how teachers created meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement. The study purpose aligns with Yin's 2003 definition (as cited in Baxter and Jack, 2008) that exploratory case study seeks to link program implementation and program effects. As an exploratory case study, the researcher of this study sought to understand how teachers constructed meaning regarding PLC participation and collaboration with application of RtI for students in the lowest 25% at-risk for reading. The use of PLCs to work collaboratively for implementation of RtI to improve reading was new to the study site. Targeting improvements in reading among shared students identified as at-risk in the lowest 25% reading was also new to the study site. A group of middle school core content teachers learned to implement Response to Intervention (RtI) strategies to raise reading scores of shared students in the lowest 25%. Scores derived from seventh grade Florida Comprehensive Assessment Test (FCAT) data provided the lowest 25% student population. The FCAT is Florida's standards based assessment given to all students in grades 3-12. Students must pass the 10^{th} grade FCAT as part of the graduation requirements.

Teachers monitored student achievement through Intensive Reading scores and Florida Assessments for Instruction in Reading (FAIR) scores, both pre-study and post-study. FCAT and FAIR data are standards based assessments given to students in the Florida public school system. Both FCAT and FAIR have been evidenced through content related evidence, criterion related evidence, and construct related evidence

(FLDOE, 2004). FAIR, a standards based assessment is given three times a year: fall, winter, and spring, to all students in Florida. The Florida Center for Reading Research (FCRR), defines FAIR as, '. . . assessment system provides teachers screening, diagnostic, and progress monitoring information that is essential to guiding instruction' (FLDOE, 2009).

Intensive Reading instruction is required for these students. Based on Florida Statute 1003.48, the Florida Department of Education 2011-2012 Student Progression Plan states:

> For each year in which a student scores at Level 1 on FCAT Reading, the student must be enrolled in and complete an intensive reading course the following year. Placement of Level 2 readers in either an intensive reading course or a content area course in which reading strategies are delivered shall be determined by diagnosis of reading needs (FLDOE, 2011, p. 23).

Interdisciplinary, interdepartmental instruction of reading and use of RtI in content areas in an eighth grade environment in central Florida set the stage for examining how teachers construct meaning from participating in PLCs to collaboration on RtI strategies for the lowest 25% in reading.

Because of interest to understand how teachers created meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement, a qualitative exploratory case study approach was selected. A qualitative exploratory case study approach provided the insight of participant experiences present in qualitative procedure through participant journals, interviews, researcher journal, and observations of PLC meetings. A concurrent triangulation qualitative methods

exploratory case study was the best choice design for this study based on the qualitative nature of PLC collaboration and teacher learning. The qualitative methodology based on the social constructivist worldview, which seeks to understand individual experiences within a natural environment added value to the study of human growth and experience (Creswell, 2009).

Research Questions

The following research question provided guidance to this qualitative methods exploratory case study.

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

A qualitative exploratory case study method provided the insight of participant experiences present in qualitative approach. The chosen design for this study found relevance based on the qualitative nature of PLC collaboration and teacher learning. The qualitative processes were related to themes based on the CBAM model: CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum. Interdisciplinary instruction of reading and the respective delivery methods, along with use of RtI, comprised differentiated strategies that aligned to the curriculum of the subject discipline for each teacher participant.

This chapter provides the details on the collection, summary, and analysis of data. Descriptive details on collection and organization of data, along with procedures used to analyze data, outline this chapter. A discussion of data analysis and summary of analysis related to the research question provide the structure for this chapter

Descriptive Data

The study population derived from a central Florida combined junior and senior high school with a predominantly lower middle to upper middle socio-economic class that is 74.3% Caucasian. The economically disadvantaged group was 16.8% in 2010-2011 and the ELL group was 1.5%.

The sample for the study came from the population of eighth grade teachers. The students connected to the teacher sample were eighth grade students who scored in the lowest 25% on the seventh grade FCAT reading given during the spring of 2012. The student population of eighth grade students at the study site was approximately 215. The 25% at-risk group, which made up the student concentration group for the teacher sample was approximately 17% of the eighth grade site population. The researcher had no student contact. Teachers used assessment data gathered through the Florida Department of Education Progress Monitoring Reporting Network (PMRN), District database for the initial FCAT scores, and Edline teacher electronic grade reporting system. Table 3 provides a breakdown of the FCAT scores for the student sample including each reading strand. These were the initial data teachers used to determine the student population. All students failed to achieve a passing score of 228 needed to pass FCAT.

Table 3

Lowest 25% Eighth Grade Students Based on FCAT Reading Scores

Students in Lowest 25% FCAT Reading	FCAT Grade	Current Grade	Pass 2012 Score Needed to	Pass 2012 Level Needed to	2012 Actual Reading Score	2012 Actual Level Reading	Vocabulary	Reading Application	Literary Analysis: Fiction and Nonfiction	Reference/ Research	Vocabulary	Reading Application	Literary Analysis: Fiction and Nonfiction	Reference/ Research
S100	7	8	228	3	223	2	8	11	6	5	89%	73%	60%	45%
S101	7	8	228	3	218	2	5	9	7	6	56%	60%	70%	55%
S102	7	8	228	3	218	2	6	7	7	7	67%	47%	70%	64%
S103														
S104	7	8	228	3	201	1	5	7	3	3	56%	47%	30%	27%
S105	7	8	228	3	205	1	7	5	5	3	78%	33%	50%	27%
S106	7	8	228	3	227	2	7	8	8	8	78%	53%	80%	73%
S107	7	8	228	3	217	2	7	6	8	5	78%	40%	80%	45%
S108	7	8	228	3	215	2	4	8	7	5	44%	53%	70%	45%
S109	7	8	228	3	225	2	6	10	7	7	67%	67%	70%	64%
S110	7	8	228	3	225	2	7	11	6	6	78%	73%	60%	55%
S111	7	8	228	3	210	1	5	6	6	5	56%	40%	60%	45%
S112	7	8	228	3	226	2	7	10	8	5	78%	67%	80%	45%
S113	7	8	228	3	225	2	6	9	7	9	67%	60%	70%	82%
S114	7	8	228	3	222	2	6	10	5	9	67%	67%	50%	82%
S115	7	8	228	3	207	1	5	7	6	4	56%	47%	60%	36%
S116	7	8	228	3	227	2	7	11	6	7	78%	73%	60%	64%
S117	7	8	228	3	227	2	5	12	8	6	56%	80%	80%	55%
S118	7	8	228	3	220	2	4	9	6	9	44%	60%	60%	82%
S119	7	8	228	3	221	2	6	10	7	5	67%	67%	70%	45%
S120	7	8	228	3	221	2	7	10	6	5	78%	67%	60%	45%
S121	7	8	228	3	218	2	3	9	7	6	33%	60%	70%	55%
S122	7	8	228	3	227	2	8	9	9	6	89%	60%	90%	55%
S123	7	8	228	3	226	2	6	10	8	7	67%	67%	80%	64%
S124	7	8	228	3	227	2	7	11	8	6	78%	73%	80%	55%
S125	7	8	228	3	201	1	3	8	3	5	33%	53%	30%	45%
S126	7	8	228	3	216	2	6	7	5	7	67%	47%	50%	64%
S127	7	8	228	3	220	2	6	9	7	5	67%	60%	70%	45%
S128	7	8	228	3	223	2	7	12	6	5	78%	80%	60%	45%

The teacher participant population consisted of eight, eighth grade teachers, one guidance counselor for exceptional education students, and one reading teacher. The teacher participants ranged in age and years of teaching experience. The table below provides descriptors related to number of years teaching or number of years within the field of education and the highest degree held by participants within the teacher population.

Table 4

Teacher Participant Descriptors

Number Of Years Teaching/Field Of Education	Highest Degree Held
10	M.ED.
30	M.S.
11	M.ED.
10	B.S.
3	B.S.
25	M.ED.
18	B.S.
2	B.S.
1	B.S.
16	M.ED.

The average number of years taught among the participant group was 12 years. The subject areas taught covered the core content areas of math, English, science, and history (MESH). An additional area was included because there was not a second history teacher sharing the lowest 25% in FCAT reading. This teacher was a technology exploration teacher. Five of the participants hold Master's degrees, four in Education, and one a Master's of Science in Math Education. The remaining five participants hold Bachelor of Science degrees.

Data Analysis

Qualitative data collected from participant interviews, participant journals, researcher observations, and the researcher's journal were relevant to the research questions based on the guiding theoretical foundation of the study phenomenon related to the relationship of teacher learning and student growth. Participant interviews were held in a location of the participant's choice. The questions were the same for all participants. The interviews were recorded and researcher notes were taken in a researcher journal. Once the interviews were transcribed and uploaded to Dedoose, any references to the predetermined themes (CC= Collaboration and Collegiality, DI= Data-informed

instructional decisions, RtI=Intervention strategies implemented, KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum) were placed in a table. Emerging themes were analyzed the same way. Participant journals were highlighted according to the above, predetermined themes and emerging themes uploaded to Dedoose workspace, then placed in a table for ease of use. For the researcher observations, each stage of concern instance was counted and recorded first in an Excel spreadsheet, which uploaded to the Dedoose workspace. The same was done for the predetermined theme occurrences seen in the observations. Researcher notes of observations were analyzed for theme emergences and highlighted. These were recorded in Excel spreadsheet format and then exported to Dedoose, which allowed linking among all data sources, as well as, linking to predetermined themes, emerging themes, and the research questions.

How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students defined research question one and how does PLC collaboration on RtI implementation help teachers learn defined research question two. The research questions provided the basis for data analysis. To provide structure, the data analyzed for the study related to the data collection format and tool. Qualitative data derived from observations of participants in PLC collaborative meetings, interviews with participants, and participant journals. Qualitative data from observations of PLC collaborative meetings was first analyzed using a Microsoft Excel spreadsheet based on descriptive themes based on the CBAM model: CC= Collaboration and Collegiality, DI= Data-informed instructional decisions, RtI=Intervention strategies implemented,

KS=Knowledge sharing, and R=Reading instructional practices and integration across the curriculum.

Visual displays in the form of graphs provided a snapshot of the data for comparison among the three observed PLC collaborative meetings. The data from Dedoose exported to Excel where graphic displays were created to provide descriptive analysis. Additional qualitative data from participant interviews was placed into individualized tables for each participant then combined based on responses relating to the themes listed above. Extraction of journal data based on the themes entered in a table indicated theme occurrences among participants. Each journal entry, interview question response, and CBAM data were notated based on the themes. Emerging themes were notated based on frequency of occurrence among the participants.

A modification occurred with regard to the teacher participant groups based on teachers sharing the same students in the lowest 25% on FCAT Reading. There was only one history teacher sharing these students with other core curriculum teachers, so the exploration of technology teacher replaced a second history teacher. This was determined based on shared students. The teachers requested to meet as one team for all meetings. The request was made based on lack of time for the intensive reading teacher and the RtI trained guidance counselor to meet with multiple teams.

Analysis of data from three PLC collaboration observations related to occurrences of the following predetermined themes: Collaboration and Collegiality (CC), Data-informed instructional decisions (DI), Intervention strategies implemented (RtI), Knowledge sharing (KS), and Reading instructional practices and integration across the curriculum (R). To add depth to the stages of concern within teacher learning and

collaboration involvement, further analysis of observation data relied on the following concerns based adoption model:

Stage 0-Observational stage and note taking

Stage 1-Sharing information through writing or verbal exchange

Stage 2-Connecting with team members on implementation of RtI within core content curriculum

Stage 3-Team discussions on implementation of RtI in core content areas, sharing of data, and integration of reading strands in all curriculums

Stage 4-Sharing student data and instructional practices with PLC team members

Stage 5-Collaborative data-informed decision-making on shared students and integrating reading across the curriculum

Stage 6-Willingness to assist team members with targeted instruction based on data-informed decisions in specific core content curriculum

Interview data related to the following themes: Collaboration and Collegiality (CC), Data-informed instructional decisions (DI), Intervention strategies implemented (RtI), Knowledge sharing (KS), and Reading instructional practices and integration across the curriculum (R). Patterns of importance based on occurrence placed on each theme provided overall trends among the participants. Another point of qualitative data surrounded overall understanding of RtI and differentiated strategies for students in the lowest 25% reading, along with clarity of Strategic specific, Measurable, Attainable, Results oriented, and Time bound (SMART) goals to target areas collectively of concern among the student population.

Analysis of participant journals relied on teacher experiences related to PLC collaboration, RtI use in core content areas, and possible learning gains among students in the lowest 25% in reading. Participant journal entries were attached to the theory of teacher learning related to student growth and to the predetermined themes used for observational and interview data, along with the research questions. Participants related experiences implementing RtI strategies to target reading among students in the lowest 25%. While the journals relied on personal experience, possible emergence of themes could provide insightful evidence of teacher learning effecting student achievement.

Assurance of validity and reliability of data were addressed for qualitative data analysis. For qualitative assurances, data collection occurred through instruction to participants on journals that the teachers kept during the six-week period of the study. Participants were instructed to journal on their experiences with Collaboration and Collegiality (CC), Data-informed instructional decisions (DI), Intervention strategies implemented (RtI), Knowledge sharing (KS), and Reading instructional practices and integration across the curriculum (R) along with a central focus on the research questions. No training was provided concerning journaling of experiences. Bias from participants or persuasion from others was addressed through instructions not to share journal entries. Journals were collected individually at the time of the participant interview.

Validity and reliability of participant interviews were assured through one-on-one interviews using the same fourteen questions based on the research questions in a comfortable setting and time chosen by the participant. The format was the same for each participant. With permission to record obtained from each participant, the researcher used two recording devices to assure proper recording, validity, and reliability of the

interview. Reliability and validity of data was further through researcher notes taken during the interview to capture nonverbal and environmental cues. Transcription of the recordings and researcher notes occurred within twenty-four hours. Once the transcriptions occurred, the recordings were listened to again to check for errors in transcription or missed data. Repeated listening to interview recordings provides additional reliability and validity assurances (Al-Yateem, 2012).

For validity and reliability of observation data, location and time of day remained the same for all observations. Tallies marked consistently throughout each observation on the CBAM recorded theme and stages of concern occurrences during each PLC meeting. Researcher observations allowed nonbiased awareness of teacher interactions within PLC collaboration. The observations permitted the experience of documenting emerging themes resulting from collaboration, data and knowledge sharing, and individual experiences related to the student group and RtI. The researcher took notes in a researcher log to fill in nonverbal and environmental cues present during the PLC meetings.

Transcription of notes was within twenty-four hours. Comparison of CBAM tallies occurred within 24 hours of the third and final PLC meeting. To address possible sources of error and impact on data due to researcher bias or mistakes made during transcriptions, the researcher made transcriptions of observation, journal, and interview data available to individual participants. Continual checking for errors during analysis took place through triangulation. Consistency in relating qualitative data to themes and checking for accuracy in recording data ensued throughout the analysis process.

Organizations of results of analysis are by data type and corresponding collection tool. The organization allowed insight into the data collected and the case study analysis of each qualitative data set. Each analysis related to the research questions.

Observations of professional learning community collaborative meetings. All collaborative meetings were held in the classroom of one of the teacher participants. It was the same location for each meeting. Three meetings were held over 6 weeks. The meetings were held at the same time of the day, lasting approximately 30 minutes.

The researcher acted as an observer only and had no participatory role during any of the meetings. The researcher sat off to the side of the room, in the same location every meeting. The location enabled the researcher to observe all participants. The meetings were held in the classroom of one of the participants. The researcher took notes on nonverbal cues as well as notes on emerging themes. The participants sat in a circle made up of student desks. For the remainder of the analysis of results reference of each teacher participant was TP-A through TP-J to encompass all teacher participants. Acknowledging the Hawthorne effect, which as stated in Brannigan and Swerman (2001), and Chiesa and Hobbs (2008), denotes the changes in behavior that occur when participants are aware of observation, the researcher sought to focus solely on the stages of concern and descriptor themes of the CBAM instrument. Separation of participant sentiments toward school administration or current policies along with the self-interests of participants was at the forefront of objectivity and focus on the research at hand. To avoid possible uncontrollable variations in observations, each observation was done in the same manner mentioned above. The following the statement in Brannigan and Swerman (2001), any inconsistencies present between research results and possible reverence of the Hawthorne

effect should be treated as independent and different types of knowledge, this provided the researcher with resolution for any possible challenges resulting from the Hawthorne effect itself.

Observation number one. All participants were present for the first PLC collaboration meeting which began with TP-A providing each PLC team member with documentation on RtI. The following documentation relates researcher notes during the PLC collaboration meeting:

TP- C: spoke about differentiated instruction and differentiated treatment of students

TP-A: means of gathering information, always doing interventions

TP-A: went through the tiers of RtI while others were looking through notes, handouts, and taking notes. There was captive attention. Gave direction on where to find information on district website. Went through different data to use as risk factors. Data pulled from various sources such as grades, discipline, and attendance records.

TP-D and TP-F: both asked for data on students and mentioned that ISS (In school suspension) was also a risk factor.

TP-C: stated that free and reduced lunch information was also important information

TP-A: spoke about how RtI should go as far as school, administration should also be involved.

TP-G: wanted to know how to address the students in the lowest 25% with RtI

TP-A: stated that a data team meets regularly getting data team to meet regularly to assess and reassess.

TP-C: stated that some students in the lowest 25% are maybe not true lowest 25% due to a bad year or other factors. Can we find opportunities to move them out of the lowest 25%?

TP-C: dropout / graduation rate many who never get out of middle school, she knows of some personally.

TP-I: students in lowest 25% take longer to engage/ and often choose to shut down.

TP-D: assign older athlete when kids get zeroes, peer mentoring also an option

TP-A: peer mentoring can be very successful

TP-C: next meeting time, date, and place. Will send FCAT data to all team members. Also will provide learning gain list for all eighth graders.

TP-F: will get all FAIR data

Observation number two. TP-A was absent from PLC Collaboration meeting number two. Participants chose different seating and TP-F opened the meeting with FAIR data from the lowest 25% FCAT reading students. The following documentation relates researcher notes during the PLC collaboration meeting:

TP-I came in late

Discussion about behavioral issues in class. Part of RtI is behavioral data, PC led the conversation 80% of the students are not making learning gains

TP-D provided a handout

TP-H asked what learning gains were and how this was measured

FCAT achievement levels changing

TP-F shared information on FCAT levels and fair scores

TP-C explained the changes in FCAT achievement levels related to FCAT 2.0

Comparison of scores between pre FCAT 2.0 and FCAT 2.0 was discussed

Side bar conversations between TP-J and TP-I over FCAT scores

TP-F tracking of lowest 25% from 2008 to 2012

Many students who were previously not in the lowest 25% dropped to lowest 25% in 2012

TP-J said many of her problems were behavioral related rather than academic

TP-D mentors students who do not want to receive help due to behaviors

TP-J students do not care about doing work and shared observational notes

TP-B stated that students are lacking life and organizational skills

TP-C stated that lowest 25% needed to be addressed with behavioral interventions

TP-F set up next meeting

Observation number three. TP-J was absent from PLC Collaboration meeting number three. The circle of student chairs was moved toward the back of the room for this meeting. There appeared to be no apparent reason, or motive, perhaps the change was due to an ongoing classroom activity. The following documentation relates researcher notes during the PLC collaboration meeting:

TP-C: stated that each should take two students in lowest 25% to mentor.

Students are at-risk and there are many behavioral issues among the lowest 25%

TP-I: stated that the collaboration and mutual accountability team has the same goals with mentoring

TP-G: related to professional growth plan of the principal on mentoring

TP-D: talked about one student in lowest 25% and his progress--he is more assured with his work

TP-B and TP-H: shared information about another student and her progress in science and math

TP-I: stated that the same student mentioned by TP-B and TP-H did not want to be in his science class

TP-B: mentioned that RtI could provide some structure and management when used to address these types of issues

TP-A: mentioned the need for a homeroom class to teach strategies for success such as organizational skills

TP-C: mentioned a book titled surviving middle school

TP-B: stated the Ruby Payne training incorporated the use of RtI for management skills and organizational skills

TP-F: stated that behaviors were incorrectly channeled

TP-D: conferences with students and parents is needed

TP-I: made comments that some students do not want to excel

TP-C: brought the discussion back to mentoring stating that there needs to be a focus

TP-I: stated he will mentor and that he does reading comprehension in science

TP-G: uses FCAT explorer for reading comprehension as part of homework

TP-D: uses comprehension lessons

TP-E: will mentor her lowest 25%

TP-A: mentoring is an informal way to get to know the students better and to help with achievement

TP-G: suggested that each participant choose students to mentor

As a breakdown of tallied instances of themes recorded by the researcher on the CBAM Table 5 displays a comparison of the three PLC meetings and the frequency of each of the theme descriptors during each meeting. Frequencies were recorded based on the number of instances when conversation relating to, or sharing of, any of the themes occurred within the PLC collaboration meetings.

Table 5

Comparison of Themes from PLC Collaboration Meetings Based on Occurrences

Observation	*CC= Collaboration and Collegiality*	*DI= Data-informed instructional decisions*	*RtI= Intervention strategies implemented*	*KS= Knowledge sharing*	*R=Reading instructional practices and integration across the curriculum*
PLC MEETING 1	28	25	9	48	13
PLC MEETING 2	43	22	17	50	9
PLC MEETING 3	32	19	9	41	21

The comparison among theme frequencies in each PLC meeting was based on frequency markers, specifically tallies, entered on the CBAM instrument by the researcher. The theme Collaboration and Collegiality (CC) had 43 instances among teacher participants in PLC meeting number 2, which was the highest frequency of the three meetings. The theme CC had 32 instances among teacher participants in PLC

meeting number 3, and 28 instances in PLC meeting number 2. The highest number of instances for the theme, Data-Informed Instructional Decisions (DI), occurred in PLC meeting number 1at 25 observed instances. PLC meeting 2 had 22-recorded instances and PLC meeting 3 had 19-recorded instances.

The theme Intervention Strategies Implemented (RtI), occurred more frequently in PLC meeting number 2 with 17 instances. PLC meetings 1 and 3 had the same number of occurrences for RtI at 9 instances each. Knowledge Sharing (KS), theme occurred most frequently during PLC meeting number 2 with 50 instances. PLC meeting number 1 had 48 instances and PLC meeting number 3 had 41 instances. The theme Reading Instructional Practices and Integration Across the Curriculum (R) occurred more frequently in PLC meeting number 3 with 21 instances. PLC meeting number 1 had 13 instances of R and PLC meeting 2 had 9 instances of R.

During the first observation, the teacher participants spent a substantial amount of time-sharing knowledge, listening, and observing each other. Collaboration and collegiality, data-informed instructional decisions, and reading instructional practices and integration across the curriculum provided shared accountability with some demonstration of teacher learning. During observation number two, the PLC collaboration showed an increase in collaboration and collegiality, data-informed instructional decisions, and intervention strategies implemented. Reading instructional practices and knowledge sharing were apparent in the second meeting, but there was a decrease in these two themes.

PLC Collaboration meeting number three showed a decrease in collaboration and collegiality from meeting two, but was equal to meeting one. Data-informed instructional

decisions decreased when compared with meetings one and two. Intervention strategies implemented was the same in meetings one and three. Knowledge sharing decreased when compared with meetings one and two. Reading instructional practices and integration across the curriculum occurred less frequently in meeting one but more than meeting two.

Another point of analysis from PLC collaboration meetings derived from the observation of concerns based stages of collaboration. The researcher used the CBAM instrument seen in Appendix F to tally observed themes, as well as, stages of concern. Theme analysis occurred first and then stages of concern were analyzed based on observable occurrences. Stages of Concern revolved around the stages of experiences surrounding innovation. In this qualitative exploratory case study, the innovation was to establish PLC participation using interdisciplinary collaboration to implement RtI for the lowest 25% eighth grade students in reading. Stage 0 represents the stage of general awareness and information gathering, where Stage 6 represents collaboration among team members to work toward an end goal (Loucks, et al., 1976). In this study the purpose was to investigate the Danielson (2002) theory that when teachers learn students show growth in achievement through the construction of meaning among the teacher participants to use PLC collaboration in implementing RtI in all classes with the intent of increasing reading scores among the lowest 25% eighth grade students. Teacher learning occurred through PLC collaboration as the avenue to learn RtI implementation to increase student achievement in reading. The stages of concern relate to teacher learning developmental phases, which link to Danielson's suggestion that middle school teachers work together in teams representing the core disciplines. Innovation in the development as a PLC

collaboration team to implement RtI played a role in teacher learning. Table 6 displays the results of concerns based stages of new experience, or innovation.

Table 6

Comparison of Stages of Concern from PLC Collaboration Meetings Based on Frequencies

Stages Of Concern	Observation #1	Observation #2	Observation #3
0-Observational stage and note taking	27	36	17
1- Sharing information through writing or verbal exchange	34	77	35
2- Connecting with team members on implementation of RtI within core content curriculum	57	15	40
3-Team discussions on implementation of RtI in core content areas, sharing of data, and integration of reading strands in all curriculum	5	5	13
4-Sharing student data and instructional practices with PLC team members	0	8	17
5-Collaborative data-informed decision-making on shared students and integrating reading across the curriculum	0	0	0
6-Willingness to assist team members with targeted instruction based on data-informed decisions in specific core content curriculum	0	0	0

In PLC meeting, or researcher observation, number 1, teacher participants demonstrated 27 occurrences of Stage 0 concern with note taking and observational (watching) stage. Stage 1, which entailed sharing of information through written or verbal exchange, occurred 34 times as recorded by the researcher. Stage 2,connecting with team members on implementing RtI within core content curriculum occurred 57 times in PLC meeting number 1. Stage 3, team discussions on implementing RtI in core content areas, sharing data, and integrating reading in all core content curricula was observed 5 times in PLC meeting number 1. Stages 4-6 were not observed in PLC meeting number 1.

In PLC meeting number 2, stage 1 was observed with 36 occurrences. Stage 1 was observed with 77 occurrences and stage 2 was observed with 15 occurrences. Stage 3 was

observed with 5 occurrences. Stage 4 among the teacher participants, sharing student data and instructional practices with PLC team members was observed with 8 occurrences. PLC meeting number 2 provided no observable occurrences of stages 5 and 6. Stage 4 was first observed among the teacher participants in PLC meeting number 2. Stage 3 was observed with the same instances in PLC meetings 1 and 2.

Stage 0 was observed with 17 occurrences and stage 2 was observed with 35 occurrences in PLC meeting number 3. In PLC meeting number 3, stage 2 was observed with 40 occurrences and stage 3 was observed with 13 occurrences. Stage 4 was observed with 17 occurrences in PLC meeting number 3. PLC meeting number 3 provided no observable occurrences of stages 5 and 6.

Stage 0 was observed more in PLC meeting number 2, with 9 more observable instances than PLC meeting 1 and 19 more observable instances than PLC meeting 3. Stage 1 was observed more in PLC meeting number 2, with 43 more observable instances than PLC meeting 1 and 42 more observable instances than PLC meeting 3. Stage 2 was observed more in PLC meeting 1, with 42 more observable instances than PLC meeting 2 and 17 more observable instances than PLC meeting 3. Stage 3 was observed the same number of instances in PLC meetings 1 and 2 with an increase of 8 more observable instances in PLC meeting 3. Stage 4 was observed more in PLC meeting 3, with 9 more observable instances than PLC meeting 2, and 17 more observable instances than PLC meeting 1. Stages 5 and 6 were not observed in any of the meetings.

Teacher participants preferred the stages of observation and note taking, sharing information through writing or verbal exchange, connecting with team members on RtI implementation, and team discussions of RtI in core content areas throughout meetings

one and two. The trend was to stay within stages O through 2 in all meetings. Meeting 2 showed some sharing of student data and instructional practices, but meeting three was where most of stage 4 was observed. Perhaps stage 4 occurred more in meeting three due to an increase in familiarity among participants and an increase in comfort level concerning RtI implementation. Stage 1 appeared more in meeting two than meetings one and three. This level of concern possibly relates to the handout and the emergence of behavioral issues related to academic achievement linked to RtI. Stage 2 occurred as a concern more in meetings 1 and 3. Perhaps the mention of shared students and discussion of strategies within individual classrooms prompted the increase in these two meetings. Mentoring was a key topic in meeting 3, which brought students of concern to the forefront.

Participant interviews. All participants were interviewed. The researcher allowed participants to choose the interview setting, time, and date. All participants chose to stay at the study site for the interviews. All but one chose their own classroom for the interview location. TP-C chose to hold the interview in a conference room located near the front office area. All participants were given a copy of the interview questions prior to the scheduled interview. The questions were the same for all participants. The researcher recorded each interview and took notes in a journal during the entire interview time. Following the interviews, the recordings were downloaded onto a password-protected computer at the researcher's home. To ensure further protection of participant information, the recording files received a password known only to the researcher.

A chart for each participant (TP) related the results from the interviews. The participant chart provided the interview questions and the condensed responses based on

key words for each question. Comparisons among participants allowed the researcher to look for the themes used in the modified CBAM (Collaboration and Collegiality, Data-informed instructional decisions, Intervention strategies implemented, Knowledge sharing , and Reading instructional practices and integration across the curriculum). The data from the participant charts was placed in Tables 9 - 13 for each theme. Table 7 displays the interview responses as related to interview questions with exception of questions 1 and 2, which ask for overall experience in education and current teaching position respectively. The responses displayed relate to teacher participant code, for example TP-A, TP-B, through TP-J for the ten teacher participants.

Table 7

Interview Questions and Responses Related to Themes

Interview Question	CC= Collaboration and Collegiality	DI= Data-informed instructional decisions	RtI= Intervention strategies implemented	KS= Knowledge sharing	R= Reading instructional practices and integration across the curriculum
4: Describe your previous experience with RtI.	TP-A, TP-C, TP-D, TP-F	TP-G, TP-I, TP-J	TP-J	TP-C, TP-D, TP-F, TP-J	TP-I
6: What criteria do you use to assess reading achievement?		TP-B, TP-C, TP-F, TP-G, TP-H, TP-I, TP-J	TP-G, TP-I, TP-J		TP-B, TP-D, TP-E, TP-G, TP-H, TP-I, TP-J
8: Is there a member of your PLC team with expertise in RtI?	TP-J			TP-A, TP-C, TP-D, TP-J	
3: Describe your experience with PLC teams and collaboration.	TP-B, TP-C, TP-D, TP-F, TP-G, TP-H, TP-I, TP-J	TP-G	TP-H, TP-I, TP-J	TP-F, TP-G, TP-H, TP-I, TP-J	
5: How are RtI strategies for reading integrated in you subject area?		TP-B, TP-C, TP-D, TP-F, TP-G, TP-H, TP-I, TP-J	TP-B, TP-C, TP-D, TP-F, TP-G, TP-H, TP-I, TP-J		TP-B, TP-C, TP-D, TP-F, TP-G, TP-H, TP-I, TP-J
13: How do you align RtI with FCAT reading strands?	TP-G	TP-C,TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J	TP-C, TP-D, TP-E, TP-F, TP-J	TP-G, TP-H	TP-J

7: How do you know if RtI strategies are implemented effectively?		TP-A, TP-B, TP-C, TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J	TP-C, TP-E, TP-J		TP-J
12: Do you align RtI with FCAT reading strands?		TP-B, TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J	TP-B, TP-D, TP-E, TP-G, TP-H, TP-I, TP-J		TP-B, TP-C, TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J
9: How will you know if students are becoming better readers?		TP-A, TP-B,TP-C, TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J	TP-B, TP-C, TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J	TP-A, TP-G,	TP-B, TP-C. TP-D, TP-E, TP-F, TP-G, TP-H, TP-I, TP-J
10: Are there elements in your curriculum that you can eliminate or curtail to provide greater emphasis on reading strategies?					TP-D, TP-E, TP-G, TP-H, TP-I, TP-J
14: Has PLC collaboration and team data analysis helped you learn RtI integration within your subject area?	TP-A, TP-B, TP-C, TP-D, TP-F, TP-G, TP-H, TP-I, TP-J	TP-A, TP-B, TP-C, TP-D, TP-F, TP-G, TP-H, TP-I, TP-J	TP-B, TP-C,TP-I	TP-A, TP-B, TP-C, TP-D. TP-F, TP-G, TP-H, TP-I, TP-J	TP-G
11: How do you use PLC team established SMART goals to implement RtI?		TP-E	TP-I		TP-I

Participant responses to interview questions 4, 8, 3, 13 and 14 related some importance to theme CC with question 14 relating to all but one of the participant with regard to importance, or significance related to collaboration and collegiality. Teacher participants A, C, D, and F found collaboration and collegiality related to their experiences with RtI. Teacher participants B, C, D, F, G, H, I, and J related collaboration and collegiality as positive components in their experience with PLC teams and collaboration.

Interview questions 4, 6, 3, 5, 13, 7, 12, 9, 14, and 11 derived importance to the teacher participants in the theme DI. Of the above questions, questions 4, 3, and 11 did

not receive an indication of relation to the question, or an indication of significance by more than 5 of the teacher participants. Data-informed instructional decisions related to the overall RtI, PLC, and reading assessment as seen by responses.

Implementation of intervention strategies, or RtI, related to questions 4, 6, 3, 5, 13, 7, 12, 9, 14, and 11. Teacher participant responses linked to RtI were more prevalent with questions 5, 13, 12, and 9. Prevalence occurred as more than five participants found significance with RtI in their responses to these questions.

Knowledge sharing, or KS, related to questions 4, 8, 3, 13, 9, and 14. Five or more Teacher participant responses linked the KS as significant for questions 3 and 14. Based on responses, questions 4 and 8 provided links to KS from four participants, while questions 13 and 9 provided links to KS from two participants.

Reading instructional practices and integration across the curriculum, or R, related to questions 4, 6, 5, 13, 7, 12, 9, 10, 14, and 11 based on participant responses. Questions 4, 13, 7, 14, and 11 had one teacher response with an indication of significance; questions 4, 13, 7, and 11 were related to the same teacher participant. The remaining questions, which elicited responses pertaining to R, were from five or more teacher participants.

Additionally through the interview process, the researcher was able to understand better the individual experiences of each participant. This understanding of individual experiences occurred through the in-depth responses given to the interview questions as well as the opportunity for the researcher to observe nonverbal cues during the time of each interview. As mentioned in Al-Yateem (2012), qualitative interviews provide the researcher the supposition of accuracy regarding participant experiences. Each participant was asked to state their name, age, number of years teaching, or number of years in

education, and degree type as shown in Table 5 with the exception of participant names. The degree type related to Bachelor Degree or Master Degree for all participants. Statements 1 and 2 provided some background to questions three through fourteen.

TP-A interview. TP-A was interviewed in her office. There were no interruptions. The interview lasted eighteen minutes and forty-eight seconds. TP-A was very thoughtful throughout the interview, taking time to answer each question with careful consideration. Often leaning toward the researcher while answering questions, this seemed to suggest a desire to comprehend fully each question.

Questions three, six, seven, ten, twelve, and fourteen were not applicable to TP-A based on the role of guidance counselor. These questions related to classroom teachers and provided no relevance for TP-A. TP-A believes that collaboration is a key component to learning RtI and successful implementation. There is a need to continue with the PLC Collaborative group implemented from of this study as stated by TP-A. TP-A believes student achievement will increase over time with continued meetings and growth in RtI.

TP-B interview. TP-B was interviewed in a Science classroom after school. There were no interruptions during the interview. The interview lasted twenty-one minutes and fourteen seconds. TP-B answered all questions with thoughtful responses and was often quiet prior to answering. This seemed to suggest careful consideration of the question and reflection on how to respond. Very open and willing to share, TP-B seemed happy to be part of a research study.

TP-B was not aware of anyone with RtI expertise within the PLC Collaborative team of eighth grade teachers. TP-B was also unsure of SMART goals and expressed not

knowing what that meant. TP-B expressed desire to continue with PLC Collaboration and RtI implementation and indicated that RtI could be beneficial to struggling students.

TP-C interview. The interview for TP-C took place in the front office conference room. The interview lasted ten minutes and forty seconds. There were several interruptions as people passed through the room. A door connecting the media center with the conference room provides a short cut to the front office. TP-C ignored the distractions. The interruptions totaled three. TP-C was very open and happy to participate in the interview.

TP-C does have experience in RtI and is gathering experience with PLC collaboration within an educational setting. Prior to choosing a profession in education, TP-C was a corporate employee within banking. According to TP-C, PLC collaboration practiced routinely within the corporate world was the arena where she learned much of the experience for collaboration and sharing data. TP-C stated that SMART goals had yet to be established but had hopes that the PLC collaborative research study group would continue.

TP-D interview. The interview for TP-D took place in the participant's classroom. The interview lasted thirteen minutes and twenty seconds. TP-D remained serious and thoughtful for the duration of the interview, often sighing. TP-D appeared open to the interview and willing to assist the researcher with the study. There were two interruptions with students coming into the classroom to work, but TP-D made them understand not to disturb quickly and quietly.

The amount of paperwork required in the study site school district and the State of Florida seemed to distress TP-D. She did seem interested to continue the learning process

on RtI and mentioned that there was value to using interventions in all areas. There was discussion on the three tiers of RtI after the interview was complete and TP-D realized that she understood RtI more than she thought initially.

TP-E interview. The interview for TP-E took place in the participant's classroom. The interview lasted fourteen minutes and forty-seven seconds. TP-E looked down throughout the interview and kept pulling at her fingers. It seemed that TP-E was unsure of herself and her answers. Perhaps this behavior relates to being a young teacher with only two and one half years of experience. The phone rang while the interview was in process and TP-E seemed unsure as to what to do. Eventually TP-E decided not to answer the telephone.

TP-E mentioned that finding mentor teachers had been difficult based on the movement from various teams. This participant has been on several teams of teachers and has not experienced true collaboration as a result. TP-E stated the desired to continue with the PLC collaboration team of teachers established for the study. Learning RtI was an area of struggle for TP-E because she has very little background; but TP-E would like to learn to integrate RtI strategies in her math and technology courses.

***TP-F interview*.** The interview for TP-F took place in the participant's classroom. The interview lasted 17 minutes and 55 seconds. TP-F offered the researcher candy at the onset. To maintain an atmosphere of scholarly research, the researcher declined politely. TP-F seemed excited to be a part of the study and eager to provide answers.

TP-F seemed to have knowledge of RtI and implementation of strategies to increase learning gains in reading. The participant attended RtI training at the study site during the spring of 2012. TP-F stated differentiation and data-informed instructional

decisions integrate on a consistent basis in her classes. The idea of continuing the PLC collaboration team established for the study centered on targeting life and organizational skills for students.

TP-G interview. The interview for TP-G took place in the participant's classroom. The interview lasted fourteen minutes and thirty-nine seconds. TP-G appeared relaxed, but overwhelmed by paperwork when the researcher entered the classroom. TP-G did state that he was happy to help and would like to conduct the interview.

TP-G spent six years teaching in a State of Florida prison for juvenile offenders prior to the present school district. TP-G stated that he loves teaching and learning new strategies. The hope for changes in the Florida Department of Education protocols regarding pay ranked high as a concern for TP-G. This participant voiced concerns over lack of funding overall for education. The idea of teachers learning from each other in PLC collaboration seemed important to TP-G. TP-G spends time analyzing student data and working on behavioral strategies to assist student achievement.

TP-H interview. The interview for TP-H took place in the participant's classroom. The interview lasted eleven minutes and forty-one seconds. The researcher had to wait approximately five minutes for TP-H to arrive. Once TP-H arrived, the researcher and participant went into the classroom. TP-H appeared excited to participate in the interview but apprehensive based on lack of overall teaching experience. TP-H is a young teacher with two years of teaching experience. TP-H stressed a great love for her chosen profession but a dislike for paperwork involved in teaching.

TP-H voiced concern over having no experience with RtI, but seemed open to learning more through the PLC collaborative group formed for the study. TP-H seemed

convinced that RtI strategies to improve reading comprehension could apply to word problems in math. The use of highlighters to find key words within word problems is a strategy applied for RtI in the participant's classes. TP-H stated the alignment of FCAT and common core curriculum within math which indicated that the participant felt this needed nothing more in terms of instructional or intervention planning.

TP-I interview. The interview for TP-I was conducted in the participant's classroom. The interview lasted twenty-two minutes and ten seconds. TP-I seemed happy to participate in the interview and confident in all of his answers.

TP-I seemed to enjoy the interview process and had an answer for every question except the question relating to a PLC member with RtI expertise. TP-I is a young, first year teacher and does not yet know too many of the faculty members at the study site. The participant displayed energy and excitement for teaching and voiced content with the ever changing and evolving profession of education. TP-I stated that opportunities for collaboration were present while at the university, but PLC collaboration is something new to him. TP-I voiced a desire to continue to collaborate and address student issues. According to TP-I RtI as a method for intervention, while discussed frequently at the university, has been an area lacking experience in implementation. The use of RtI for behavioral issues is a big interest for TP-I.

TP-J interview. The interview for TP-J took place in the participant's classroom. The interview lasted sixteen minutes and forty-four seconds. TP-J appeared helpful and excited to participate in the study interview. TP-J was relaxed but determined in her responses throughout the interview.

TP-J stated that teaching was a good experience and there was joy in teaching. TP-J stated concerns for lack of parent support and too many meetings. PLC team meetings provide benefit to discussing students with academic and behavioral concerns, but the number of meetings is not necessary. TP-J voiced concern over spending time in meetings rather than addressing paperwork. TP-J stated that students continue to have to same problems and nothing changes. RtI to address behavioral issues, or discipline problems, brought no change. The problems remain the same, but no improvement may mean RtI is not the answer. SMART goals do not exist yet and the area in math that can target reading comprehension is word problems. All math curriculums are state driven and nothing can change; but reading intertwines throughout the content area.

Collaboration, knowledge sharing, and data-informed instructional decision-making resulting from PLC participation added value to the participants. There was a desire to continue participation in PLC collaborative meetings to address the needs of eighth grade students in the lowest 25%. The consensus was that the lowest 25% in reading also represented students with either behavioral or organizational deficiencies. As a result, additional uses of RtI emerged.

The emergent themes surfacing from the teacher participants because of the interviews centered on using RtI as methodology to addressing discipline issues, organizational issues, and concerns with lack of student performance. These emergent themes seemed to form two distinct themes: Behavioral which entails RtI applied to discipline, or behavioral concerns, and Organizational Skills, which entails RtI applied to lack of organizational skills linked to lack of performance, or possibly student responsibility to completing assignments. Participants related the use of RtI to address

these themes, which would have an overall, lasting positive effect on reading achievement.

Participant journals. Participants were given journals to record personal experiences related to PLC team collaboration, data-informed decision-making, learning to implement RtI related to the subject area taught, and student achievement concerns. Most journals were collected at the time of the interview; however, four participants requested an additional day because they wanted to add more related to their experiences. For the purpose of analysis participant journal experiences were organized by PLC collaboration themes used on the CBAM, experiences with RtI, and emergence of new themes.

Related experiences from the journals seem to indicate that the use of collaboration and data-informed decision-making relates to learning RtI and student achievement. Differentiated instruction not only links to academic performance but to behavioral performance as found in participant journals. The journals uncovered further emergences of behavioral concerns linked to low academic performance on FCAT, FAIR, Intensive Reading, and classroom assessments. In the case of several participants but also used for behavioral concerns along with organizational and management concerns. Table 8 displays each of the teacher participant journal entries as related to each of the predetermined themes.

Table 8

Participant Journal Entries Related to Themes

Teacher Participant	*CC= Collaboration and Collegiality*	*DI= Data-Informed Instructional Decisions*	*RtI= Intervention Strategies*	*KS= Knowledge Sharing*	*R=Reading Instructional Practices and Integration Across the Curriculum*
TP-A		X		X	X
TP-B	X	X	X	X	X
TP-C	X			X	
TP-D		X	X	X	X
TP-E	X		X	X	X
TP-F	X	X	X	X	X
TP-G		X	X	X	X
TP-H			X		X
TP-I			X	X	
TP-J	X		X	X	

Five out of the ten teacher participants did mention collaboration and collegiality in journal entries. Four out of the ten participants related to data-informed instructional decisions while seven out of the ten provided references to the use of intervention strategies. Nine out of the ten participants had journal entries relating to knowledge sharing, or importance of knowledge sharing related to student achievement. Seven out of ten of the participants had entries, which related to reading instructional practices and integration across the curriculum.

Journal entries for teacher participants B, C, F, G, I, and J related to the use of RtI for behavior modification and organizational skills linked to turning in assignments and completion of classwork. Organizational and planning strategies along with relationship building garnered through targeted RtI strategies was a concern for TP-I. The reflection posed was to use RtI to find ways to address issues of organization and planning and does it related to improved grades and FCAT scores. TP-J related to the use of data, which showed a decrease in levels on FCAT where behavioral issues had increased.

Results

Results were broken down by the predetermined and emergent themes. A table for each theme provides a display of data obtained from PLC observations, participant interview responses, and participant journal entries. Descriptions of each table provide the relationship of the data with regard to the research questions. Both research questions were addressed with all data collection and data analysis.

Research question 1 (RQ_1). How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students defined RQ_1. This question was examined through researcher observations, researcher journal, participant journals, and interviews. To answer this question analysis of results from observations, participant journals, and interviews based on frequency occurrences as related to each theme. Each theme then tied to the research questions based on the relationship to collaboration and teacher learning and student achievement.

Research question 2 (RQ_2). How does PLC collaboration on RtI implementation help teachers learn defined RQ_2. This question was examined through researcher observations, researcher journal, participant journals, and interviews. To answer this question analysis of results from observations, participant journals, and interviews based on frequency occurrences as related to each theme. Each theme then tied to the research questions based on the relationship to collaboration and teacher learning implementation of RtI. For this study, research question two relied more on interview questions and journal entries due to the personal experiences related through the interview process and the journal entries.

Theme: Collaboration and collegiality. According to journal entries of the participants, collaboration and collegiality are critical to RtI and addressing the needs of students in the lowest 25% in FCAT Reading. Occurrences of collaboration and collegiality increased by fifteen occurrences between PLC meeting number one and PLC meeting number two. There was a decrease of nine occurrences between PLC meeting number two and PLC meeting number three; however, there was an increase from PLC meeting number one when related to the following PLC meetings. Interview data related to collaboration and collegiality appears to stress the importance of collaboration and collegiality when learning RtI and discussing student data and instructional strategies. Table 9 provides a snapshot of the occurrences of Collaboration and Collegiality from all three qualitative data collection instruments.

Table 9

Collaboration and Collegiality Related to Qualitative Data Collection

Data Collection Instrument	Theme: Collaboration and Collegiality
CBAM: Observations	PLC Collaboration Meeting #1: 28 observed occurrences PLC Collaboration Meeting #2: 43 observed occurrences PLC Collaboration Meeting #3: 32 observed occurrences
Participant Interviews	TP-A: "Collaboration is a key to success for RtI" TP-B: "PLC collaboration is helpful . . . see the value in RtI for eighth grade . . ." TP-D: ". . . like the idea of PLC collaboration . . ." TP-G: ". . . learning how to analyze data, new strategies . . ." and ". . . reading and PLC collaboration integrates across the disciplines." TP-H: "… sharing strategies and techniques …" TP-I: "PLC collaboration allows discussion of student issues." TP-J: "RtI is discussed routinely because the team received training." and "PLC teams are beneficial to discussing students' academic and behavioral problems . . ."
Participant Journals	TP-B: "Collaboration provides a more accurate picture of the whole student and RtI may benefit all students in all courses." and "Collaboration should be long term to help teachers learn and students achieve." TP-C: "good team in place with teachers willing to work with lowest 25% and implement RtI strategies for impact on student learning gains." TP-E: "need to work with PLC collaborative team to learn how to implement RtI and provide material that is centered on strategies " TP-F: "focus group for RtI is a good idea" TP-J: "implement RtI focus of PLC collaborative group"

As seen in Table 9, collaboration and collegiality related to RQ1 indicates a desire to participate in PLCs and collaborate with colleagues through observed occurrences of collaboration and collegiality, as well as, participant interview responses related to collaboration and collegiality. All PLC observations indicated collaboration and collegiality among participants. Journal entries support the desire to collaborate in PLCs to improve student achievement. Participant construction of meaning in PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students derives from a collective desire to collaborate long term. TP-B journal entries: "collaboration provides a more accurate picture of the whole student and RtI may benefit all students in all courses" and "collaboration should be long term to help teachers learn and students

achieve," TP-B responses mirror TP-G interview responses to question number 3 and question number 14 with the following excerpts: ". . . learning how to analyze data, new strategies. . . " and ". . . reading and PLC collaboration integrates across the disciplines."

As seen in Table 9, collaboration and collegiality related to RQ2 indicates collaboration and collegiality as factors to teacher learning. As previously mentioned, observation of collaboration and collegiality was present in all PLC meetings. Participants provided the following within journal entries related to collaboration and collegiality as part of teacher learning:

TP-B: "collaboration provides a more accurate picture of the whole student and RtI may benefit all students in all courses" and "collaboration should be long term to help teachers learn and students achieve"

TP-C: "good team in place with teachers willing to work with lowest 25% and implement RtI strategies for impact on student learning gains"

TP-E: "need to work with PLC collaborative team to learn how to implement RtI and provide material that is centered on strategies"

TP-F: "focus group for RtI is a good idea"

TP-J: "implement RtI focus of PLC collaborative group"

All of the interview questions provided significance to RQ1 through the individual responses and the relation to personal experience with PLC participation and collaboration related to implementation of RtI to improve reading scores among the lowest 25%. Significant overall responses to questions 3, 8, and 11 related to a desire to continue with PLC collaboration and the importance of working as a team to analyze data and target areas of learning deficiencies among shared students provided positive

indications that PLC participation and collaboration is meaningful and worthwhile. TP-J in response to question three stated, ". . . PLC teams are beneficial to discussing student with academic and behavioral problems." Question 8 related to expertise among PLC members. Four of the participants stated that TP-C and TP-A were the experts, while the remaining six felt that at this point no one was an expert but that time and continuation of the PLC collaboration would help. Question 11 indicated a strong desire among all ten participants to continue with PLC participation and collaboration post study. The use of PLC participation and collaboration to implement SMART goals for RtI for behavioral and organizational needs remained a concern for TP-I. TP-I stated, "Time bound is essential to getting anything done . . . success is critical to time bound, and . . . ability in reading is limited with behavior . . ." The other 9 participants stated the importance of SMART goals, but felt that none had been established at the time of the interviews.

Overall responses related to collaboration and collegiality is provided in Table 9. With the exception of teacher participants C, E, and F, all participants provided some response related to collaboration and collegiality as significant in the interviews. Overall, collaboration and collegiality provided an important component to PLC participation and RtI implementation.

Interview question 14 as seen in Appendix E, directly related to RQ2. All participants related the importance of collaboration to teacher learning. TP-G summed the importance of PLC collaboration related to teacher learning with the response, "PLC collaboration and team data analysis helped with RtI integration for all disciplines . . . strategies are shared among teachers and struggling students are identified . . ." TP-I also

mirrored this response with an addition related to the usefulness of collaboration in lesson planning and identification of problems.

Theme: Data-informed instructional decisions. As seen in Table 10, data-informed instructional decisions are integral with targeted, differentiated instruction according to the journal entries, interview questions, and PLC observations. PLC collaboration meeting number two showed the highest rate in data-informed instructional decisions occurrences. Data-informed instructional decisions found significance to teachers with regard to RtI and the differentiation of instruction based on the interventions used to increase student achievement. Use of prior test data, along with data from standardized state assessments such as FCAT and FAIR provided teachers with the ability to differentiate instruction based on individual needs. FCAT and FAIR data related to student success in reading and provided teachers with data for RtI strategies. Table 10 provides a snapshot of the occurrences of data-informed instructional decisions from all three qualitative data collection instruments.

Table 10

Data-informed Instructional Decisions Related to Qualitative Data Collection

Data Collection Instrument	Theme: Data-Informed Instructional Decisions
CBAM: Observations	PLC Collaboration Meeting #1: 25 observed occurrences PLC Collaboration Meeting #2: 42 observed occurrences PLC Collaboration Meeting #3: 19 observed occurrences
Participant Interviews	TP-A: "Using student success to make decisions…" TP-B: ". . . vocabulary exercises, QNotes, and outlining. . . " TP-D: "FAIR data, FCAT data, and common core. . ." TP-E: ". . . positive gains in academic and behavioral performance . . . " TP-F: ". . . differentiated reading instruction based on student needs. . . " and ". . . growth in FAIR and FCAT scores. . . " TP-G: ". . . teachers learning to analyze data . . . new strategies . . ." TP-H: ". . . differentiated instruction and incorporating technology with RtI . . . " and ". . . focus on research projects, summative and formative assessments . . . " TP-I: ". . . using prior test data and implement RtI in areas of weakness . . . " and "…higher test scores to gage success . . ." TP-J: ". . . academic and behavioral improvements . . . "

Participant Journals	TP-B: "differentiated instruction and differentiated treatment of students"and "RtI allows differentiated instruction for students", and "identify lowest 25 % and track risk factors for each" TP-D: "FCAT and FAIR data compared: informational text is an issue" TP-F: "differentiated instruction is continual and addressed according to student needs" and "data collection is important for understanding lowest 25% and RtI" TP-G: "monitor and repair for reading strategies and RtI targeting the lowest 25% ", "80% of all seventh and eighth graders did not make learning gains according to FCAT reading scores", and "lowest 25% dropped at least one level over the course of the last four years"

Table 10 displays the overall findings related to data-informed decision-making and the meaning found among the teacher participants. Data-informed decision-making was present in all PLC meetings. Meeting two was more active with data-informed decision-making due to explanations provided by TP-C regarding changes in FCAT and comparisons of scores among students. Tracking of reading achievement levels in the lowest 25% student population was shared through data collected by TP-F. Data related to behavior problems was mentioned by TP-J and TP-B. TP-D related the possible use of mentors to assist students with behavioral issues, which prevents increased reading achievement. RtI used for behavioral and organizational issues became the focal point.

Theme: Intervention strategies implemented. Intervention strategies occurred by teacher participants as related in the participant journals, interviews, and PLC meeting observations. PLC meeting observations showed the same number of references to intervention strategy implementation in meetings one and three. Meeting number two showed an increase of eight from meetings one and three. The use of differentiated instruction as part of RtI appeared as a trend among the teacher participants. Focus on reading activities based on student readiness, or student needs, appeared to surface among multiple teacher participants. Table 11 displays a snapshot of the occurrences of Intervention strategies implemented from all three qualitative data collection instruments.

Table 11

Intervention Strategies Implemented Related to Qualitative Data Collection

Data Collection Instrument	Theme: Intervention Strategies Implemented
CBAM: Observations	PLC Collaboration Meeting #1: 9 observed occurrences PLC Collaboration Meeting #2: 17 observed occurrences PLC Collaboration Meeting #3: 9 observed occurrences
Participant Interviews	TP-B: ". . . vocabulary exercises, QNotes, and outlining. . . " TP-C: ". . . interventions used in everything from academics to behavior . . ." TP-D: "FAIR data, FCAT data, and common core. . ." TP-E: "positive gains in academic and behavioral performance…" and ". . . informational text use . . ." TP-F: ". . . differentiated reading instruction based on student needs . . ." ". . . growth in FAIR and FCAT scores . . ." and ". . . aligning RtI with FCAT reading strands . . ." TP-G: ". . . highlighting techniques incorporated with word problems and focus on RtI for mastery in reading . . ." TP-H: ". . . differentiated instruction and incorporating technology with RtI . . ." and ". . . focus on research projects, summative and formative assessments . . ." TP-I: ". . . portions of text and enrichment activities to link to informational text and FCAT . . ." TP-J: ". . . word problems, vocabulary, and other activities to transition and intervene for student growth . . ." and ". . . success of students receiving RtI through modified interventions . . ."
Participant Journals	TP-D: "should create informational text articles for background stories to relate with curriculum" and "using guided reading as RtI strategy" TP-E: "working with students in math and reading and trying to make sense of how to implement RtI" TP-F: "reading silently alternated with guided, oral reading for strategies and checks for fluency", "highly focused reading activities for focus on FCAT reading strands target skills in a focused method", and "RtI implemented for behavioral modifications" TP-G: "monitor and repair for reading strategies and RtI targeting the lowest 25%" TP-H: "highlighting techniques for RtI reading strategies", "read once, find comparisons, use two colors of highlighters", and "many students will skip over details in reading, so highlighters call attention to this detail." TP-I: "organizational and planning strategies equals RtI implementation occurring in classroom" and "another RtI implementation occurring is the building of relationships with these students" TP-J: "RtI has been instituted in classrooms with shared lowest 25% but behavior is still an issue"

Table 11 indicates an increase in intervention strategies implemented in PLC meeting two. Strategies for those not making learning gains was a discussion point because TP-C stated that 80% of the lowest 25% had not made learning gains in reading

as shown by FCAT and FAIR data. TP-D provided a handout of strategies to implement for students in the lowest 25%. Interview questions five and seven related to the implementation of RtI strategies or the integration of RtI strategies. In response to interview question five, TP-G provided insight on the use of document-based questions (DBQs) to integrated reading strategies in social studies curriculum. In response to interview question seven, TP-F stated the use of data from FAIR to assess the implementation of RtI strategies and the overall effectiveness of each intervention.

Theme: Knowledge sharing. Sharing data and knowledge on RtI appeared to find importance to the following participants as noted in the journal entries, interviews, and PLC meetings. Knowledge sharing was present in all three PLC meetings with PLC meeting number two showing the highest number of occurrences. The difference in knowledge sharing between meeting one and meeting three was seven occurrences and between meeting two and three, the difference was nine occurrences. Between meetings one and two, the difference was two. Sharing knowledge related to instructional techniques and strategies seemed important to teacher participants. Knowledge sharing among teachers appeared to provide support in raising student achievement among the lowest 25%. Table 12 provides a snapshot of the occurrences of Knowledge sharing from all three qualitative data collection instruments.

Table 12

Knowledge Sharing Related to Qualitative Data Collection

Data Collection Instrument	Theme: Knowledge Sharing
CBAM: Observations	PLC Collaboration Meeting #1: 48 observed occurrences PLC Collaboration Meeting #2: 50 observed occurrences PLC Collaboration Meeting #3: 41 observed occurrences
Participant Interviews	TP-A: ". . . continuation with PLC meetings important to success with RtI . . ." TP-B: ". . . PLC team meetings a big help with RtI . . ." TP-C: ". . . knowledge in RtI . . . " and ". . . would like to obtain more tools and knowledge . . ." TP-D: ". . . TP-C and TP-A sharing knowledge on RtI . . ." TP-F: ". . . enjoying team sharing among 8th grade teachers . . ." and "sharing life skills and organizational skills for students to be successful . . ." TP-G: ". . . learning to analyze data . . ." and ". . . reading integrates across curriculum . . ." TP-H: ". . . sharing techniques and strategies . . ." and "using RtI related to reading in Math…" TP-J: ". . . RtI discussed routinely based on team training . . ."
Participant Journals	TP-A: "mention of reference informational strand in FCAT reading for focus in all curriculum areas" and "list of lowest 25% --eighth grade students" TP-B: "RtI presentation from TP-A: district website with multi-tiered system of support", "rehab and how RtI applied there", "explanation of learning gain for FCAT explained as 11 point gain but need more clarification and information", " share with PLC group a book by Ruby Payne Research Based Strategies: Narrowing the Achievement Gap for Under-Resourced Students", and "planning, predicting, cause and effect, consequences, impulsivity, inclination toward criminal behavior from a neurological study" TP-C: "behavior of students often dictated by the way teacher treats students" and "many students fail due to poor classroom management and RtI can help with this" TP-D: "learning about RtI and how to implement" and "mentoring as RtI strategy for lowest 25%" TP-E: "initially had no idea for RtI and now understand that an individual education plan or a behavior plan is not necessarily equated to RtI" and "RtI is not just raising test scores but much more" TP-F: "graphic comparison of FCAT reading achievement levels for lowest 25% over the past four years provided to PLC collaborative group" TP-G: "80% of all seventh and eighth graders did not make learning gains according to FCAT reading scores", "lowest 25% dropped at least one level over the course of the last four years", "perhaps a bad test day or deliberate sabotage of the test", and "mentoring could be a good strategy and good way to apply RtI for lowest 25%" TP-I: "address students with academic issues and find ways to improve rate of success with these students" TP-J: "behavior issues and students not making learning gains", "learning gains equates to points from FCAT reading", "reading scores of lowest 25% presented and students in eighth grade a concern", "behavior more of a problem and RtI may focus there", "following rules and consistency in all classrooms with rules", and " rigid discipline ladder to address behavior"

As seen in Table 12, knowledge sharing appears as a meaningful tool for RtI success and PLC participation and collaboration, which related to RQ1. Knowledge sharing provided meaning to PLC participation and collaboration for RtI implementation to increase reading scores as indicated by TP-F: ". . . enjoying team sharing among 8th grade teachers . . ." and "sharing life skills and organizational skills for students to be successful . . ." in response to experience with PLC teams and collaboration. Knowledge sharing related to RQ2 as indicated by responses generated from interview question 14, see Appendix E, from TP-G: ". . . learning to analyze data.." and ". . . reading integrates across curriculum . . ." and TP-H: ". . . sharing techniques and strategies . . ." and "using RtI related to reading in Math . . .".

Theme: Reading instructional practices and integration across the curriculum. Several participants seemed to relate to learning how to integrate reading with their curriculum, which was significant to the differentiated strategies employed by teachers and the delivery method conducive to the content area. The willingness to learn appeared to be present in journal entries among those who mentioned integration and learning to target reading. Also present was the use of reading strategies across curriculum. Teacher participants appeared to relate reading to the subject area taught as seen in excerpts from participant interviews and journal entries. PLC meeting number three showed the highest number of occurrences in reading instructional practices and integration across the curriculum at twenty-one versus thirteen in PLC meeting number one and nine in PLC meeting number two. Table 13 provides a snapshot of the occurrences of Reading instructional practices and integration across the curriculum from all three qualitative data collection instruments.

Table 13

Reading Instructional Practices and Integration Across the Curriculum Related to Qualitative Data Collection

Data Collection Instrument	Theme: Reading Instructional Practices and Integration across the Curriculum
CBAM: Observations	PLC Collaboration Meeting #1: 13 observed occurrences PLC Collaboration Meeting #2: 9 observed occurrences PLC Collaboration Meeting #3: 21 observed occurrences
Participant Interviews	TP-B: ". . . note taking on what is heard and seen from a short video clip . . .", "outlining and note taking. . .", "radio reading and 15 minute rule…" and "focus on vocabulary" TP-C: ". . . progress monitoring of achievement TP-D: "Reader responses and Socratic discussions . . .", ". . . aligning FCAT, FAIR, and common core . . ." TP-E: Vocabulary and reading achievement through word problems . . ." and ". . . informational text activities . . ." TP-F: ". . . increasing levels of engagement and addressing anxieties students may have toward reading . . ." TP-G: ". . . deciphering key points and word problems . . ." and ". . . using alignments present with reading strands and curriculum . . ." TP-I: ". . . emphasize reading comprehension in Science . . ." and ". . . use time bound goals and focus on a specified time table to accomplish reading goals . . ." TP-J: ". . . transference from word problem to equation . . ." and ". . . use aligned FCAT with RtI in reading and math . . ."
Participant Journals	TP-A: "mention of reference informational strand in FCAT reading for focus in all curriculum areas" TP-B: "need a combination of reading and management strategies with RtI TP-D: "should create informational text articles for background stories to relate with curriculum" and "does RtI relate to general reading interventions" TP-E: "working with students in math and reading and trying to make sense of how to implement RtI" TP-F: "reading silently alternated with guided, oral reading for strategies and checks for fluency" and "highly focused reading activities for focus on FCAT reading strands target skills in a focused method" TP-G: "monitor and repair for reading strategies and RtI targeting the lowest 25% " TP-H: "highlighting techniques for RtI reading strategies", "read once, find comparisons, use two colors of highlighters", and "many students will skip over details in reading, so highlighters call attention to this detail"

Table 13 displays overall significance related to reading instruction and integration across the curriculum. Journal entries for all participants with the exception of TP-C and TP-I related to some use of reading instruction, or integration, in all subject areas. The importance of reading instruction was related to Math and Science success as seen by TP-B, TP-E, TP-G, TP-H and TP-I responses to interview questions six and 10.

According to the qualitative data there seemed to be some connection concerning teachers learning RtI through collaboration for teacher learning and student achievement. This likely related to movement from Stage 0-Observational stage and note taking to Stage 4-Sharing student data and instructional practices with PLC team members as seen in Figure 1. Stage 0 represents the stage of general awareness and information gathering, where Stage 6 represents collaboration among team members to work toward an end goal (Loucks et al., 1976). Movement from Stage 0 to Stage 4 increased by 25 occurrences from Observation number one to Observation number three as participants began to share data and instructional practices. Observation number three showed a trend of increased sharing of student data and instructional practices where the teacher participants seemed more willing to openness with instructional practices and student achievement within content areas. Stages 5 and 6 were not observed.

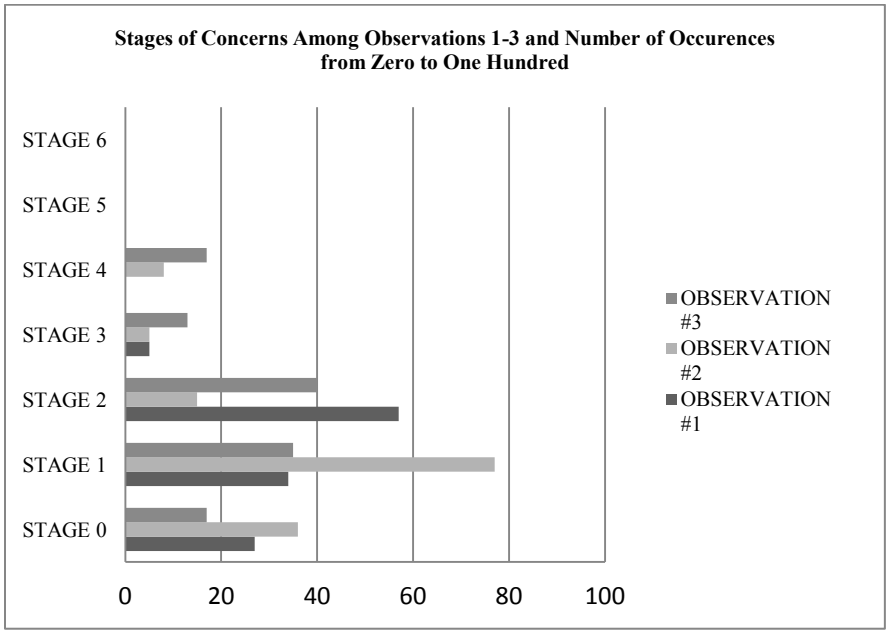

Figure 1. Occurrences of Stages of Concerns for Observations 1-3.

Figure 2 displays the occurrences of the themes as related to the PLC collaboration meetings. The connections may be seen through the overall increase in occurrences related to collaboration and collegiality, data-informed instructional decisions, intervention strategies implemented, knowledge sharing, and reading instructional practices and integration. The increases in most of the themes occurred as linked to observations two and three. Meeting two showed higher instances of Collaboration and Collegiality, RtI Intervention Strategies Implemented, and Knowledge Sharing than meetings one and three. Meeting one showed higher instances of Data-Informed Instructional Decisions than meetings two and three. Meeting three showed higher instances of Reading Instructional Practices and Integration than meetings one and two.

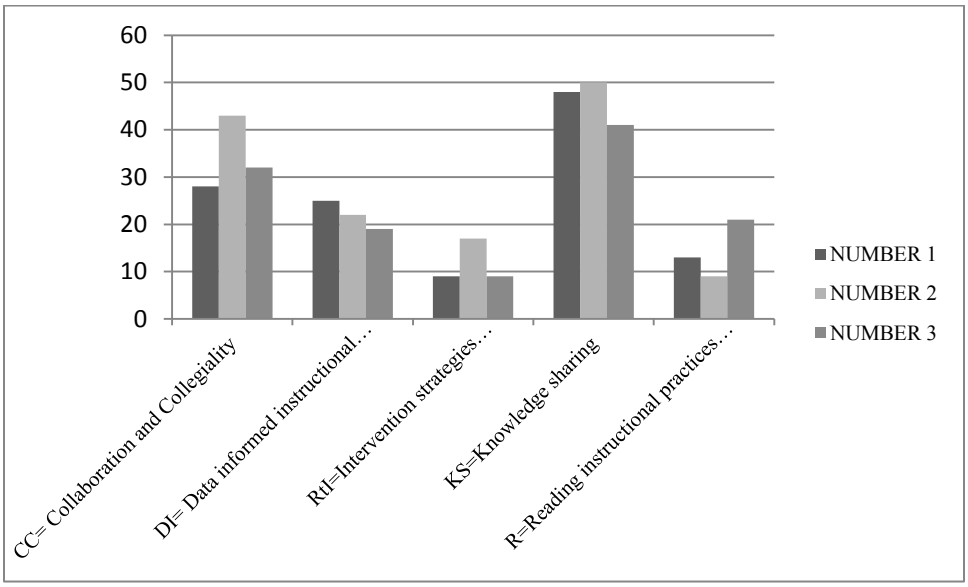

Figure 2. Frequency Occurrences of Themes from PLC Meetings.

Emerging themes. The themes emerging from the PLC observations, interview questions, and journal entries were the use of RtI to address targeted behavioral issues and organizational and study habits first rather than use of RtI for increasing reading

scores. Emergence of RtI used for organizational and behavioral modification to increase reading scores appeared in observations, interviews, and journal entries among the teacher participants. This was different from the predetermined study themes because reading was not the primary RtI target for the participants; reading targets were deemed secondary. The study participants placed behavioral issues and organizational and study habits as primary targets for RtI. Participants B, C, E, I , and J related the need to modify behavior among the students in the lowest 25% as a means to increasing student achievement in reading. In response to interview question number six, TP-B responded, "The only measure is time management organization," with regard to knowing if RtI strategies are implemented effectively. Improvements in behavior were present in the responses of TP-C, TP-E, and TP-J to the same question.

Based on this research, targeting behaviors through use of RtI to change disruptive or destructive behavior presented new information and points of collaboration and knowledge sharing to the PLC team in raising reading scores. Targeting organizational and management skills dominated the emergence of RtI for behavior modification as a foundation toward increased student achievement in reading. The trend relating to RtI for behavioral modification allowed participants to discuss classroom management techniques in addition to instructional strategies for reading.

Table 14

RtI for Disruptive or Destructive Behavior Related to Qualitative Data Collection

Data Collection Instrument	Theme: RtI for Disruptive or Destructive Behavior
Researcher Journal: Observations	PLC Collaboration Meeting #1: First mention of In School Suspension as a risk factor for academic achievement, students shutting down and displaying disruptive behavior due to low academic achievement (TP-A, TP-F, TP-G, TP-C) PLC Collaboration Meeting #2: Behavioral issues and RtI use of behavioral data (TP-C); Many problems with the lowest 25% are not academic but behavioral (TP-J, TP-C, TP-B); Mentoring and applying RtI strategies to behavior are needed first for lowest 25% (TP-D, TP-J) PLC Collaboration Meeting #3: Mentoring as RtI strategy for behavioral issues among the lowest 25% (TP-C, TP-I, TP-B, TP-H); Channeling disruptive and destructive behaviors using RtI (TP-F); Parent involvement for behavioral issues needed as part of RtI (TP-I, TP-D)
Participant Interviews	TP-G: ". . . teachers need to learn strategies to target behavioral issues" and "positive reinforcement needed for change in behavior" TP-I: ". . . address student issues with all teachers . . .", ". . . learning new techniques for addressing behavior . . .", and " time bound is essential to the ability to limit problems with behavior" TP-J: ". . . behavioral issues need to be address through parent support, enforcement of school rules . . .", "PLCs are beneficial to discussing behavioral concerns . . .", ". . . RtI needs to target the multiple discipline problems", ". . . behavior modifications must occur through RtI strategies . . .", and ". . . data analysis and PLC need to help with same students having same problems . . ." TP-C: ". . . behavior problems are targeted every day . . ." TP-B: ". . . PLC and mutual accountability helps with behavioral targets . . ."
Participant Journals	TP-B: "discussion once again returned to behavior" (with regard to PLC meeting number 2), "Following student behavior. Teachers comparing student behavior and sharing with other teachers. Observation that many students with behavioral issues are the same students that have poor planning and management skills. Parent involvement is important." TP-C: "There is an inability to manage student conduct in general and with specific students in particular is causing many of these kids to fail." TP-F: "Concur about behavior as well that throws some students into the RtI range. When it is the same kids who are always being tardy or pulling pranks and being general nuisances, something more has to be done than having them sit in ISS", "Why are these behaviors occurring? A)7th grade malaise where expectations and behavior norms are low?, B) parenting issues?, C) tougher applications needed when sent to dean's office?" TP-G: "Make connection with student with behavior issues in addition to academic issues." TP-J: "Discuss students with behavior issues.", "…behavior problems are more the problem than academic ability.." and "…remedy some behavior: consistency within all classrooms, respect for students and teachers, follow school rules, more rigidity in 7th grade discipline"

Table 14 displays the importance placed on the emergent theme RtI for disruptive or destructive behavior among the data collection and the teacher participants. All three PLC collaboration meetings entailed mention of behavior as a concern that needed

addressing with regard to the lowest 25% and overall success. Five out of the ten teacher participants identified with RtI use for behavioral issues in the interviews. Five out of ten related to behavioral concerns and RtI strategies within the journals.

Table 15

RtI for Organizational Skills and Study Habits Related to Qualitative Data Collection

Data Collection Instrument	Theme: RtI for Organizational Skills and Study Habits
Researcher Journal: Observations	PLC Collaboration Meeting #1: First mention of students in the lowest 25% taking longer to engage and often shut down (TP-B) PLC Collaboration Meeting #2: Students lacking organizational skills (TP-B) PLC Collaboration Meeting #3: RtI for management and structure with students in lowest 25% (TP-B), Strategies needed on using planners and management (TP-A and TP-B), Ruby Payne training related to RtI and management (TP-B)
Participant Interviews	TP-I: ". . . use of RtI to target and track organizational skills" TP-J: ". . . other factors related to academic success and study skills out of school's reach, such as family structure . . ." TP-A: ". . . RtI to implement strategies for success . . ." and ". . . PLC collaboration is very important to RtI success" TP-C: ". . . RtI strategies align with FCAT strategies for reading and study skills . . ." TP-H: ". . . use highlighting techniques for study skills. . ." TP-F: ". . . SMART goals are good for life and organizational skills . . ." TP-B: ". . . time management strategies and note taking strategies . . .", ". . . measuring success through time management and organization, use the 15 minute rule with class which helps students focus . . ."
Participant Journals	TP-B: "Observation that many students with behavioral issues are the same students that have poor planning and management skills. Parent involvement is important." TP-C: "success with study skills reliant on relationships with teachers " TP-F: "students simply do not bother to do assignments" TP-I: "address issues to improve student success with organizational and planning strategies and build relationships with students to teach these"

Table 15 shows the importance placed on the emergent theme RtI for organizational skills and study habits. All three PLC collaborative meetings entailed some mention of organizational skills and study habits through discussion on time management or generalized organizational practices and RtI strategies. Seven out of the ten teacher participants referred to organizational skills or study habits in the interviews.

Participant journal entries from four of the ten teacher participants mentioned organizational and study skills linked to academic achievement among the lowest 25%.

Summary

The qualitative method exploratory case study used concurrent strategy in data collection and analysis. Chapter 4 presented the analysis of data related to qualitative data collected from the modified CBAM used for observations of PLC collaboration meetings, participant journals, and participant interviews. Based on the analysis of data, collaboration and collegiality, data-informed decision-making, intervention strategies implemented, knowledge sharing, and reading instructional practices and integration across the curriculum are meaningful to PLC participation and collaboration. Using PLC participation and collaboration to implement RtI with the intent to increase reading achievement among the lowest 25% eighth grade students found meaning as posed in RQ1 based on the consistency in reoccurrences among the themes. The data analysis related to RQ2 indicated that collaboration helps teachers learn, in this case RtI, based on the reoccurrences and importance placed on the themes. The emergence of RtI to target behavioral, organizational, and study habits was significant among teacher participants as a starting point to increase reading achievement.

The purpose of Chapter 5 is to summarize the data analysis as related to the research questions. An additional function of Chapter 5 is to deliberate the theoretical, practical, and future implications of the study. Recommendations for practice and future study related to the study findings conclude Chapter 5.

Chapter 5: Summary, Conclusions, and Recommendations

Providing students with increased and effective learning opportunities transpires when teachers are continuously honing skills and acquiring new knowledge (Danielson, 2002). Professional learning communities through collaboration with colleagues seem to provide teachers with a productive forum to advance skills and knowledge base. According to Danielson (2002), schools focused on learning for all students provide teachers with appropriate and timely venues to seek applied and measureable improvements on instructional practices. Structuring the school as a learning organization with a culture centered on the collaborative and collegial aspects of professional learning communities supports teacher learning (Danielson, 2002). Seemingly, shared commitment to student achievement along with commitment to increased knowledge and skill engages the entire school in learning. As stated in Danielson, collaboration among teachers defines teachers committed to the profession of education.

Danielson (2002) stated the influence of teacher evaluation on the promotion of teacher learning and the effect on student achievement. The idea of collaboration and mutual accountability for student learning seems to relate to teachers sharing best practices and using student data to direct targeted instruction in all content areas. Due to increased demands for teacher accountability in the area of student performance and overall academic achievement, the need for collaboration among educators seems critical.

Performance appraisal systems used the school district of the study site include scoring based on collaboration and mutual accountability. This holds teachers sharing the same students in the same grade level accountable for assessment scores on FCAT. With the collaboration and mutual accountability component, there is an increased need for

teachers to work together, making data-informed decisions to provide increased learning opportunities. Students scoring in the lowest 25% on FCAT raise particular concerns for all teachers. Reading, as a critical area in education, signifies concern among all school stakeholders.

The purpose of this chapter is to deliver a summary of the study and to illustrate the significance of this study for educators. Chapter 5 provides the study findings and conclusions, along with recommendations for future research and practice. Finally, implications from the study will be discussed.

Summary of the Study

The purpose of this qualitative exploratory case study was to examine how teachers constructed meaning from participation in PLC collaboration to implement RtI for the lowest 25% at-risk students in reading. The PLC collaboration teams comprised math, English, science, and history (MESH) eighth grade teachers. A Response to Intervention (RtI) guidance counselor and an Intensive Reading teacher were also part of the collaborative team. All members of the collaborative team shared all or some of these students.

Data were gathered through observations, participant interviews, and journals. Data gathered through weekly observations of collaborative meetings were recorded using a modified Concerns Based Adoption Model (CBAM) instrument. Additional qualitative data were collected through participant interviews and participant journals. The coding in a researcher journal about data related to themes from participant interviews and journals, and researcher observations was based on frequency of themes, patterns, and emerging themes.

The following research question guided this qualitative exploratory case study:

R_1: How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students?

R_2: How does PLC collaboration on RtI implementation help teachers learn?

Summary of Findings and Conclusions

Research question 1. How do teachers construct meaning from PLC participation to implement RtI in a collaborative environment with the intent of improving reading achievement for the lowest 25% eighth grade students defines research question one. This question was examined using qualitative data from participant journals, researcher observations of PLC collaboration meetings using a modified CBAM instrument, and participant interviews.

Based on the qualitative data analysis shared accountability through collaboration and RtI implementation occurred through levels of knowledge sharing, collaboration and collegiality, and data-informed instructional decisions found in analysis of the PLC collaboration meetings it appeared that teachers do find value in participating in PLCs and collaborating on RtI to address the needs of the lowest 25% at-risk students .

Additionally, the CBAM was used to observe levels of concern amongst the teachers participating in the PLC collaboration meetings. Chapter four provided a display the comparisons between observations one through three with the stages of concern from the modified CBAM. In summary, the higher levels of information sharing found in observation two indicated a tendency toward shared accountability for struggling students. Observation number one indicated a tendency toward learning how to

implement RtI within core content areas, which related to teacher learning and concern for student achievement. Observation number three indicated increased levels of data sharing and instructional practices, which may show a tendency toward a positive relationship between shared accountability, teacher learning, and student achievement.

Teacher journal and interview data indicated a tendency to find collaboration useful in addressing the shared accountability of student achievement and learning to implement RtI strategies within core content areas. This tendency was present in the journal entry of TP-B: "collaboration provides a more accurate picture of the whole student and RtI may benefit all students in all courses" and "collaboration should be long term to help teachers learn and students achieve." Furthering this tendency was TP-G interview response to question: Describe your experience with PLC teams and collaboration, which was, "Teachers learning to analyze data, new strategies, is positive."

Analysis of qualitative data from participant journals, participant interviews, and PLC collaboration meeting observations indicated a tendency toward shared value among teachers relating to PLC collaboration and RtI implementation. This tendency was apparent through the knowledge sharing, collaboration and collegiality, RtI intervention strategy implementation, and data-informed instructional decision theme occurrences throughout the observations of PLC collaboration meetings, as well as a desire from participants to continue to learn RtI through post study PLC meetings.

Table 16 displays the occurrences of predetermined themes within participant journals. There is a breakdown of the analysis and results of the themes from chapter four: Collaboration and Collegiality (CC), Data-informed instructional decisions (DI), Intervention strategies implemented (RtI), Knowledge sharing (KS), and Reading

instructional practices and integration across the curriculum (R) within participant journals. Yes indicates an occurrence of this theme or importance placed on the theme. NP indicates that an occurrence of the theme was absent or that the participant demonstrated no reference, or importance on the theme.

Table 16

Presence of Predetermined Themes Within Participant Journals

TP= Teacher Participant	CC= Collaboration and Collegiality	DI= Data-informed instructional decisions	RtI= Intervention strategies implemented	KS= Knowledge sharing	R=Reading instructional practices and integration across the curriculum
TP-A	YES	YES	YES	YES	NP
TP-B	YES	YES	YES	YES	YES
TP-C	YES	YES	YES	YES	YES
TP-D	YES	YES	NP	YES	NP
TP-E	YES	YES	NP	YES	NP
TP-F	YES	YES	YES	YES	YES
TP-G	YES	YES	YES	YES	YES
TP-H	YES	YES	YES	YES	YES
TP-I	YES	YES	YES	YES	YES
TP-J	YES	YES	YES	YES	YES

Collaboration and collegiality, data-informed instructional decisions, and knowledge sharing was present in all participant journals. The presence of these themes displays a possible tendency toward PLC collaboration playing an important role in teacher learning. Only two participants did not relate to RtI intervention strategies within the journals. The reason for this is unclear, but could be related to lack of overall RtI knowledge. In response to interview question: How are RtI strategies for reading integrated in you subject area?, TP-E responded by stating that she is “struggling with RtI because I am not familiar with RtI.” TP-D responded, “RtI is not being used in the particular subject area.”

As noted in the researcher observation journal, participant interviews, and participant journals, new themes emerged and began to develop during the study period. The study focus with RtI was reading scores for students who scored in the lowest quartile on their seventh grade FCAT Reading. The PLC collaboration meetings brought about the use of RtI to address behavioral problems, and problems related to organizational and management skills as a starting point to raising student scores. Based on journals, interviews, and PLC collaboration meetings, many of the teacher participants established that RtI is not for academic targets only, but also for underlying behavioral, organizational, and study habit deficiencies. These became emerging themes throughout the PLC meetings, interview questions, and journal entries. SMART goals were not established to address these behavioral deficiencies with RtI methods, but a willingness to continue with PLC collaboration focused on the students used in the study existed. Danielson (2002) stated that student engagement related to disruptions to the classroom and a willingness to work independently. This would suggest that RtI targeted toward disruptive behaviors and lack of organizational skill could provide the starting point to academic success.

Research question 2. How does PLC collaboration on RtI implementation help teachers learn defined research question two. Analysis of qualitative data from participant journals, participant interviews, and PLC collaboration meeting observations indicated a tendency toward a relationship between PLC collaboration and RtI implementation. Teachers were learning to implement RtI with the intent of increasing reading achievement among the lowest 25% in eighth grade students. Due to shared accountability, each teacher had a stake with increasing learning gains among the lowest

25% in reading. The students were shared among all the teacher participants and the appraisal system of the study school district has a shared accountability dimension directly affecting overall appraisal scoring. The tendency to place importance on collaboration with teacher learning was apparent through the consistent occurrences of knowledge sharing, collaboration and collegiality, RtI intervention strategy implementation, and data-informed instructional decision theme occurrences throughout the observations of PLC collaboration meetings, as well as a desire from participants to continue to learn RtI through post study PLC meetings.

Overall, utilizing PLC collaboration for learning RtI implementation had value to the teacher participants. All of the participants were positive to PLC collaboration as a positive experience and valuable toward student achievement. Supporting the study's theoretical foundation based Danielson's (2002) position on teacher learning and student achievement, the benefits of collaboration might be best stated as in TP-B's journal. TP-B wrote, "Collaborating with other teachers will give a more accurate picture of student needs." and "Teacher collaboration . . . and taking long term, multi-grade, holistic team approach to helping our lowest 25% can only be a benefit for both teacher and student."

Implications

There are theoretical, practical, and future implications based on the study findings. DuFour, DuFour, Eaker, and Karhanek (2010) addressed the effective use of PLC collaboration with RtI implementation. The results of this study indicated that the idea of alignment of shared values and goals symptomatic of PLCs added to effective implementation of RtI in the middle school environment. The implications from the study added to the existing body of knowledge regarding teacher construct of meaning derived

from PLC participation and collaboration to implement RtI with the intent of improving reading scores among the lowest 25% at-risk students. Furthermore, implications appeared to exist regarding the value of PLC collaboration along with shared values and goals linked to teacher learning and implementing RtI with enhanced student achievement.

Theoretical implications. The researcher of this study sought to examine the position in Danielson (2002) which stated that when teachers are acquiring knowledge and collaborating, student would have increased opportunities to learn. The idea that teachers learning to implement RtI methods in core content areas to target reading provided the foundation for teacher learning and student achievement for the study. Core content eighth grade teachers in math, English, science, and history along with an Intensive Reading instructor, and an RtI trained guidance counselor met as the PLC collaboration team to learn how to implement RtI to address reading across the disciplines. The students were those scoring in the lowest 25% in FCAT Reading. The PLC team of educators was learning RtI, which was new to some, to target reading achievement. The teachers measured student achievement using FAIR tests and reading grades.

Theoretically, it appeared likely that teachers learning would provide increased opportunities to students, which in turn could increase student achievement. Continuation of the study may allow conclusive evidence of relation between teacher learning and student achievement. Danielson's (2002) theory that students show little or no increase in achievement when teachers are not engaged in professional development directed at knowledge acquisition added relevance to the urgency of teacher learning. Precisely, the

drive to learn effective methods of data-informed instruction and intervention strategies incorporated within the core content classrooms propelled teacher learning.

New instructional evaluation, or appraisal, systems presented theoretical implications regarding the movement toward shared accountability for student achievement regardless the subject area taught. The instructional appraisal system used at the study site is based on the research of Danielson (2002) and Marzano (2003) related to collaboration, mutual accountability, teacher learning, and the relation to student achievement. To add to the literature and research on teacher learning and student achievement, this study focused on eighth grade teachers sharing the same students.

Practical implications. SMART goals seem to provide best practice instruction and measures of assurance when applied to collaborative results oriented instruction. Results oriented goals such as SMART goals provide effective means of measuring long-term performance rather than using process-oriented goals (Conzemius & O'Neill, 2001; Schmoker, 2006; Senge, 2000). The findings of this study revealed a need to target one area of reading and utilize SMART goals in all core content classrooms. An example of this would be to target the Informational Text strand on FCAT Reading where most students seemed to struggle. Through knowledge sharing, RtI methods to target the Informational Text strand in all content areas could provide teachers with measureable goals. Knowledge sharing, collaboration and collegiality, and data-informed instructional decisions could provide teachers with methods for integration within all content areas. DuFour, DuFour, Eaker, and Karhanek (2010) stated that past research on the teaching of the curriculum should now focus on increased learning opportunities for students within all curricula.

The emergence of behavioral issues for RtI strategies may provide another target to maintain focus within the PLC collaboration groups. Behavioral deficiencies related to organizational and management skills surfaced throughout observations of PLC collaboration meetings one and two. As a starting point, this may prove a concrete avenue to learn how to implement RtI in all core content areas as each teacher could use the same techniques to address a targeted area of concern.

Future implications. There were implications that continuance of PLC collaboration, RtI implementation, and the use of shared data could show significant increases in teacher learning and student achievement. The establishment of SMART goals to target one area of concern in reading among the eighth grade students in the lowest quartile on FCAT Reading could provide a foundation for teacher learning. The likelihood of a measure for student achievement seems attainable through the establishment of SMART goals.

Teachers seem to welcome the idea of collaboration, data sharing, and RtI. The exposure to other teachers' findings and possible constructive criticisms allow constant learning and professional development through improvement of mutual goals (Schechter & Ganon, 2012). Another consideration would be to incorporate the study parameters to core content teachers for seventh grade in an effort to establish a building block for tracking students throughout middle school and into high school. These future implications provided a basis for recommendations for future research, as well as, future practice.

Recommendations for Future Research

The research used five forms of qualitative data collection. As one qualitative tool a modified Concerns Based Adoption Model (CBAM) for observing PLC collaboration meetings was used. The themes observed were collaboration and collegiality (CC), data-informed instructional decisions (DI), intervention strategies implemented (RtI), knowledge sharing (KS), and reading instructional practices and integration across the curriculum (R). Participation journals and participant interviews provided additional qualitative data collection and related to the themes of the modified CBAM.

A recommendation for future research is to seek extensive sampling of teachers, participant journaling, and researcher observations over a longer period to address the limitation of a six-week study. An additional recommendation entails the possibility of a longitudinal study that follows student achievement for a period of two to three years that would allow for convincing data related to RtI, teacher collaboration on student data, and the effects on student achievement. Another recommendation is to compare eighth grade PLC collaboration teacher teams among several schools to address the limitation of using one school.

One of the teacher participants, TP-C, shared the idea of creating a PLC collaboration team with seventh grade teachers to target specific areas of concern. This participant stated that the seventh grade team would be a good starting point for students adjusting to the middle school environment and would perhaps minimize issues seen among eighth grade students. The idea presented was to catch these students earlier to increase the student achievement in eighth grade.

The recommendation for future research that a specified grading system with lessons, or assessments, targeting the same reading strand could provide, or attain, an accurate measure of increased learning gains in reading. One area of concern related to FCAT reading at the study site was the reference and research text strand. Targeting this concern with SMART goals in each area of curriculum could show the effects of RtI and differentiated instruction across the disciplines. The study participants did not address this during the PLC collaboration meetings. The target of one reading strand could also provide direction to the PLC collaborative team of teachers and add to the construct of meaning for teachers. Future research related to PLC collaboration and student achievement could benefit from targeted indicators within the student group and provide teachers with the necessary SMART goals to apply RtI strategies in core content areas.

Gaps in this study are apparent in the knowledge of RtI and PLC collaboration. Additional gaps are associated with developing SMART goals within a PLC collaborative team. Future research should focus on training of RtI and SMART goal development tied with all core content teachers.

Future research using participant journals should provide more structure to participants. Several participants in this study used the journals to take notes of the PLC collaborative meetings rather than sharing their own experiences with learning the implementation of RtI in their content area and growth in student achievement. The researcher did provide verbal direction, but written direction may further clarity of journaling for personal experience. A longer period with journaling seems beneficial to showing comfort levels with learning RtI implementation and relation to student achievement.

Recommendations for Future Practice

Recommendations for future practice involve professional development in the areas of data-informed decision-making, RtI training, differentiated instruction, and the use of SMART goals. There is a great possibility that teacher collaboration and RtI based on student data could have far-reaching and positive effects on student achievement. Understanding RtI as an integral part of instructional delivery and classroom management appear to remain an obstacle for teachers who do not teach reading and exceptional education students. Proper training on RtI could alleviate confusion as to what RtI is and how strategic interventions target student deficiencies to drive learning gains.

Professional development regarding SMART goals and the use of data to determine areas of concern needs to occur to ensure direction in PLC collaborative teams. Without a clear understanding of SMART goals and the use of data to inform and direct instruction, teachers may lose interest and see no value from meetings and sharing of data and knowledge. Recommendations for future practice would be to take steps to clarify and direct PLC collaboration toward a strategic plan to address a shared goal.

Focus on using data to make informed decisions among a group of teachers sharing the same students could provide necessary direction and targeted instructional, or behavioral, strategies to implement in core content classrooms. Additionally, collaboration among teachers allows knowledge sharing and the possibility of sharing tried and true techniques currently unknown by other PLC members.

Tying PLC collaborative teams with accountability teams seems relevant and perhaps productive toward shared responsibility for student outcomes. Continuation with

the team established for the study is recommended as a future practice to further learning of RtI strategies. Focus on the bottom level of the lowest 25% in FCAT reading would provide a smaller target group, which may assist in measuring RtI and the overall effects on student outcomes. The smaller target group would also provide direction in knowledge sharing and reading strategies implemented to the PLC collaborative team.

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Appendix A

Recruitment Letter

I, Julia Ann Diakakis, am a graduate learner under the direction of Dr. Erich Randall, in the College of Doctoral Studies at Grand Canyon University. I am conducting a research study to examine teacher construct of meaning with PLC participation in a collaborative environment with the intent of raising reading scores for the lowest 25% eighth grade students along with the relationship between teacher learning and PLC collaboration of Math, Language Arts, Science, and Social Science teachers. As a qualitative exploratory case study, the purpose was to examine how teachers created meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement and to how PLC collaboration on RtI implementation helped teachers learn.

I am recruiting individuals to participate in the study, CREATING MEANING FROM COLLABORATION TO IMPLEMENT RTI FOR AT-RISK STUDENTS, which will take approximately six weeks. Audio taped interviews, participant journals, and researcher observations of Professional Learning Community collaborative meetings will be part of the study. A consent agreement form and participation interview form detailing assurances of participant confidentiality will accompany this recruitment letter.

Your participation in this study is voluntary. If you have any questions concerning the research study, please call Julia Ann Diakakis at (321) 536-5927.

Appendix B

Informed Consent Form

Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804
Fax: 602- 639-7820

INFORMED CONSENT FORM (SOCIAL BEHAVIORAL)

MINIMAL RISK SAMPLE

CONSENT FORM

CREATING MEANING FROM COLLABORATION TO IMPLEMENT RTI FOR AT-RISK STUDENTS

INTRODUCTION

The purposes of this form are to provide you, as a prospective research study participant, information that may affect your decision as to whether or not to participate in this research and to record the consent of those who agree to be involved in the study.

RESEARCH

Julia Ann Diakakis, a Doctoral Student at Grand Canyon University has invited your participation in a research study.

STUDY PURPOSE

The purpose of this qualitative exploratory case study is to examine the relationship between teacher learning through Professional Learning Community (PLC) collaboration of Math, Language Arts, Science, and Social Science teachers with student achievement in reading as measured by standardized and teacher assessments.

DESCRIPTION OF RESEARCH STUDY

Your participation is strictly voluntary. Your decision to participate, or not participate, will not affect any relations with Brevard Public Schools. If you decide to participate, then as a study participant you will join a study involving research of the use of Professional Learning Community collaboration to learn the use of Response to Invention strategies in content area classrooms to increase student-learning gains.

If you say YES, then your participation will last for approximately six weeks at Cocoa Beach Jr/Sr High School. Approximately ten of subjects will be participating in this study within the research site.

RISKS

There are no known risks from taking part in this study, but in any research, there is some possibility that you may be subject to risks that have not yet been identified.

BENEFITS

The possible/main benefits of your participation in the research are the use of research findings related to teacher collaboration, use of Response to Intervention in the core content classroom to increase student achievement in the area of reading. Use of teacher made assessments and Florida Assessments for Instruction in Reading (FAIR) provide relevance to the possible benefits of the study. Comingling RtI strategies with PLC culture adds additional values to this study for all educators. The innovation and support possible for focused data-informed instruction through PLC collaboration might permit RtI strategies to take hold within the regular instructional model. The combining of PLC collaboration with RtI may also assist teachers and school leaders to address better the needs of those students in need of interventions. Additionally, the Mutual Accountability component of the Instructional Appraisal Instrument may add value for all teachers.

NEW INFORMATION

If the researcher finds new information during the study that would reasonably change your decision about participating, then this information will be provided to you immediately.

CONFIDENTIALITY

All information obtained in this study is strictly confidential. The results of this research study may be used in reports, presentations, and publications, but the researchers will not identify you. In order to maintain confidentiality of your records, Julia Ann Diakakis will not include any information that will identify you in any way. Participant confidentiality will receive the highest consideration through anonymous coding of participants only accessible to the researcher. Only the researcher, Julia Ann Diakakis, will have access

to records. All research records of any type will be kept in a secure, password protected locked electronic file storage. At the end of the study, all audio tapes, and participant journals will be destroyed. Audio tapes will be deleted and participant journals will be shredded to prevent any breach in participant confidentiality.

WITHDRAWAL PRIVILEGE

Participation in this study is voluntary. It is ok for you to say no. Even if you say yes now, you are free to say no later, and withdraw from the study at any time. Participant data from any source will be destroyed upon withdrawal.

COSTS AND PAYMENTS

There is no payment for your participation in the study.

VOLUNTARY CONSENT

Any questions you have concerning the research study or Julia Ann Diakakis, may be addressed through the researcher's faculty advisor, Dr. Erich Randall, who will answer your participation in the study, before or after your consent. You may ask questions via email or phone contact to Dr. Randall at docrandall@earthlink.net or docrandall@me.com and phone: 1-231-421-1392.

If you have questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804.

This form explains the nature, demands, benefits and any risk of the project. By signing this form, you agree knowingly to assume any risks involved. Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty or loss of benefit. In signing this consent form, you are not waiving any legal claims, rights, or remedies. A copy of this consent form will be offered to you.

Your signature below indicates that you consent to participate in the above study.

_____	_____	_____
Subject's Signature	Printed Name	Date
_____	_____	_____
Other Signature	Printed Name (if appropriate)	Date

INVESTIGATOR'S STATEMENT

"I certify that I have explained to the above individual the nature and purpose, the potential benefits and possible risks associated with participation in this research study, have answered any questions that have been raised, and have witnessed the above signature. These elements of Informed Consent conform to the Assurance given by Grand Canyon University to the Office for Human Research Protections to protect the rights of human subjects. I have provided (offered) the subject/participant a copy of this signed consent document."

Signature of Investigator_____ Date_____

Appendix C

Permission to Conduct Study

School Board of Brevard County
2700 Judge Fran Jamieson Way Viera, FL 32940-6699
Dr. Brian Binggeli, Superintendent

School Board

September 6, 2012

Dear Ms. Diakakis,

Thank you for your application to conduct research in the Brevard Public Schools. This letter is official verification that your application has been accepted and approved through the Office of Accountability, Testing, & Evaluation. However, approval from this office does not obligate the principal of the schools you have selected to participate in the proposed research. Please contact the principals of the impacted schools in order to obtain their approval. Upon the completion of your research, submit your findings to our office. If we can be of further assistance, do not hesitate to contact our office.

Sincerely,

Vickie B. Hickey

Vickie B. Hickey, Resource Teacher
Office of Accountability, Testing, and Evaluation

Office of Accountability, Testing & Evaluation
Phone: (321) 633-1000 FAX: (321) 633-3465

Appendix D

Permission to Use Premises

Date

Office of Academic Research
Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804

Dear IRB Members,

After reviewing the proposed study, Creating Meaning from Collaboration to Implement RtI for At-risk Students, presented by Julia Ann Diakakis, I have granted authorization for Julia Ann Diakakis to conduct research at our Cocoa Beach Jr/Sr High School. I understand the purpose of the qualitative exploratory case study is to examine how teachers created meaning from participating in PLCs to work collaboratively with at-risk students to improve student achievement and to how PLC collaboration on RtI implementation helped teachers learn. Julia Ann Diakakis, will conduct the following research activities: recruit teacher participants, collect and analyze data. It is understood that this project will end no later than May 22, 2013.

I grant permission for Julia Ann Diakakis to contact and recruit our teachers and will collect data at Cocoa Beach Jr/Sr High School. I understand that participant interviews, participant journal entries, and researcher observations will occur throughout the duration of the study. These activities will not affect classroom instructional time and will not involve student interaction.

I have indicated to Julia Ann Diakakis that the school will assume the responsibilities for allowing the following research activities: onsite data collection with teachers, file access to student scores pertaining to the lowest 25% in Reading, teachers to use work time for journal entries.

To ensure the students and teachers are protected, Julia Ann Diakakis, has agreed to provide to me a copy of any Grand Canyon University IRB-approved, consent document before s/he recruits participants at Cocoa Beach Jr/Sr High School. Julia Ann Diakakis has agreed to provide a copy of the study results, in aggregate, to our school.

If the IRB has any concerns about the permission being granted by this letter, please contact me at the phone number listed above.

Sincerely,

Principal

_____
Printed Name

_____
Signature Date

Appendix E

Qualitative Interview Questions

1. Describe your overall experience in education.
2. What is your current role, or instructional position?
3. Describe your experience with PLC teams and collaboration.
4. Describe your previous experience with RtI.
5. How are RtI strategies for reading integrated in you subject area?
6. What criteria do you use to assess reading achievement?
7. How do you know if RtI strategies are implemented effectively?
8. Is there a member of your PLC team with expertise in RtI?
9. How will you know if students are becoming better readers?
10. Are there elements in your curriculum that you can eliminate or curtail to provide greater emphasis on reading strategies?
11. How do you use PLC team established SMART goals to implement RtI?
12. Do you align RtI with FCAT reading strands?
13. How do you align RtI with FCAT reading strands?
14. Has PLC collaboration and team data analysis helped you learn RtI integration within your subject area?

Source: Adapted from DuFour, R., DuFour, R., Eaker, R., & Many, T. (2010). *Learning by doing: A handbook for professional learning communities at work.* (2nd ed.). Bloomington, IN: Solution Tree Press.

Appendix F

Observation Instrument

Qualitative Observation Instrument Modified Concerns Based Adoption Model Teacher Professional Learning Community Collaboration

CONCERNS AND OBSERVABLE TRAITS	CC= Collaboration and Collegiality	DI= Data-informed instructional decisions	RtI=Intervention strategies implemented	KS=Knowledge sharing	R=Reading instructional practices and integration across the curriculum
0-OBSERVATIONAL STAGE AND NOTE TAKING					
1- SHARING INFORMATION THROUGH WRITING OR VERBAL EXCHANGE					
2- CONNECTING WITH TEAM MEMBERS ON IMPLEMENTATION OF RtI WITHIN CORE CONTENT CURRICULUM					
3-TEAM DISCUSSIONS ON IMPLEMENTATION OF RtI IN CORE CONTENT AREAS, SHARING OF DATA, AND INTEGRATION OF READING STRANDS IN ALL CURRICULUM					
4-SHARING STUDENT DATA AND INSTRUCTIONAL PRACTICES WITH PLC TEAM MEMBERS					
5-COLLABORATIVE DATA-INFORMED DECISION-MAKING ON SHARED STUDENTS AND INTEGRATING READING ACROSS THE CURRICULUM					
6-WILLINGNESS TO ASSIST TEAM MEMBERS WITH TARGETED INSTRUCTION BASED ON DATA-INFORMED DECISIONS IN SPECIFIC CORE CONTENT CURRICULUM					

Appendix G

IRB Approval

GRAND CANYON UNIVERSITY

GCU D-50 IRB Approval to Conduct Research

(College of Doctoral Studies - IRB initiates form)

Instructions: The research clearance form must be on file prior to initiating data collection even if the learner's work does not involve human or animal subjects. All research involving human subjects must be reviewed and approved or declared exempt by GCU Institutional Review Board (IRB).

Learner Information

Last Name DIAKAKIS First Name JULIA Middle Initial

Preferred Phone E-mail Address diakakis.julia@brevardschools.org; jdiakakis@my.gcu.edu

Title of Dissertation Proposal

Learner JULIA ANN DIAKAKIS Signature DocuSigned by: Julia Diakakis Date December 18, 20

Cynthia Bainbridge

IRB Approval to Conduct Research

Approval of the research protocol from the Institutional Review Board before received. Learner may proceed to collect data.

Protocol # 369214-1 Approval Date 11/29/12

Dissertation Chair Dr. Erich W. Randall Signature DocuSigned by: Erich Randall Date December 19, 2012

Director, Office of Research Dr. Cynthia Bainbridge Signature Cynthia Bainbridge Date December 19, 2012