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The Effects of Student-Centered Coaching on the Reading Achievement of Elementary Students

and Teacher Instructional Practice

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Concordia University–Portland

College of Education

Dissertation submitted to the Faculty of the College of Education

in partial fulfillment of the requirements for the degree of

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Teacher Leadership

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Abstract

With student achievement as the focus of educational reform, teachers in today's classrooms are faced with meeting the needs of a diverse population. These teachers need to have the skill set to meet their students' varied learning needs. This quantitative quasi-experimental study examined the impact of student-centered coaching on student learning and attitude toward reading using a comparative group (archival data, 2016–2017 school year, of students whose teachers did not receive coaching) and an experimental group (2017–2018 school year, students whose teachers received student-centered coaching). Three teachers and 276 students were taken from a Title I school in a suburban district. Analysis involved Mann-Whitney U test and repeated-measures t test. A value of $p < 0.05$ was sought for significance. Student-centered coaching had no significant impact on the reading achievement of the control and experimental groups, BOYDPM score, $U = 8146$, $z = -1.68$, $p = .09$. No significant difference between the MockSTAAR scores of the control and experimental groups was indicated, $U = 17145$, $z = -1.612$, $p = .11$. However, student-coaching had a significant impact on the pretest BOYDPM and posttest STAAR of the experimental group, scores ($t = 3.5$, $p = 0.001$). The descriptive statistical analysis indicated that student-centered coaching changed students' attitude toward reading.

Keywords: attitude, coaching, motivation, reading achievement, student-centered coaching, staff development

Dedication

To God be the Glory. To my wonderful husband, Wil, who has been my constant through this journey, your love and steadfast faith in me gave me the strength to embrace and accomplish this feat. To my sisters and brothers whose prayers and words of encouragement made the journey that more rewarding. To my colleagues and my students, this accomplishment would not have been possible without you.

To my children, grandchildren, and great-grandchildren, I pass you the baton and encourage you to pursue knowledge, and with all, you are getting get an understanding.

Acknowledgements

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Chapter 1: Introduction

Today's classrooms are filled with learners who have diverse learning needs. Students'

academic abilities may range from significantly below grade level to incredibly high achieving.

In any given classroom, there may be high-achieving learners sitting alongside English language

learners (ELLs) who may just be learning to speak English or who may speak as fluently as their

native English speaking classmates. In this same classroom, special education students with

individual education plans (IEPs) may be among the learners. Teachers must be equipped with

the knowledge and skills to meet the individual and collective needs of all of their students.

According to the 2017 National Assessment of Educational Progress (NAEP) report card, only

35% of fourth-graders perform at the proficient level in reading. They defined proficient reading

of fiction and informational text as:

> When reading literary texts such as fiction, poetry, and literary nonfiction, fourth-grade
>
> students performing at the *Proficient* level should be able to identify implicit main ideas
>
> and recognize relevant information that supports them. Students should be able to judge
>
> elements of author's craft and provide some support for their judgment. They should be
>
> able to analyze character roles, actions, feelings, and motives.
>
> When reading informational texts such as articles and excerpts from books, fourth-grade
>
> students performing at the *Proficient* level should be able to locate relevant information,
>
> integrate information across texts, and evaluate the way an author presents information.
>
> Student performance at this level should demonstrate an understanding of the purpose for
>
> text features and an ability to integrate information from headings, text boxes, graphics,
>
> and their captions. They should be able to explain a simple cause-and-effect relationship
>
> and draw conclusions. (NAEP, 2017, p. 1)

As such, the need for teachers to teach reading effectively is paramount in such a climate.

As educators strive to meet the academic needs of such diverse populations, they seek to understand what students need to learn and find new ways to deliver effective instruction. To that end, schools are turning to site-based professional development (PD) to equip teachers with the knowledge and skills to meet students learning needs. Coaching is one means by which schools provide on-site professional development (Kraft, Blazar, & Hogan, 2018). According to Kraft, Blazar, and Hogan (2018), a fundamental assumption underlying the theory of action for coaching and many other PD models is that helping teachers improve the quality of their instructional practice will lead to improvements in student achievement (p. 565). However, a variety of coaching models are being used. Research has shown mixed results regarding the impact of several coaching models on student academic achievement (Knight, 2007; Neuman & Wright, 2010; Powell, Diamond, Burchinal, & Koehler, 2010). In this chapter, the researcher describes the: (a) problem, (b) purpose of the study, (c) research questions, (d) conceptual framework, and e) significance of the study. The chapter also includes an overview of the limitations and assumptions of the study, as well as definitions of key terms.

Background, Context, and Conceptual Framework for the Problem

The goal of educational reform is to improve student academic achievement. This was especially true of the No Child Left Behind Act (NCLB; U.S. Department of Education, 2002). Improving student learning outcomes requires teachers to improve their capacity, which requires teachers to work collaboratively. Berry, Daughtrey, and Wieder (2009) argued that collaboration between teachers has a more significant impact on teacher effectiveness than individual ability. They also asserted that collaboration might enhance teacher capacity, which improves student learning. According to Dufour, DuFour, and Eaker (2008), in school settings, collaboration often

takes the form of teams of teachers working independently to achieve common goals such as student learning.

Constructivism and cognitive learning theory were the frameworks for the current study (Vygotsky, 1978). Piaget (1936) believed that intelligence is not fixed but developed over time as children mature and gain knowledge. They retain this knowledge by making mental pictures of the world around them. Both Piaget (1936) and Vygotsky (1978) believed that knowledge is constructed when people interact with their environment. Piaget's cognitive learning theory and Vygotsky's social constructivist theory provide foundations for the collaborative pedagogy of coaching.

Conceptual Framework

Cognitive learning theory defines learning as a behavioral change based on the acquisition of information. This theory is based on Piaget's (1936) study of cognitive development and Vygotsky's social constructivist approach (1978). Constructivist learning theory is based on the belief that people construct their own learning by making their own subjective representation. They then link new learning to prior learning. Vygotsky (1978), asserted that learning should meet students at their level while challenging them to develop their skills. The zone of proximal development, according to Vygotsky (1978), is the place where learners are primed to move to the next level. Student-centered coaching is a blueprint for meeting students at their developmental level (Sweeny, 2011). It helps students master current skills and propel them to the next level. According to Piaget (1936), children development occurs in stages, and one phase builds on the other. The theorists of cognitive development established an understanding of the acquisition of learning. Learning to read is a critical process that is sequential and requires the mastery of one skill to move to another. Student-centered coaching

focuses on a student-centered learning model in which students are equipped with the tools they need to be successful learners (Sweeny 2011).

Knight (2007) outlined a partnership philosophy approach to coaching. He outlined seven principles that build upon one another. The principles of partnership are Equality, Choice, Voice, Dialogue, Reflection, Praxis, and Reciprocity (Knight, 2007, pp. 37–54). Knight (2007) conducted a study comparing two approaches of professional development: a traditional lecture-based instructional model; and, partnership learning—a dialogic approach to professional development built on seven principles of human interaction. Student-centered coaching fits into the framework of partnership learning outlined in Knight's philosophy and underpins this study. Knight's (2007) theoretical foundation for instructional coaching is based on the partnership philosophy. The social nature of teaching and learning makes social constructivist theories, cognitive development theory, and Knight's partnership learning theory appropriate model to help guide and inform the methodology used in this study.

Statement of the Problem

Teaching is a solitary undertaking; teachers enter their classroom daily to work with students and often receive little or no support from colleagues regarding the practice. In this state of isolation, many teachers struggle to meet the needs of their diverse learners. Research has shown that teachers need to engage in professional development to improve their practice and effectively impact student achievement (Darling-Hammond, 2000, 2006). However, the workshop model of professional development that occurs at the start of the school year does not produce the desired outcome for teachers (Marzano, 2003). Marzano (2003) further asserted that practical application must be included in standardized professional development to create change in teacher practice.

Researchers have argued that effective professional development must "first, be sustained over time, second, should be anchored to practice- in terms of its subject-specific contents linked to standard, curriculum, and assessment, third, the strategies that are designed to help teachers must involve active learning" (Sun, Penuel, Frank, Gallagher, & Young, 2013, p. 346). For example, according to Bolton (2007), bringing reading coaches into the classroom changed teachers' perceptions of collaboration and improved student learning outcomes. Bolton (2007) stated that "teachers' practices improve when they feel they are a part of their professional community" (p. 154). Neufeld and Roper (2003) acknowledged that professional development in schools had been proven to have a positive effect on teachers' instructional practice. Similarly, Gulamhussein (2013) purported that effective professional development equipped teachers with the knowledge and skills that achieve improved student results. Likewise, Demonte (2013) indicated that professional development that is conducted and practiced with fidelity changes teaching practices and impacts student learning. Site-based professional development incorporates collaboration, which may alleviate the isolation of teaching.

Purpose of the Study

The purpose of this study was to determine the impact of student-centered coaching on students' learning and students' attitude toward reading. Student-centered coaching is a model that is being used in schools to improve student learning. Student-centered coaching is in place in over 100 K–12 schools across the U.S. (Sweeney, 2011). Specifically, the study will explore the extent to which student-centered coaching impacted students' academic achievement in reading and the students' attitude toward reading. The researcher developed an interest in student-centered coaching while working as an Advanced Reading Instruction Program (ARIP) teacher and a reading interventionist. Working with elementary students whose performance was

significantly below grade-level expectations shaped the researcher's belief that student-centered coaching could positively impact student performance. The study will measure the effectiveness of student-centered coaching as a site-based professional development to help the school improve student achievement. Student-centered coaching is a coaching model that is grounded in using student data to improve instruction, thus improving student learning.

Research Questions and Hypotheses

After examining the body of research on coaching, the researcher explored the following research questions to fill the gap in the literature about the impact of coaching on student academic achievement in reading. This quantitative quasi-experimental design study examined the following questions:

RQ1. What is the impact, if any, of student-centered coaching on the reading achievement of elementary school students?

a. What is the difference in the reading achievement of students whose teacher received student-centered coaching for the academic year 2017–2018 and those whose teacher did not receive coaching for the academic year 2016–2017?

$H_0 1$. There is no difference between the reading scores of students whose teacher received

coaching for the academic year 2017–2018 and those whose teachers did not receive coaching for the academic year 2016–2017.

H1. There is a difference between the reading scores of the students whose teachers received student-centered coaching for the academic year 2017–2018 and those whose teachers did not receive coaching for the academic year 2016–2017.

RQ2. What is the difference between the BOYDPM and STAAR score assessment of the

experimental group?

H₀2. There is no difference between the BOYDPM and STAAR assessment of the experimental group.

H2. There is a difference between the BOYDPM and STAAR assessment of the experimental group.

RQ3. What is the impact, if any, of student-centered coaching on the attitude of elementary school students toward reading?

a. What is the impact of coaching on student attitude toward reading as measured by the pretest and posttest administration of the ERAS?

Rationale, Relevance, and Significance of the Study

This study is significant because its findings may serve as a resource for educators, principals, and district personnel who want to use coaching as a site base staff development model to improve student achievement. Participation in the study will help the teacher reflect on their practices and how they make decisions about instruction. Recent educational reform mandates have spotlighted teacher effectiveness and student academic achievement. According to the U.S. Department of Education, the average fourth and eighth-grade math proficiency and fourth-grade reading proficiency in 2017 was 47% for White students and only 20% for Black, and 23% for Hispanic students (U. S. Department of Education). This significant gap in achievement is cause for concern across the country. Moreover, only 29% of Texas' fourth graders are proficient readers. The achievement gap leads to opportunity disparity that is caused by the inequitable education systems that do not provide opportunities for all learners to advance and succeed.

The 'achievement gap' in education refers to the disparity in academic performance between groups of students. The academic gap shows up in grades, standardized test scores, and college completion rates, among other success measures. It is most often used to describe the troubling performance gaps between African-American and Hispanic students, at the lower end of the performance scale and their non-Hispanic White peers, and the similar academic disparity between students from low-income families and those who are better off. (Ansell, 2011, p. 1)

Despite educational reform and initiatives like NCLB, Race to the Top, and the Every Student Succeeds Act (ESSA), the achievement gap within the United States continues to grow. This study is relevant to education because it provides teachers with a professional development model and strategies to positively affect students' learning and close the achievement gap. Moreover, it adds to the body of research on coaching as an on-site professional model. Since teacher effectiveness is the single most crucial factor affecting achievement (Marzano, Pickering, & Pollock, 2001), quality professional development must be part of teachers' daily practice. Bolton (2007) asserted that "using reading coaches along with a more traditional style of teaching literacy works hand in hand and compliments one style of instruction with another" (p. 166). Job-embedded or site-based coaching is a popular topic in the literature on professional development and student learning outcomes. Studies have shown that coaching is helping increase teachers' awareness of their instructional practices (Bolton, 2007; Demonte, 2013; Gulamhussein, 2103; Neufeld et al., 2003). Most studies use qualitative data to determine the impact of coaching on teacher and student achievement (Bolton, 2007; Demonte, 2013; Gulamhussein, 2103; Neufeld et al., 2003). However, past research has not shown the *extent* to which coaching is affecting student academic achievement. The current study used coaching as

on-site professional development, which will make the findings more relevant to educators. Additionally, this study was conducted in a diverse setting that serve students from all races and socioeconomic backgrounds. The setting is representative of the broader community in which the school and district are located.

Definition of Terms

Achievement gap. This term is defined as the disparity in academic performance between groups of students (Ansell, 2011).

Coaching. This term is defined as a method of directing, instructing, and training a person or group of people, to achieve specific goals or develop specific skills (Knight, 2007).

Coaching model. This term is defined as a set of guidelines for professional developers who provide onsite teacher support (Mekenna & Walpole, 2008).

Instructional coach. This term is defined as a full-time, on-site professional at a school who develops teachers and helps them incorporate research-based instructional practices (Knight, 2007).

Instructional practice. This term is defined as the way instruction is designed and delivered by educators in the classroom (Sweeney, 2011).

Literacy coach. This term is defined as an instructional support staff who provide teachers with tools and pedagogical methods to enhance students performance as it relates to literacy (Knight, 2007).

Professional development. This term is defined as ongoing learning opportunities available to teachers and other education personnel through their schools and districts (Education Week, 2011).

Student achievement. This term is defined as measures of students' attainment of academic knowledge and skills (TEA, 2010).

Student-centered coaching. This term is defined as school-based coaching that prioritizes and emphasizes the needs of students. By focusing on coaching practices on specific goals for student learning, rather than changing or fixing teachers, a coach can work towards a direct, measurable impact and increase student achievement (Sweeney, 2011).

Assumptions, Delimitations, and Limitations

Assumptions. Assumptions are things that are accepted as accurate or plausible by a researcher. In this study, the researcher made the following assumptions:

1. The teachers in the study would make themselves available for coaching and apply the strategies discussed in their teaching.

2. The teachers would be concerned about how the researcher perceives them. The researcher assured the participants that confidentiality would be maintained. Specifically, each participant was assigned a code that was attached to their data, then all identifying information about both the teacher and students were removed before the researcher analyzed the information.

3. The validity and reliability of the instruments were established and effective.

4. The students would respond truthfully to the survey based on their experiences as a reader.

Delimitations. According to the American Psychological Association delimitations are conditions set by the researcher (American Psychological Association, 2014). This quantitative quasi-experimental study had the following delimitation:

1. One delimitation of the study was that the researcher chose to conduct the study at a single site. However, the school has a similar demographic makeup to the other Title I (Title one) schools in the district and the area and therefore is expected to be representative of other school sites.

2. Another delimitation of the study was the time frame; the researcher chose for conducting the study and delimiting the study to one a single school year allowed for a focus on the immediate effect the coaching.

3. Student learning outcomes (dependent Variable) was the released STAAR test, used as district benchmark assessments.

Limitations. Limitations are conditions that cannot be controlled by the researcher. Limitation of the study included:

1. Grade level focus: The study was also limited to one grade level by the site principal. This limitation narrowed the scope of the study and made it difficult to generalize the impact of the coaching across the school or to the broader U.S. population of students and teachers.

2. Sample size- The sample size depended on the number of fifth-grade language art teachers, their willingness to participate in coaching, and the number of students enrolled in classes who assented to sharing their assessment data.

3. The teachers' experience and education level of the teachers was another limitation.

Summary

This study used quantitative methods to explore what effect if any, student-centered coaching had on student achievement in reading and student attitude toward reading. To determine what impact of student-centered coaching, the study aimed to answer two research

questions. One questioned addressed student reading achievement, and the other addressed students' attitude toward reading after coaching was implemented over 20 weeks. The researcher used a quantitative methodology to address the quantitative gap in studies on coaching. In addition, the researcher used a quasi-experimental design that combined nonequivalent group design with a pretest posttest design. The researcher in the introduction provided information on the need for coaching as a site-based professional development model. With the focus of student achievement and teacher practice as part of school reform, teachers need to engage in continuous learning of their craft. Then the conceptual framework that underpins the study was discussed. The research questions were presented to explore how teachers who employed student-centered coaching strategies impacted learning outcomes. Included in the introduction was an outline of the delimitations of the study, limitations, and definition of relevant terms. The study's significance was also addressed to show how the study would add to the body of literature on coaching and professional development.

The remainder of this dissertation is organized such that Chapter 2 includes an in-depth review of the literature related to the present study. Chapter 3 includes an explanation of the research methodology of the study. Chapter 4 includes a detailed explanation of the data analysis and findings from the quasi-experimental design study. Finally, Chapter 5 includes the researcher's interpretation of the findings, as well as the implications of the study.

Chapter 2: Literature Review

Introduction to the Literature Review

Educational reforms like the No Child Left Behind Act (U.S. Department of Education, 2002) have amplified the conversation about accountability for students' academic achievement. Discussions of improved student outcomes permeate all levels of government, education, and even the media. Most of the debates, however, center on teachers' ability to meet the instructional needs of students from a variety of backgrounds. To this end, pundits contend that reform should aim to increase teacher instructional capacity and content knowledge through staff development and incentives. Additionally, improving teacher education, decreasing ineffective practices, increasing pay, and decreasing classroom size have been proffered during these passionate debates (U.S. Department of Education, 2002). Therefore, professional development for educators has become the focus of local districts and campuses as they work to meet the mandates of educational reform.

While the process of delivering professional development may differ among stakeholders, there is a consensus that to help teachers improve student achievement; teachers need to receive intensive and sustained professional development. In a 2013 study, Van Zandt asserted that there is a need for new models of professional development. According to research by L'Allier, Elish-Piper, and Bean (2010), literacy coaching provides job-embedded and ongoing professional development for teachers. L'Allier et al. (2010) asserted that past research focused mainly on roles, responsibilities, and relationships rather than on student learning. Furthermore, research by Scott, Cortina, and Carlisle (2012) examined the correlation between literacy coaching and teacher understanding, reliance, and performance. They found that literacy

coaching impacted teacher performance and influenced teachers' use of assessment to drive instruction.

Additionally, Neufeld and Roper (2003), stated that "coaching does increase the instructional capacity of schools and teachers, a known prerequisite for increasing student achievement" (p. v). A study by Datteri (2011) found that coaching had an impact on student academic achievement. Specifically, the findings showed there was growth in the Dynamic Indicators of Basic Literacy Skills (DIBELS) among students whose teachers engaged in coaching (Datteri, 2011). Moreover, the study "provided evidence that teachers who engaged in coaching cycles with their academic coach yielded positive results 50% of the time in student achievement and performance" (Datteri, 2011, p. 69). However, studies by several authors showed that the primary focus of coaching had been the teacher rather than student achievement and their continued growth (Matsumura, Garnier, & Skybrook, 2013; Spollen-LaRaia, 2011). Sweeney (2011) suggested that emphasis needs to be placed on student achievement and continued student growth. Thus, the purpose of this study was to determine if student-centered coaching is an effective model of site-based professional development for improved student achievement.

The researcher examined the literature that was most relevant to the research question for the study. Information was gathered from a variety of databases, including ProQuest, ERIC, and Cu commons. Studies that provided an understanding of instructional practices, instructional coaching, and reading achievement that used both qualitative and quantitative data to draw conclusions were carefully reviewed to inform the current study.

Conceptual Framework

The purpose of educational research should advance academic achievement. Research should be grounded in a theoretical framework. The purpose of this quantitative study was to explore how student-centered coaching impacted the reading achievement of elementary students, in a Title I school in a suburban school district in Texas. The conceptual framework for this study is based on cognitive learning theory and constructivist learning theories. According to Olusegun (2015), constructivism is a learning theory, found in psychology, explaining how people might acquire knowledge and learn, therefore it is directly applicable for education. The theorist suggests that people construct learning through personal experiences. Olusegun purports that, "a focus on student-centered learning may well be the most important contribution to constructivism" (p. 66). The constructivist conception of learning with its root in the work of Vygotsky (1962) and Piaget (1980) sees the learner as an active participant in knowledge acquisition. Piaget's theory of constructivist learning has had wide-ranging impact on theories of learning and teaching. Vygotsky (1978) asserts that the learning process should meet students at their current level and be somewhat challenging. Tradition forms of professional development does not consider this need in the learner. Student-centered coaching is designed to meet teachers at their development levels. With this study, it is important to understand the relationship between learning, professional development, and coaching, because they are important factors that drive student achievement.

Review of Research Literature

This literature review featured a variety of articles, books, and dissertations that addressed coaching and its impact on student achievement and attitude. This included different coaching and professional development models and their impact on both teacher and student

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learning. The literature that focused on coaching addressed the need for how coaching is used in schools and districts and the impact of coaching on students learning.

The need for coaching. Many schools and districts are seeking ways to make professional development more relevant and user-friendly to meet the mandates of educational reform. Marzano et al. (2001) asserted that the most important factor affecting student learning is the teacher. In a 2009 Edutopia report, Darling-Hammond (2009) declared that "teacher qualifications, teacher knowledge, and skills, make more difference for student learning than any other single factor" (p. 1). Therefore, teachers must be equipped to meet the learning needs of all students. Since students' performance varies based on their level of skill mastery and current academic standards, it is necessary to provide educators with a variety of techniques to assist students in their attainment of new concepts (Marzano, 2011a).

One of the most significant challenges faced by educators is the promotion of student achievement. Teachers working collaboratively with their colleagues can help one another meet this challenge. Researchers have found that teachers working in isolation cannot improve the practice and culture of their workplace (Darling-Hammond & McLaughlin, 2011). Darling-Hammond and McLaughlin (2011) further posited that school leaders must provide an environment where teachers feel safe when taking risks. Teachers need opportunities to share what they know, discuss what they want to learn and connect new concepts and strategies to their own context. Furthermore, teachers need opportunities for inquiry and collaboration. Collaborating in meaningful ways empowers teachers to do the critical work of meeting the academic needs of children (Matsumura et al., 2013). In recent years, coaching has become one way for teachers to accomplish this collaborative work.

Coaching is used to help schools and districts meet the challenges that teachers are facing. In today's Title I schools, many teachers are inadequately equipped to address the needs of their pupils. Title I, Part A of the Elementary and Secondary Education Act, as amended by the Every Student Succeeds Act (ESEA) provides financial assistance to local educational agencies (LEAs) and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards (U. S. Department of Education, 2016). According to Sweeney (2011), "a gap exists in our schools, separating the data that surrounds teachers daily from how (or whether) they use it. This shortcoming can be significantly reduced through coaching conversations that are rooted in student evidence" (p. 64). In education, there is an ongoing discussion about using data to drive instruction. However, the discussions have not led to teachers focusing on students individually, nor has it given teachers the tools they need to meet students' individual learning needs. The current framework does not foster or assist teachers in making data-driven instructional decisions. Beyond that, schools spend tremendous resources on intervention programs to prepare students for the state assessment, but they fail to evaluate the effectiveness of these programs.

Furthermore, there is a clear mandate in ESSA (2015), formerly NCLB, for schools to use researched-based staff development to improve student achievement. Student-centered coaching is a concept that shifts the focus from "fixing" the teacher to working collaboratively with him/her to meet the learning needs of students (Sweeney, 2011). This fundamental change in focus is vital because no single approach to teaching leads to the desired outcomes for all students.

Educational coaching. Educational coaching has clear benefits for classroom teachers. Froelich and Puig (2007) suggested that those in education should take the concept of

professional development and integrate it with artistic skills; this could create a seamless transition that could help teachers achieve the ultimate goal, namely, enabling students to reach their maximum potential. Froelich et al. used primary and secondary observation protocol to gather information about coaching. They noted that when using the primary observation protocol, the focus must be on the students, not the teacher. Likewise, Hasbrouck and Denton (2007) stated that coaches helped teachers understand how to address their students' behavioral and academic challenges. Similarly, Martin and Dowson (2009) found that coaches used data to coach for instructional improvement. The authors noted that when coaches spent time in classrooms regularly, they were able to collect a variety of real-time qualitative data to support teachers' application of theory to teaching practice. With coaching, teachers can become empowered and develop skills that will benefit their students' academic achievement.

Also, L'Allier et al. (2010) presented seven guiding principles of coaching for instructional improvement and student achievement. First, coaching requires specialized knowledge. Specifically, successful classroom teaching experiences must form the foundation of any coach's knowledge base. Additionally, coaches must engage in their own continuous professional development to enhance the knowledge gained in their initial training. Their primary obligation is to help build teacher capacity through onsite professional development. The second principle, time working with teachers, is the focus of coaching. The coach spends time modeling instruction, co-teaching, observing, and analyzing data to help teachers meet their objective of effective teaching. However, many coaches spend much of their time in other administrative tasks rather than working with teachers and students (L'Allier et al., 2010).

The third principle focuses on collaborative relationships, which are crucial for successful coaching. The bond forged through the shared desire for student success is the foundation for the

collaborative relationship between coach and teacher. However, coaches bear the responsibility of developing relationships built on trust. To accomplish this, they must keep their discussions with teachers confidential and develop ways to communicate with teachers effectively (L'Allier et al., 2010). Thus, coaches must develop the vital skill of relationship building if they are to be successful. The fourth principle, coaching that supports student reading achievement, focuses on a set of core activities. Coaches should facilitate grade-level meetings, co-plan lessons, co-teach in the classroom, facilitate book clubs, and deliver monthly professional development workshops for teachers effectively (L'Allier et al., 2010). Elish-Piper and L'Allier (2007) asserted that when coaches worked with teachers to analyze data, they helped teachers develop plans to meet students' learning needs.

The fifth principle is that coaching must be both intentional and opportunistic (L'Allier et al., 2010). Specifically, coaches should develop a coaching plan but be flexible enough to adjust the plan as teachable moments arise. Effective coaches are skilled enough to notice and take advantage of opportunities as they occur. When working with teachers, these coaches can see and determine what the teachers need. "For example, a coach working with a novice teacher may decide that modeling is a good first step followed by co-teaching, and finally, observing the teacher in action" (L'Allier et al., 2010, p. 549). However, with a skilled teacher, the coach might choose to share instructional ideas at a grade-level meeting. L'Allier et al. (2010) stated: "that in an interview study of 20 coaches who work in districts that received Reading First grants, Bean et al. and colleagues (2008) concluded that these coaches had an in-depth understanding of how and why they worked with teachers" (p. 550). Effective coaches understand their role and therefore are better able to help teachers.

The sixth principle is that coaches must be literacy leaders in the school (L'Allier et al., 2010). Coaches establish the tone for literacy within the school. According to L'Allier et al. (2010), coaches were engaged in goal setting or establishing directions in their schools, developing people, and redesigning the organization to facilitate the accomplishment of targets. Finally, the seventh principle is that coaching evolves. The practice of effective coaching develops over time, and coaches must learn how to use their time and expertise to grow both students' and teachers' capacities (L'Allier et al., 2010). Gersten, Morvant, and Brengleman (1995), and Denton, Swanson, and Mathes (2007) asserted that coaches used diagnostic and progress monitoring assessment to help teachers to meet students' instructional needs.

Coaching model. A coaching model is a set of guidelines for professional developers who provide onsite teacher support (Mekenna & Walpole, 2008). A coaching model includes a plan for teacher collaboration, instructional strategies implementation, reflection on instructional practices, observation, and feedback. According to Neufeld and Roper (2003), there are two kinds of coaches: change coaches and content coaches. Change coaches provide administrative-type support and work primarily with administrators. They focus on big-picture ideas for the school.

Conversely, content coaches help teachers learn and apply knowledge in the classroom, and these coaches work primarily, and directly, with teachers (Neufeld & Roper, 2003). Coaching as site-based professional development provides on-the-job training for teachers. Such training for teachers happens in the classroom during the workday. Researchers have engaged in a variety of studies on ways to provide this job-embedded staff development. Coaching models vary in implementation, but there is a consensus among instructional leaders that coaching is an effective method to provide job-embedded staff development (Denton & Hasbrouck, 2009).

According to Knight (2009), three types of coaching are common in schools today: Literacy coaching, cognitive coaching, and instructional coaching. A study by Bolton (2007) indicated that there is no one set of coaching strategies that are guaranteed to work with every student. However, researchers have found that a variety of coaching strategies that have resulted in student success (Denton et al., 2009; Knight, 2009; Bolton, 2007).

Cognitive coaching. One coaching model addressed in the literature, cognitive coaching, has been used to help teachers develop their instructional capacity. According to Knight (2007), "cognitive coaching is one of the most widely used forms of coaching in American schools" (p. 10). The main tenet of cognitive coaching is that behaviors only change when beliefs change. Knight (2007) further posited that cognitive coaching always includes the interrelated elements of (a) a planning discussion, (b) observation of a lesson, and (c) reflection. Cognitive coaches engage in dialogical discussions with educators and other instructional staff members, observe the practices of their coaches, and then participate in sound questioning and relationship building that allows them to become reflective practitioners. In every discussion, the coach's goal is to help the teacher work more effectively (Knight, 2007).

Two studies on cognitive coaching have shown positive outcomes for teachers' instructional practice. First, Eger (2006) found that "cognitive coaching created a culture for continuous improvement in teachers' professional growth and continuous improvement in the buildings as a whole, in the sites studied" (p. 97). In her 2006 study, Eger asserted that high school teachers benefited and grew their knowledge as a result of collaborating in their cognitive coaching sessions. Second, Batt (2010) found that roughly 50% of teachers of English Language Learners (ELLs) who attended a traditional workshop on Sheltered Instruction Observation Protocol (SIOP) followed through with the implementation of the protocol. However, after

engaging in cognitive coaching as a follow-up to the workshop, 100% of the teachers implemented the SIOP (Batt, 2010). The teachers in Batt's study found cognitive coaching to be a valuable method of professional development. These two studies validate coaching as an effective model of professional development. Furthermore, Commitante (2014) indicated that coaching that follows a cycle allows teachers to receive feedback, reflect, and clarify their learning, thus empowering them in their practice.

Literacy coaching. A literacy coach is an instructional support staff member who provides teachers with tools and pedagogical methods to enhance student performance as it relates to literacy (reading and writing). Literacy coaches have a variety of wide-ranging responsibilities. Their main role, however, is to help teachers better serve their students (Knight, 2007). According to Knight (2007), some literacy coaches may "instruct teachers about reading strategies, graphic organizers, or teaching activities that will make it easier for students to understand texts, or for teachers to communicate how language functions in their particular discipline" (p. 12). Knight also posited that a literacy coach's responsibility might be to work with students to develop a particular skill. When working with children, literacy coaches do not interact with teachers. According to Deussen, Coskie, Robinson, and Autio (2007), a significant contribution of coaching is that it is individualized. Since teachers have a variety of abilities and levels of experiences, differentiation in coaching provides the teachers with need-based support (Elish-Piper & L'Allier, 2007). Coaching provides teachers with the individualized and differentiated support that helps them to improve their practice and meet their students' academic needs.

Literacy coaching is a form of on-site continuing staff development for teachers. Some prior research investigated the correlation between literacy coaching and teacher understanding,

reliance, and performance (Bean, Draper, Hall, Vandermolen, & Zigmond, 2010; L'Allier et al., 2010). Taylor, Pearson, Peterson, and Rodriguez (2003) posited that literacy coaching increased student learning outcomes. However, other research shows that a considerable number of coaches spend most of their time engaged in administrative tasks rather than working with teachers to meet the needs of the students (Knight 2007). Although the teacher has been the primary focus of past coaching methods, some researchers have examined the impact of literacy coaching on student reading achievement (Elish-Piper & L'Allier, 2011; Matsumura et al., 2013; Taylor et al., 2003). Matsumura et al. (2013) found that content-focused coaching improved both the quality of teaching and the reading achievement in schools serving high numbers of minority and ELL students from low-income families. Elish-Piper and L'Allier (2011) indicated that "the results provide information about the relationship of student reading gains with the type of reading credential held by the literacy coach, the amount of coaching, and the type and content of coaching received by teachers" (p. 99). Taylor et al. (2003) found that student reading achievement increased when teachers used higher-level questioning. However, studies conducted by Powell et al. (2010) and Neuman and Wright (2010) showed positive effects of coaching on the classroom environment, but not on teacher-student interactions. To date, the research presents mixed results about the impact of coaching on student learning outcomes and teacher-student interactions. There is limited research on the effect of literacy coaching on teacher improved instructional effectiveness.

Instructional coaching. Unlike literacy coaches, instructional coaches are full-time onsite professionals who develop other staff members' skills (Knight, 2007). Instructional coaches, partner with teachers to help them incorporate research-based instructional practices into their teaching so that students will learn more effectively (Knight, 2009). Instructional

coaches only work with children when demonstrating new practices for teachers. According to Knight (2013), instructional coaches must have a cadre of communication skills, be able to empathize, listen, and build relationships and trust. Instructional coaching has become the most common model for providing site-based professional development training. Like literacy coaches, instructional coaches must be knowledgeable in a variety of proven instructional practices. Instructional coaches, however, focus on a broader range of instructional practices than literacy coaches.

For coaching to be effective, instructional coaches and teachers must develop trusting relationships. Coaches need to be honest and open about their intentions and support so that teachers are willing to collaborate with them. Hall and Simeral (2008) stated that effective coaches are (a) highly self-reflective, (b) able to maintain trustworthy relationships, (c) skilled in recognizing others' strengths, abilities, and beliefs, (d) a servant leader, (e) patient, and (f) considerate of what would happen in their absence.

The research on instructional coaching also focuses on how coaches spend their time. Bean et al. (2010) conducted a study that focused on coaching behaviors. The researchers used structured interviews, teacher questionnaires, and assessment data from the Terra Nova reading assessment and found that coaches spent most of their time working in level 2 and 3 activities. Level 2 activities include observing, modeling, and talking with teachers about their lessons. Level 3 activities involve meeting with teachers to discuss assessment data and plan for instruction. These coaching conversations centered on data and how teachers could effectively use data to improve instruction. The coaches spent the highest portion of their time (i.e., 37%) working individually and with groups of teachers. The study found that schools that received instructional coaching had a higher percentage of students scoring at the proficient level than

those who did not (Bean et al., 2010). Another study by Liddell (2014) asserted that some teachers were able to transfer instructional coaching to empower student learning.

Similarly, the results of Spollen-LaRaia's (2011) research supports the direct impact of coaching on student achievement. Spollen-LaRaia (2011) found that when coaches spent their time working with teachers and focusing on student achievement, teachers' work improved, and student achievement grew. Research by DeWeese et al. (2008) indicated that the literacy goals of all children could be met through a balanced literacy approach to instruction that was guided by focused and sustained professional development designed to deepen teacher understanding.

In-situational coaching. Research on the topic of coaching shows that there are various methods of coaching currently used in U.S. schools. Hernández (2012) posited that in-situational coaching resulted in increased reading learning outcomes for ELLs. In-situational coaches work with teachers to make real-time instructional decisions. Hernández (2012) found that coaching was a useful model of staff development. Currently, there is very little research on in-situational coaching, however, Hernández (2012) concluded that teachers engaged in in-situational coaching changed their perception of coaching. The next section will discuss another form of coaching that focuses on the student and, like in-situational coaching, has limited research on its effectiveness.

Student-centered coaching. According to Sweeney (2011), the purpose of student-centered coaching is to answer the question of whether coaches make a difference in students' learning outcomes. Student-centered coaching is a new way of looking at and delivering school-based coaching that prioritizes the needs of students (Sweeney, 2011). When coaching focuses on specific goals for student learning, rather than on changing or fixing the teacher, a coach can work, directly, on creating measurable impact and increased student achievement (Sweeney, 2011). Sweeney (2011) explains, "student-centered coaching is about 1) setting specific targets

for students that are rooted in the standards and curriculum; and, 2) working collaboratively to ensure that the targets are met" (p. 7). There is a clear mandate in ESSA for schools to use research-based staff development to improve student achievement. Since meeting students' learning needs is paramount, the researcher plans to study how student-centered coaching impacts student learning outcomes.

   Professional (staff) development. According to the Center for Public Education (CPE), "in the coming years, schools will be hit with a trio of potent reforms: teacher evaluations that will include student test scores, widespread adoption of higher academic standards, and the development of high-stakes standardized tests aligned with these new standards" (2013, p. 1). To meet these new standards, teachers will need to learn new ways of teaching. Professional development is defined in a variety of ways. According to Guskey (2002), professional development programs are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes, beliefs, and ultimately, in the learning outcomes of students. Killion (2008) also define professional development as systems that develop teachers' knowledge and skills as well as on changing teacher attitudes, and beliefs to bring about improved academic achievement. Recent research has established that 90% of educators recounted participating in professional development that they regarded as useless since there was no active participation and little if any follow-up occurred (Guskey, 2010; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2000). Effective professional development will be needed for teachers to meet the demands of providing instruction that increases student learning outcomes.

  Research into professional development has revealed a variety of perceptions about the effectiveness of professional development models that have previously been used in U.S. schools. Gulamhussein (2013) affirmed that professional development should: (a) expose

teachers to various pedagogical strategies and the research behind them, and (b) support teachers as they implement research-based strategies into their classrooms, recognizing that implementation is the most challenging learning stage for teachers. Desimone (2009) purported that the critical features of professional development include content focus, active learning, coherence, collective participation, and duration. Coaching is an effective way to provide teachers with the support to implement new, researched-based practices into their classroom instruction (Knight, 2007). Like students, teachers need to be provided with opportunities to engage in active learning when they are acquiring new teaching skills and concepts. Knight (2007) asserted that successful professional development requires "working one-on-one, listening, demonstrating empathy, engaging in dialogue, and communicating honestly" (p. 7). However, the traditional model for professional development—a workshop where information is dispensed—does not allow teachers to engage in active learning.

In a 2006 study, Darling-Hammond compared the policies of several states and found that states with comprehensive policies that included teacher professional development had improved student achievement when these policies were enacted. After comparing state comprehensive teacher quality policies, student achievement data, and student demographic data for Connecticut, West Virginia, and North Carolina they found that these states had improved student achievement as a result of professional development. DuFour, DuFour, and Eaker (2008) emphasize the importance of collaboration in professional development. From the literature, effective professional development must be:

- Ongoing (Knight, 2007; Desimone, 2009)

- Collaborative (DuFour et al., 2008)

- Improve student learning (Killion, 2008; Guskey, 2010); and

- Systematic in design and implementation (Knight, 2007; Garet et al., 2001)

Mentoring. Mentoring is one of the most common ways for schools to support teachers. Many school districts assign experienced teachers to new teachers as support. These mentoring relationships focus on basic teaching and helping the new teacher assimilate into the work environment. According to Achinstein and Athaneses (2006), mentor programs are often underdeveloped because mentor selection is haphazard, and professional development is often missing or extremely limited.

Furthermore, McKenna and Walpole (2008) asserted that effective mentoring programs were costly to support. Since mentors are usually classroom teachers, any time allotted to mentors to meet with mentees during the workday incurred the cost of providing substitutes to cover the mentors' classroom. Like any coaching model, mentors collaborate with mentees to support them in their role as teachers.

Student attitude. Beyond the issue of teacher effectiveness, the way students feel about school and learning may have an impact on their learning outcomes. Many external factors influence students' learning, but one important internal factor is students' attitudes toward learning. This factor, as teachers often discuss, may have a tremendous impact on student achievement. Research has shown that a learner's attitude can have a profound impact on his or her reading achievement (Ghaith & Bouzeineddine, 2003; Kaniuka, 2010). According to Kaniuka (2010), chronically low-achieving students who achieved reading success after remediation had higher scores on attitude toward reading than their peers who did not. Kaniuka (2010) concluded that reading achievement impacted student attitude toward reading. Shirk, Burwell, and Harter (2003), as cited by Kaniuka (2010), posited that there is a "correlation between low academic

achievement and others social behaviors and low levels of self-esteem" (Shirk et al., 2003, p. 186). Thus, one's attitude impacts one's aptitude.

Likewise, in a 2003 study, Ghaith and Bouzeineddine found "that learners with positive attitudes toward reading comprehended reading materials better than their counterpart who had less positive attitudes" (2003, p. 115). Their study accentuated the importance of attitude and its impact on reading achievement. A study by Petscher (2010) also supported the idea that attitude influences reading. He posited that "attitudes are an important psychological construct as they play a major role in moderating one's level of motivation and intention to read" (p. 335). According to Askov and Fishbach (1973), as cited by Petscher (2010), attitude positively affected achievement on the paragraph and word meaning portion of the Standford Achievement Test scores. Analyzing an earlier study by Cloer and Ross (1996), Petscher (2010) indicated that students' reading achievement from the previous year impacted their attitudes toward future reading. While many factors impact students' attitudes toward reading, their attitudes toward reading have a direct bearing on their achievement.

Review of Methodological Issues

The literature review revealed various methods to gather data about coaching and student achievement, including qualitative, quantitative, and mixed methods designs. A study by Denton et al. (2007) used observation data, student outcome data, qualitative data, and survey data to answer research questions. They concluded that due to the limitations of the methods employed, further research of instructional coaching was warranted, including randomized field trials to examine the effects of instructional coaching on teacher and student outcomes, as well as qualitative research to provide rich descriptions of the nature of the coaching relationship

(Denton et al., 2007). Other researchers used both qualitative and quantitative data to inform their studies.

Bean et al. (2010) conducted a case study that used interviews, student achievement data, and teacher questionnaires to gather information. When analyzing the data, they concluded that the process used to collect the data obscured the in-depth analyses of what coaches were doing in terms of how and why coaches worked with individual teachers, worked on school-related activities, or planned and organized for their coaching work (Bean et al., 2010). Bean et al. (2010) suggested that only a more detailed level of analysis could generate a clearer understanding of how coaching functions in a specific school and the factors that influence it. They proposed further studies using case study and action research to determine how coaching decisions are made in specific schools. The purpose of the current study was to explore how coaching affects teacher instructional practice and student learning outcomes.

To explore the impact of literacy and instructional coaching on teacher instruction and student learning, Froelich and Puig (2007) and Bolton (2007) both used a qualitative, case study methodology that included participant interviews and observations of teacher instruction. They found that qualitative methods of data collection had limitations in determining student achievement; thus, they concluded that further studies were warranted. According to Depasquale (2015) and Harris (2014), more research is needed in order to understand how teachers interact with coaches and how such coaching interactions affect achievement. Further research is also needed to explore the relationship between coaching and student achievement thoroughly.

Similarly, Walpole, McKenna, Uribe-Zarain, and Lamitina (2010), Zakierski and Siegel (2010), Toone (2012), and Anthony (2009) used qualitative research methods to examine the effect of coaching on student achievement. In these studies, the researchers found that sample

size, observation, and data analysis were among the limitations that affected the results of their studies. Toone (2010) study excluded items measuring the use of assessment data to plan small group instruction for any of the grade levels. The aim of a coherent line of future inquiry must be to evaluate the path of causality from coaching to altered instruction to enhanced student achievement. To that end, the current study focused on the cause and effect relationship between coaching, instruction, and learning outcomes.

Some studies used a mixed-method approach to gather data. Legg (2014) focused on maximizing the effectiveness of a literacy coaching program in elementary schools. He used both qualitative and quantitative data to answer the research questions in his correlational study (Legg, 2014). The focus of the study was the relationship between student achievement, expenditures on professional development, and professional development strategies implemented by Iowa school districts. Legg (2014) analyzed student achievement and professional development expenditure data to show the nature of the relationships between these factors. Additionally, Legg (2014) analyzed survey responses from a questionnaire on professional development strategies to determine the relationship between these strategies and student achievement. A limitation of the study was the narrow scope; the study focused on only one aspect of coaching- instructional planning.

Researchers use a variety of methods to gather information while understanding that all methods have limitation and challenges. After reviewing a variety of studies and methodologies, this study utilized a quantitative quasi-experimental design to answer the research questions. An examination of past research on the topic of coaching led to the choice of a quasi-experimental design method for this study. Many of the earlier research used qualitative data that relied on teacher and coach's interpretation of success. Quantitative studies rely on statistical, numerical

data collection. Since quantitative methods rely on numerical data, imperial evidence will allow the study to be generalized. In the current study, the researcher examined students' assessment data to determine the effect of coaching on instruction and student achievement.

Synthesis of Previous Research

According to past research, coaching has developed into a model of job-embedded staff development that empowers teachers and improves student achievement (Legg, 2014; Anthony 2009; Knight, 2013; Bolton, 2007). Previous researchers have found that a variety of coaching models have brought varying levels of success to teachers and students (Froelich et al., 2007; Bolton, 2007). It has been shown that literacy coaching leads to improved instruction and student academic achievement, but the time that coaches can spend working with students and teachers is limited. Through qualitative research, researchers have studied various kinds of coaching used for the job-embedded staff development model. Denton et al. (2007) asserted that coaches used diagnostic and progress monitoring assessments to help teachers meet students' instructional needs. Likewise, there was evidence that teachers in both intervention conditions set goals for student performance and adjusted the pacing and focus of instruction based on progress-monitoring data (Denton et al., 2007).

Instructional coaching is a field with many possibilities for teacher growth. The goal of school-based instructional coaching is to increase student learning by supplying continuous, relevant, and job-embedded support to teachers (Sweeney, 2010). A variety of instructional coaching models are used in schools to support teachers. Unfortunately, not all of these models focus on evidence and student learning. Student-centered coaching is the model that embraces these practices and best positions teachers to improve student learning.

There is enough reason to believe that an investigation examining the impact of student-centered coaching on teacher instruction and student learning outcome may yield significant findings. Researchers claim that coaching is becoming the professional development model to bring instructional change and improve student achievement (Denton et al., 2007; Bean et al., 2010; Martin et al., 2009). The ESSA and its predecessor, NCLB, have created a climate of accountability in public education. Education reform has emphasized teacher effectiveness as the measure of choice for meeting accountability standards. Researchers studying these reform efforts have shown that job-embedded staff development is the preferred model to build teacher capacity and improve student learning outcomes (Denton et al., 2007; Bean et al., 2010; Martin et al., 2009; Maclin 2018).

Critique of Previous Research

The research included quantitative, qualitative, and mixed methods studies. Most of the studies were qualitative. The qualitative studies focused on surveys and case studies about coaching, coaches' behavior, and teacher understanding. L'Allier et al. (2010), found that when teachers received effective coaching, their instructional practice improved. However, the small sample size makes it difficult to generalize and replicate the studies. Matsumura et al. (2013) yielded results that showed content-focused coaching improved both teacher quality of instruction and student reading achievement of minority and English Language Learners. The review of the literature indicated that there is limited research on student-centered coaching and the effect of coaching on student reading achievement. This study contributed to the research on the effectiveness of student-centered coaching on reading achievement.

Summary

Based on this review of the literature, which develops a unique conceptual framework using job-embedded professional development, there is enough reason to believe that an investigation of the impact of student-centered coaching on teacher instruction and student learning outcomes may yield significant findings. The studies claim that coaching is becoming the professional development model to bring instructional change and improve student achievement.

In a 2007 book, Knight described how instructional coaches bring their skills to the classroom teacher to help improve student academic achievement. Although many past studies have addressed various forms of coaching and how they were used to bring staff development into schools, there is a need for further research on the effectiveness of coaching on student academic achievement and teachers' instructional practices. There is also a need for more research on coaching that centers on the student and specific learning targets, as well as studies that explore which models of coaching most effectively deliver professional development.

Chapter 3: Methodology

Introduction

  This quantitative quasi-experimental design study explored the effects of student-centered coaching on elementary students' reading performance in a school in a large suburban school district in a southern state. According to Bolton (2007), coaching has become the preferred method of site-based professional development designed to help teachers improve students' academic performance. Likewise, L'Allier et al. (2010) asserted that literacy coaching provides job-embedded and ongoing professional development for teachers. Since the teacher is the most significant factor affecting student learning, the primary focus of coaching has been placed on improving teacher capacity (Marzano, 2011b).

  With new mandates from the Every Student Succeeds Act (ESSA), the reauthorization of NCLB for teacher accountability, and the use of research-based strategies to improve student achievement, schools are looking for ways to help teachers grow within their craft. This research study compared student learning outcomes on a state released standardized test (STAAR) used as district benchmarks before and after the implementation of the student-centered coaching. Darling-Hammond and McLaughlin (1995) and Marzano et al. (2001) argued that schools must invest in student education by supporting teacher professional development. The researcher intended to use the study to determine if coaching is an appropriate site-based professional development model. The ESSA mandates that schools have highly qualified teachers, which has led districts to provide continuous professional development for their teachers. According to the U.S. Department of Education, the highly qualified teacher has a bachelor's degree, has passed a state content test, and is certified to teach in the state where they work (U.S. Department of Education, 2017). However, some low-performing schools have high rates of teacher turnover,

which forces them to rely on less qualified and experienced teachers to fill their staff. Low achieving schools may be rich in resources but scarce in effective teachers. This causes the schools to engage in professional development continuously (Ronfeldt, Loeb, & Wykoff, 2013). However, the kind of professional development is of paramount importance. According to Rushton (2017), strategy-based professional development was beneficial and affected the learning outcomes of at-risk students.

Maclin (2018) asserted that professional development in literacy and reading instruction impacted students' learning outcomes (Maclin, 2018). Some districts and schools are using job-embedded professional development, particularly coaching, to increase their teachers' ability to meet the new ESSA mandates. The purpose of this study was to determine whether there was a relationship between student-centered coaching and increased learning outcomes of elementary school fifth-grade readers.

This chapter presents the research procedures used in this study. The chapter includes an overview of the purpose of the study, the research questions, and hypotheses. Additionally, a detailed explanation of the research methodology, a description of the population, sample selection methodology, procedure for data collection and analysis, and ethical considerations are presented.

Purpose of the Study

The purpose of educational research should advance academic achievement. Research should be grounded in a theoretical framework. The purpose of this quantitative quasi-experimental study was to test the theory that student-centered coaching impacted student achievement and student attitude about reading. The researcher explored how student-centered coaching impacted the reading achievement of elementary students, at Education Academy, a

Title I school in a suburban school district in Houston, Texas. The conceptual framework for this study is based on cognitive learning theory (Piaget, 1936) and constructivist learning theories (Vygotsky, 1978).

Specifically, the goal of this quasi-experimental design study was to determine the nature of the relationship between student-centered coaching and student reading performance. The primary focus of the study was to investigate the extent to which student-centered coaching impacted the reading achievement of students. The study was designed to provide results that might inform the conversation of site-based professional development. The findings might also help districts and schools determine how best to allocate funds to improve student academic achievement. This study measured the effectiveness of student-centered coaching (IV) on improving student reading achievement and student attitude toward reading (DV).

Research Questions

The study was focused on the questions: What is the impact, if any, of student-centered coaching on the reading achievement of elementary school students? What is the impact, if any, of student-centered coaching on the attitude of elementary school students? The researcher used a more specific question to examine the impact.

RQ1. What is the impact of student-centered coaching on the reading achievement of elementary school students?

a. What is the difference in reading achievement of students whose teacher received student-centered coaching for the academic year 2017–2018 and those whose teacher did not receive coaching for academic school year 2016–2017?

RQ2. What is the difference between the BOYDPM and the STAAR assessment of the experimental group?

RQ3. What is the impact, if any, of student-centered coaching on the attitude of elementary school students?

    a. What is the impact of coaching on student attitude toward reading as measured by the pretest and posttest administration of the ERAS?

Hypotheses

$H_0$1. There is no difference between the reading scores of students whose teacher received coaching and those whose teacher did not receive coaching.

H1. There is a difference between the reading scores of the students whose teachers received student-centered coaching and those whose teacher did not receive coaching.

$H_0$2. There is no difference between the BOYDPM and STAAR assessment of the experimental group.

H2. There is a difference between the BOYDPM and STAAR assessment of the experimental group.

Research Design

Researchers must choose the most appropriate methodology to answer their research questions. The quantitative quasi-experimental design was selected to collect data with the inferential and descriptive statistical analysis used to answer the research questions for the study. According to Creswell (2013), the research questions, problem, audience, and researcher knowledge should determine the research methods. Several researchers have used a qualitative design to study coaching and its impact on instruction and student achievement (Bean et al., 2010; Gibson, 2006; Hasbrouck & Denton, 2007). According to Rossman and Rallis (2003), "qualitative research occurs in a natural setting, relies on multiple methods that respect human subjects of a study, focuses on context and is subject to interpretation" (p. 51). However, for this

study, the researcher found a quantitative method to be more appropriate, as most of the studies in the literature review were qualitative and their small sample size made it difficult to apply to a broader population. The gap in the literature, the purpose of the study, and the literature support for the methodology and design supported the choice of a quantitative quasi-design.

The researcher employed quantitative research methods to determine the extent to which student-centered coaching impacted student reading outcomes and student attitude toward reading. The use of quantitative measures allowed for the research outcomes to be expressed numerically. The researcher gathered quantitative data for the study from the school district's benchmarks and STAAR test; as proxies for student achievement.

In addition to quantitative methods, the researcher employed a quasi-experimental study design to examine the intricacies of student-centered coaching. In social science and psychology research, a quasi-experimental design is an effective methodology (Cook, 2015). According to Adams and Lawrence (2014), quasi-experimental research "includes manipulation of an independent variable but no random assignment of the independent variable" (p. 21). A quasi-experimental design is defined as a not true experiment. Unlike true experiments, quasi-experimental designs do not use randomization. A quasi-experiment compares two groups: a control and an experimental group. In education, the quasi-experimental design is often used because it is not feasible to randomly assign students to classes. The sample in a quasi-experiment is not randomly assigned. This leads to nonequivalent groups, meaning there could be significant differences between the groups (Cook, 2015). The pretest and posttest was the released STAAR reading test, which is the state-mandated standardized test given to all fifth-grade students in the state. This is one of the two dependent variables (DV) of the study. The

researcher compared the 2016–2017 fifth-grade archival data to the 2017–2018 students data of the students whose teacher received coaching.

The study also used a 20 questions Likert-scaled survey to measure student attitude. The survey was administered as a pretest, and as a posttest measure after the independent variable (IV) student-centered coaching was administered. According to Harnisch, Fisher, and Connell (1989), a large variety of research designs fall under the quasi-experimental heading resembling true experimental designs, except that they do not use random assignment of subjects to groups; while others use only one group and limited testing. Furthermore, Harnisch et al. (1989) suggested that a comparative pretest-posttest design strengthens the internal validity of a study. In a pretest-posttest design, the dependent variable is measured before the treatment is administered and measured again after the treatment is given. However, Zientek, Nimon, and Hammack-Brown (2016) proposed that this design presented a threat to internal validity and limited the scope of a study. They further posited that this design has no external validity as it focuses on the change in the participants before and after treatment (Zientek et al., 2016). One way researchers seek to improve the internal validity of their study is by utilizing the control group design alongside the pretest-posttest design. Yin and Campbell (2018) stated that the control group—the group that does not receive any treatment—should be compared to the treatment group. The changes in each group can be analyzed for statistical significance.

According to Zientek et al. (2016), the posttest pretest with control group design is a preferred quasi-experimental method as it minimizes threats to internal validity. This method is often used in educational research to test the effectiveness of an intervention or program (Creswell, 2008; Robbins, Pfeiffer, Maier, Lo, & Wesolek, 2012). The pretest-posttest model is normally used in experimental design to measure the difference between the experiment and

control groups. According to De-Marcos, Dominguez, Saenz-De-Naverrete, and Pages (2014), the pretest-posttest model is often used because of the ease with which it allows researchers to analyze the effectiveness of a treatment. For this study, the researcher chose a quantitative quasi-experimental design using a pretest and posttest model for control and experimental groups.

The study was conducted at the Education Academy, a Title I elementary school in Texas. The researcher used the archival data of the 2016–2017 academic year's fifth-grade students as a control group. The school utilized the state release STAAR test twice a year to measure student growth. The beginning of the year results were used as a pretest. Coaching was conducted from mid-October to January with the mid-year test serving as the posttest for the treatment.

Target Population, Sampling Method (power), and Related Procedures

This section describes the target, sampling method, and the procedures for the study. A targeted population must be defined and be representative of the whole population (Adam & Lawrence 2014). In this study the focus was on elementary school educators and their students.

Target population. The target population of the study was qualified and experienced fifth-grade reading teachers, and their students enrolled for the 2017–2018 school year. Being qualified and experienced was defined as having a bachelor's degree, a Texas teaching certification, and at least two years of fifth-grade teaching experience (NCLB, 2002). The students in the study were fifth-grade students and agreed to be apart of the study. The setting for the study is an elementary school in a large school district in a Texas suburb. The district serves a diverse population and has approximately 55 elementary schools that serve students in grades pre-k-fifth. The research site, Education Academy, serves approximate 1,100 students in grades pre-kindergarten through fifth.

Sampling method. The sample was limited to fifth-grade reading teachers due to parameters imposed by the building principal. The teachers chosen for the study were selected for their convenience and willingness to collaborate with the researcher. The researcher employed convenience sampling a form of nonprobability sampling to select participants (Adams & Lawrence, 2014). Convenience sampling is a technique that relies on selecting participants from the target population who are easy to reach and readily available to participate in the study (Best & Khan, 2006). The teachers in the sample were selected based on their willingness to participate in the study, and on meeting the research criteria. The participants were chosen because they were teachers who taught language arts at the fifth-grade level. The selected teachers were experienced fifth-grade teachers who had worked at the school and had been on the same team for more than two years. The students in the sample teachers' classes were also a convenient sample which included all of the fifth-grade students who agreed to participate. All of the students in the fifth grade were invited to participate in the study. The students from the three teachers who agreed and were selected to participate in the study made up the student sample. The nonequivalent grouping of students in the classes lends itself to a quasi-experimental design.

Participants

The researcher conducted the study at a Title I elementary school campus in a suburban district in Texas. All the teachers in the study were highly qualified teachers, as defined by the No Child Left Behind Act. The school's rating at the time of the study was academically acceptable, according to the Texas Education Agency (TEA). A total of three teachers were selected for the study. All three teachers who agreed to take part were chosen because they taught fifth-grade language arts. All of the teachers were female; two were African American and one was Caucasian. Their fifth-grade teaching experience ranged from three to seven years. Two of

the three teachers held a master's degree and were English as a Second Language (ESL) certified; a significant percentage of the school's students, including the fifth-grade population, were second language learners. The other teacher held a bachelor's degree and is Gifted and Talented (GT) certified; some of her students were in the GT program. Table 1 shows all the demographic characteristics of the teacher sample. Each teacher has been given a pseudonym to protect her identity.

The student participants in the study came from among the 185 who made up the fifth grade. One hundred forty-four of the students consented to participate in the study: 75 male students and 69 female students. Demographic data for the school and fifth grade were collected from the school's website. This data is summarized in Table1. Of note, the fifth-grade population reflected the overall demographics for the school across all indicators except two racial categories: Asian students made up 0.03% of the fifth grade, but 2.7% of the overall school population. Similarly, multi-race students made up .02% of the fifth grade, but 2.7% of the school population. A G-Power Analysis 3.1.9.4 was used to calculate the sample size ($N = 88$ for control and 88 for the experimental group) for the students for the study. The statistical tool used to answer the research question dictated the sample size required.

The research was conducted in a Title I school in a school district located in the Gulf Coast Region of Texas. Title 1 was enacted in 1965 under the Elementary and Secondary Education Act (ESEA). Title I, Part A of the amended ESEA provides financial assistance to local educational agencies (LEAs) and schools with high percentages of children from low-income families to ensure that all children are able to meet the challenging state academic standards (U.S. Department of Education, n.d.). The selected school, Education Academy (pseudonym), served students from pre-kindergarten through fifth grade. The school served a

population of approximately 1,100 students. 185 of these students were in the fifth grade, and 144 of those students participated in this study.

Table 1

Fifth-Grade Student and School Demographics (N = 144)

Indicator	Fifth Grade	School
Number of Students	185	1,030
Economic Disadvantaged	77%	77.6%
Race/Ethnicity		
African American	30%	27.2%
Hispanic	57%	58.4%
Caucasian	7.6%	7.6%
Asian	1.03%	2.7%
Native American	.01%	.08%
Multi-Race	.02%	2.7%

Instrumentation

Instrumentation refers to the data collection tools used in a study. These tools should be adapted to the needs of the researcher (Mertens, 2010). Instruments have different strengths and weaknesses; therefore, researchers should make sure that their instruments are tested. For this study, the researcher used published instruments with high validity and reliability. The data used was both archived Benchmark data and current benchmark data. According to Creswell (2014), validity is the ability to make meaningful inferences about the scores of an instrument. Creswell (2014) described three forms of validity content validity (does the instrument measure the content it was designed to measure), predictive validity (do the scores predict a criterion measure and correlate to other scores), and construct validity (do items measure constructs and do they have a useful purpose and have positive consequences when used in practice). Creswell (2014) defined reliability as having internal consistency and test-retest correlation, meaning that the instrument has been tested multiple times to ensure the same or similar results every time.

District benchmark (DBM). The primary instruments used in the study were pretest and posttest scores from the District benchmark: the State of Texas Assessment of Academic Readiness (STAAR) test. The STAAR test has been the state assessment of academic achievement for students in Texas since the 2011–2012 school year. The test was designed to measure the extent to which students have learned and can apply the knowledge and skills defined in the state-mandated curriculum standards—the Texas Essential Knowledge and Skills (TEKS; Texas Education Agency, 2017). Fifth-grade students must pass the STAAR reading assessment to be promoted to the sixth grade. Each year, students participate in two administrations of the DBM. The first administration of the DBM occurs in September (the beginning of the school year). The second administration of the benchmark occurs in January to assess the students' level of understanding of the curriculum. Data from the benchmarks (2017 STAAR Test) were analyzed to determine if coaching had any impact on the reading achievement of the students.

STAAR Assessment validity and reliability. In the Texas assessment program, validity refers to the extent to which test scores help educators make proper inferences about student performance (Texas Education Agency, 2017). Test validity is established based on the content of the test and the statewide curriculum. Items for the test are field-tested as part of the STAAR test annually. A committee, comprised of teachers across the state, TEA staff, and test designers, examines test items. Other committees also review test items to check for content and bias (Texas Education Agency, 2017). The results of the STAAR test is used to make inferences about students' knowledge and understanding of the Texas Essential Knowledge and Skills (TEKS) curriculum. Group difference analysis provides information about disaggregated student groups are measured using the Mantel-Haenszel Alpha and the ABC DIF classification. The DIF

analysis results information is used to identify with unusual statistical characteristics related to student performance. Test items for the Texas assessment are scaled and equated using the Rasch Partial-Credit Model (RPCM), making it possible to make inferences about what items a student is likely to get correct or incorrect based on the student's proficiency (Texas Education Agency, 2017).

Content validity. Validity evidence based on test content supports the assumption that the content of the test adequately measures what it intended to measure (Technical Digest, 2013; Creswell, 2014). The STAAR test is aligned to the Texas Essential Knowledge and Skills (TEKS). The validity of the STAAR assessments connects the test to the TEKS. The test development begins with educators reviewing the TEKS. Then educators work with TEA to define the readiness and supporting standards in the TEKS and help determine how each standard would be assessed.

Construct validity. Validity studies have been conducted to assess the comparability between two language versions of the same test. A 2007 study by Davis, O'Malley, and Wu concluded that the Spanish and English versions of the Texas assessment measured the same construct, supporting the internal structure validity of the tests.

Predictive validity. Predictive validity refers to how well an instrument is related to other instruments that measure the same variable. The STAAR assessment has good validity with other instruments that measure achievement. External validity studies link performance on the STAAR assessment to the SAT and the ACT

STAAR reliability. On the STAAR test, reliability is based on the idea that repeated administration of the same assessment should generate consistent results. Test reliability is calculated using multiple internal consistency measures. The Kuder-Richardson 20 (KR20)

coefficient is used for tests with only multiple-choice items. Stratified coefficient alpha is used for tests having a mixture of multiple-choice and constructed-response items (Texas Education Agency, 2013). Internal consistency is evaluated for student groups- including all students, female, males, African-American, Hispanic, and white students. Interrater reliability for the test involved teachers observing and evaluating students who are completing appropriate TEKS-based assessment tasks. Two trained evaluators observe the same student performance at the same time and independently provide ratings of the student performance. The correlation between the two sets of rating is a measure of the reliability of the test scores (Texas Education Agency, 2013).

Elementary reading attitude survey (ERAS). In order to explore question two of the study, the researcher administered the "Professor Garfield" ERAS to students (see Appendix D). The ERAS is a picture survey that was used to determine students' attitudes toward reading. The ERAS used four pictures of Garfield's face, ranging from very happy to very upset: happy Garfield = 4 points; slightly smiling Garfield = 3 points; mildly upset Garfield = 2 points; and very upset Garfield = 1 point. The students responded to questions about reading by circling the Garfield that best represented their response. The ERAS was administered at the beginning of the study and at the end, to see if coaching had made a changed the students' attitudes toward reading. This tool was selected because the ERAS has a large-scale normative frame of reference and has empirically documented reliability and validity (Mckenna & Kear, 1990). According to Creswell (2014), validity is the ability to make meaningful inferences about the scores of an instrument. The Cronbach alpha, a statistic developed primarily to measure the internal consistency of attitude scales, was calculated at each grade level for both subscales and for the composite score. The coefficients ranged from .74 to .89

The instrument was designed for students in grades one through six. Reliability and validity of the instrument were determined based on a national sample of 18,000 children in grades 1–6. The internal consistency coefficients for fifth-grade were 0.86 for recreational reading, 0.82 for academic reading, and 0.89 overall. The survey was administered to all fifth-grade students in the experimental group teachers' classes. The survey provided quantitative estimates about students' perceptions of recreational reading and academic reading. According to McKenna and Kear (1990), the instrument can be used to (a) make conjectures about the attitude of specific students, (b) provide a convenient group profile of a class, or (c) serve as a means of monitoring the attitudinal impact of instructional programs (p. 627). The prototype of the instrument was administered to 499 elementary students. In norming the ERAS, the survey was administering to 18,138 students in grades 1–6. Participants in the study were reflective of the U. S. population to allow for confident generalization. Study participants were taken from 95 school districts from 38 states across the United States. The number of girls was only 5 more than the boys. The ethnic makeup of the sample was close to the population- the number of Blacks (9.5%) was within 3% of the population and Hispanics (6.2%) was within 2%.

Data Collection

The study was conducted in a school district in Texas. The Researcher used archival data of the 2016–2017 academic year's fifth-grade students as a control group. The school utilized the state release STAAR test twice a year to measure student growth. The beginning of the year results were used as a pretest. Coaching was conducted from mid-October to January with the mid-year and STAAR tests serving as the posttest for the treatment. Concordia University–Portland Institutional Review Board (IRB) approved the study (see Appendix A). The researcher requested and received permission from the school district to conduct the study and collect data.

Additionally, the researcher discussed the study with the school principal in August and gained her approval to coach the teachers who volunteered for the study. Next, the researcher decided to meet with the teachers to complete the consent forms (see Appendix C).

Three fifth grade reading teachers agreed to take part in the study. The researcher coached the three teachers using the student-centered coaching model defined by Sweeney (2010). The coach had 14 years of teaching experience, hold a master's degree in reading and curriculum and instruction, had taught prekindergarten through fifth grade, and worked as a reading interventionist and coach. The coach also has a Master Reading Teacher certification from the state.

Once a signed consent was received from the teachers, the researcher/coach met with the teachers to discuss the study and establish a day of the week for coaching. The teachers were given consent forms for the students to complete with their families. The coach and teacher agreed to meet once per week for coaching for individual coaching, and once every three weeks for group coaching. During individual coaching, the coach and teacher discussed individual student academic concerns, instructional objectives, and teacher instructional needs. Group sessions focused on checkpoint assessment data. Checkpoints were administered at the end of each coaching cycle, which were three weeks long.

District checkpoints were administered every three to four weeks to monitor students' progress at mastering the taught curriculum. The district curriculum coaches wrote the district checkpoints in alignment with the district curriculum, which is based on the TEKS. Checkpoints were administered at the end of coaching (teaching) cycles that covered specific curriculum objectives. All fifth-graders in the district completed the checkpoints to measure progress toward curriculum mastery.

When the student consent forms were returned, the principal provided the researcher with the fourth-grade STAAR results of the students who consented to have their data shared. The researcher analyzed the STAAR data to determine the areas where the students struggled to establish a start point for coaching. The coach began meeting with the teachers for coaching in the middle of September. The coach met with the teachers weekly to provide planning support, data analysis, and strategies and skills for teaching reading. The three teachers in this quantitative quasi-experiment study received coaching by meeting with the instructional coach weekly to discuss students' needs and set up a learning target. According to Sweeney (2011), the coach partner with the teacher to design learning that is based on a specific objective for student learning.

The coaching cycle used for the study consist of four stages. Stage 1: estastablish goals based on the standard. Stage 2: pre-assess students and design instruction. Stage 3: implement instruction. Stage 4: post-assess the students. Figure 1 shows the flow of the coaching cycle.

Student-Centered Coaching Cycle

Figure 1. Student-centered coaching cycle. From *Student-Centered Coaching The Moves* p. 11, D Sweeney and L. S. Harris, 2017, Thousand Oaks, CA: Corwin. Copyright [2017] by D Sweeney and L. S. Harris. Reprinted with pemission.

In conducting the study, the coach met with the teachers to review the previous year's data and determine our focus. The following questions guided the coaching conversation.

- What is our focus?

- What is our goal for student learning?

- What are the learning targets that will show what we want our students to know and be able to do?

How will we approach planning?

- We will need 40–45 minutes each week for planning. What day and time works best for you?

- What tool will be used for planning? (Google Docs, planning template, etc.)

Goal setting. What will the student learn as a result of coaching?

- What would you like the students to do as readers?

- What student work, data, samples that can be used to help us decide on a focus that would impact student learning?

- Is this the goal that would best meet the student needs?

Unpack the standard (s). When determining individual learning targets ask:

- Does the target fit the goal and standard that support it?

- Is it written in student-friendly language?

- Is the target focused on learning rather than on a task or activity?

- Is the target measurable?

- Does the target contain only one action and/or piece of content?

- Is there a balance of knowledge and skills in the set of targets?

    Measuring the impact of coaching on teaching and learning. A results-based coaching tool was used to track the impact of coaching during the coaching cycle (see Appendix F) The researcher assigned each teacher a code to ensure confidentiality. Before analysis of the data, the students' and teachers' identifying information was removed and replaced with a code. Assessment data was delivered electronically and was stored in a password-protected file on the researcher's computer, which could only be accessed with a password and a fingerprint scan. All paper data was delivered to the researcher by the teacher and was stored in a locked cabinet in

the researcher's locked classroom. All data was only accessed and reviewed by the researcher. All data for the study will be stored kept for three years after completion of the study.

Operationalization of Variables

With this study, the researcher wanted to determine the impact of student-centered coaching on student achievement and attitude toward reading. To that end, three questions were answered. Questions 1 and 2 are about student achievement, and question 3 addresses student attitude.

RQ1. What is the impact, if any, of student-centered coaching on the reading achievement of elementary school students?

b. What is the difference in the reading achievement of students whose teacher received student-centered coaching for the academic year 2017–2018 and those whose teacher did not receive. The independent variable was the student-centered coaching, and the dependent variables were the reading BOYDBM (Pretest) and MockSTAAR (Posttest) scores of the control and experimental groups.

RQ2. What is the difference between the BOYDPM and STAAR score assessment of the experimental group? For this question, the independent variable was student-centered coaching, and the dependent variables were the students reading scores on the MockSTAAR and the STAAR.

RQ3. What is the impact, if any, of student-centered coaching on the attitude of elementary school students toward reading? In this question, the independent variable was the implementation of student-centered coaching, and the dependent variables were the pretest and posttest survey results of the ERA. According to Adams and Lawrence (2014), "knowing the relationship between two variables can help us explain the variability in the measures and

whether knowledge about the relationship is useful" (p. 254). The teacher's ability, together with students' interactions with instruction, determined the effectiveness of the coaching.

Data Analysis Procedures

In this study, the researcher used both primary and secondary data to answer the research questions. Data analysis is a critical review of the information collected during the research. The statistical data collection in this quantitative study was analyzed using descriptive statistics such as range and standard deviation. Additionally, inferential statistics were used to determine statistical significance (Creswell, 2014). Quantitative data analysis was used to determine what effect (if any) coaching had on student reading achievement and attitudes toward reading. Descriptive and inferential statistics were applied to analyze the data.

Comparative analysis was used to determine the difference in reading performance between students whose teachers received coaching and those who did not. An independent t test was used to test the research hypotheses. Descriptive statistics were applied to answer question three. Best and Khan (2006) asserted that a t test could be a useful analysis tool when using a quasi-experimental design because the groups in the study may not be equal. They stated that "a mere quantitative superiority of the experimental group mean score over the mean score of the control group is not conclusive proof of its superiority" (Best & Khan, 2006, p. 407). Therefore, using a t test for this study was appropriate because it could not be ensured that the control and experiment groups were equal in terms of size or student ability. A t-test mean scores of the control and experiment groups were compared using a t test to determine the impact of student-centered coaching to answer the first research question. Descriptive analysis was used to determine the impact of student-centered coaching on students attitude toward reading.

Two of the three research questions were answered using the Mann-Whitney U test to answer question one and the repeated-measures *t* test to answer question two. Question three was answered using descriptive statistics.

Limitations and Delimitations of the Research Design

The study was limited to the use of student-centered coaching. Although all the students were fifth-graders, their abilities and teachers' application of teaching strategies may be a limitation of the study. Due to parameters imposed by the site principal and the researcher's position, the study was limited to fifth-grade reading teachers. Time constraints further limited the study. The research was conducted from October through February of the 2017–2018 school year. The time frame of the study was narrowed due to a natural disaster that caused the school to open later than originally planned. The researcher also restricted the study to a single site because of the time constraints.

Internal and External Validity

The cornerstone of good research is the validity and reliability of the data. Adams and Lawrence (2014) defined reliability as the consistency of the findings or measure and validity as the accuracy of the finds (p. 69). A study's reliability refers to the expectation of the replication of a study in similar situations. However, reliability cannot stand alone. A study's validity, or accuracy, also must be examined. The validity of the research is dependent on the conformity to an ethical standard. Creswell (2014) asserted that experimental researchers should identify threats to the internal validity of experiments and ensure that they take action to mitigate those threats. The researcher took the following steps to minimize threats:

1. The teachers in the study had to have at least two years of teaching experience and be highly qualified according to the TEA, and the school had to be a Title I with a diverse student demographic.

2. A convenient sampling approach was used and all three teachers and the students who agreed to take part were selected for the study.

3. The use of the STAAR test as a measure of student achievement added validity and reliability to the study since the STAAR test is used by all elementary fifth graders in the state. The test also has external validity comparison to the SAT and the ACT.

4. The ERAS has been used in other studies that addressed student attitude and student achievement.

Threats to external validity must also be addressed and minimized. According to Creswell (2014), external threats result from researchers making incorrect inferences to other populations that are not like the sample. The sample of this study is a diverse population that is like other schools in the district and district around the research site. As such, the inferences drawn from this study will be limited to communities with similar student demographics.

Expected Findings

This quantitative quasi-experimental pretest-posttest with a control group study sought to determine the impact of student-centered coaching on reading achievement of elementary students. The literature review revealed a shortage of quantitative studies on the topic of caching and student achievement. This study intended to address the gap and make a possible causal connection between student-centered coaching and student achievement to add to the body of research on educational coaching. The researcher expected to find a positive relationship between student-centered coaching and students' reading achievement. Another expectation was

that there would be a statistical difference between the scores of the control and experimental group students. The researcher expected that there would be a positive change in the student attitude toward reading.

Ethical Issues in the Study Considerations

With any study that involves human subjects, it is important for the researcher to be aware of the ethical issues and to use every effort to mitigate the related concerns. The study posed no physical risk to the participants of the study. Concordia University IRB approved the procedures for conducting the study. Before engaging in the study, the researcher also obtained permission from a school district administrator and the site principal.

Informed consent. The research provided a detailed consent form to the fifth-grade language art teachers. The consent outlined the study and the expectation for the teacher participants. The participants volunteered for the study and were assured that they could stop participation at any time without penalty.

Informed parental consent. One concern was parental consent. The researcher provided each participant with informed consent for parental signature. The rights of the participants were clearly outlined in the consent form. All the participants were made aware that they could opt-out or leave the study at any time without pressure or recrimination. The purpose of the study and how the information would be communicated was clearly explained to the participants. The researcher stored the signed consent forms in a locked filing cabinet in the researcher's locked classroom.

Assent. As part of Concordia University IRB approval, a student assent was required. Once parent consent was received, the students were given an assent form. The researcher spoke to each class about the research and gained the assent of the students in the study. The students

were assured that no adverse action would be taken if they did not assent. The signed assent forms were locked in the researcher's filing cabinet.

Data confidentiality. The confidentiality of all participants data was maintained. Student assessment results were kept electronically on the researcher's password protected and fingerprint-secured laptop in a password-protected file. The researcher was the only one who knows the password. All data will be maintained for three years from completion of the study, then it will be securely deleted. Physical data were stored in a locked filing cabinet and will be shredded two years after completion of the study.

Anonymity. The researcher deidentified all data prior to any analysis. The archival data, which was retrieved from the school district website, was accessed by the site assistant principal and given to the researcher. There was no student names or identification numbers associated with the data. The teachers and students in the experimental group all received and signed a consent to participate in the study. Each teacher (Spring, Summer, Winter) and the school (Education Academy) was assigned a pseudonym. The school district was referred to as a district in Texas.

The researcher had one other ethical concern. Since the researcher worked as a teacher and coach, there was potential for bias. Therefore, the researcher did not administer any of the assessments and obtained assessment results from the school instructional specialist rather than the teachers. To eliminate any bias, the researcher conducted the study according to the IRB guidelines.

Summary

  The current educational climate demands improved teacher practice and student achievement. This quasi-experimental design research design studied the impact of student-centered coaching on students' reading achievement. Statistical analysis was applied to determine if there was a causal relationship between coaching and student reading achievement.

  The methodology, data collection procedures, and the analysis of the data presented in the chapter provided the study with the valid results. Student assessment data were analyzed using an independent samples t test and paired samples to determine the effectiveness of the treatment on student achievement and attitude. The researcher was interested in the extent to which coaching changed the instructional practice of reading teachers, although no research question addressed teacher instruction. The goal of the study was to determine whether student-centered coaching was a useful model for job-embedded professional development. The following chapter will present an introduction, followed by a description of the sample, a summary of the results, a detailed analysis of the results, and a chapter summary.

Chapter 4: Data Analysis and Results

Introduction

This quasi-experimental study examined the effects of student-centered coaching on student academic achievement and student attitudes toward reading. This study employed student-centered coaching as a site-based staff development model. The treatment used for the study was student-centered coaching. The treatment (student-centered coaching) was changed slightly to accommodate the time frame and because the coach could not work in the classroom with the teachers and students. Throughout the implementation, the coach met weekly with the teachers to analyze observation data, plan instruction, and discuss instructional practices. This chapter presents the analysis of the data collected from the DBM, ERAS, and STAAR.

The first section outlines data collection methods and is followed by a summary of the results and a detailed analysis of the quantitative findings. Student-centered coaching is intended to be collaborative teaching approaches such as; co-teaching, modeling instruction, or observing the teaching practice with an eye on how it is impacting students. It includes tools for measuring coaching impact on teaching and student learning. It is a well-designed system for professional development that includes large group learning, small group collaboration, and one-on-one coaching sessions. The study sample included 276 students and three teachers from a Title I elementary school in a large district in Texas. The sample was selected using a convenience sampling method, in which students and teachers were selected because they were available and consented to take part. The control group consisted of all fifth-grade students in the teachers 2016–2017 ($N = 132$) academic year classes, and the experimental group consisted of the teacher's 2017–2018 ($N = 144$) academic year students.

Two instruments were used in the study to measure student reading achievement and student attitude towards reading. The ERAS was used to measure the student attitude using a pretest posttest (Scheriff, 2012) measure. According to Guthrie, Wigfield, Metsala, and Cox (2004), attitude toward reading impacts student reading achievement. The STAAR test was used to measure student reading achievement.

Data collection began for the experimental group with a District Benchmark Assessment (DBM; the 2017 4th grade STAAR test) administered to the students to determine a baseline before beginning the coaching cycle. The treatment (student-centered coaching) was administered over a period of twenty weeks from October 2017 through April 2018. The Elementary Reading Attitude Survey (ERAS) was used to explore the second research of the study. The survey was administered as a pretest and posttest measure to the experimental group, first in September and again in February after the mid-year reading assessment.

Description of the Sample

The study was conducted at Education Academy, an elementary school, in a large school district in Texas. The researcher selected a convenience sample of students and teachers. All the participants were enrolled in a Title 1 school. The participants in the study consisted of 276 students, 132 made up the control group (2016–2017 fifth grade students) and 144 made up the experimental group (2017–2018 fifth grade students). The study began with three teachers. The sample consisted of three female educators, one Caucasian, and two African Americans. The teacher participants were of varying ages, education, and experience levels. They ranged in experience from four years to nine years, and one held a bachelor's degree, and two had master's degrees. The researcher screened the participants to make sure they were highly qualified, as defined by the Texas Education Agency. All teacher participants are considered highly qualified

and credentialed and licensed to teach this grade level. Table 2 represents the characteristics of the teacher participants.

Table 2

Study Sample Teacher Demographics

Teacher Name	Grade	Gender	Years Taught	Years in Fifth Grade	Degree
Spring	5	Female	9	7	Masters
Summer	5	Female	5	3	Bachelors
Winter	5	Female	8	5	Masters

There were 144 student participants in the experimental group of the study. The sample included students of different races and ages. The ages of the students ranged from eight to 11 years old. 34.2% were African American, 57% Hispanic, 7.0% Caucasian, .03% Asian, .01% Native American and .02% Multi-Race. The group consisted of 67 of the students were females, and 77 were males. The control group of the study included 132 students. The had 72 females students and 60 males students. The ages of these students ranged from eight to 12 years old. Thirty-three percent were African American, 60% were Hispanics, 6% were Caucasian, .03% Asians, .02 Native American, and .05 Multi-race. According to the G Powered Analysis 3.1.9.4, the sample was large enough for a medium effect. Table 3 represents the characteristics of the student participant in the study reported above.

Table 3

Ethnicity, Gender, and Socioeconomic, of Student Participants (N = 276)

Indicator	Experimental	Control
Number of Students	144	132
Boys	77	72
Girls	67	60
Economic Disadvantaged	77%	75%
Race/Ethnicity		
African American	34.2%	27.2%
Hispanic	57%	58.4%
Caucasian	7.6%	7.6%
Asian	1.03%	2.7%
Native American	.01%	.08%
Multi-Race	.02%	2.7%

Research Methodology and Analysis

The researcher used this quasi-experimental design study to understand the impact of student-centered coaching on students' reading achievement and attitude towards reading. According to Creswell (2013), a quasi-experimental design is one in which the participants are not randomly assigned because creating artificial groups is not possible. The researcher also looked at how coaching impacted teachers' instructional practices.

Furthermore, the researcher wanted to establish a site-based staff development model. A descriptive study is used to describe an intervention or phenomenon in the context in which it occurs (Yin, 2003). For this research, a single quasi-experimental study was conducted. The goal of this study was to improve student reading achievement.

As indicated in Chapter 3, a comparative analysis of the quantitative data were conducted using the independent *t* test. These tests were used to ensure the validity and reliability of the data. The researcher used the instruments outlined in Chapter 3 in the ways they were designed to be used. However, student-centered coaching was used with some modifications to coaching

strategies, as the coach was unable to work directly in classrooms with teachers and students, which is an essential part of the coaching cycle (Sweeney, 2013).

In conducting this research, the researcher did not alter the methodology, as discussed in Chapter 3. However, a major adjustment was made midway through the study. One of the original teachers in the study, Spring, left the school. The teacher who took over Spring's class agreed to participate in the study. This new teacher was new to the profession and only had student teaching experience.

The teachers and coach met weekly for coaching sessions. The individual coaching sessions lasted 45 minutes, and the coach and teacher used student data to guide the discussions. The coaching followed the coaching cycle defined by Sweeny. Teachers used the learning targets and strategies established during coaching sessions during their instruction. Group coaching sessions were held once every three to four weeks at the end of a coaching cycle. Checkpoint assessment data was analyzed to see if student goals were being met. New learning goals were established based on the standards that would be addressed over the next three to four weeks.

Summary of the Results

The study involved several ways to address threats to validity. First, the accepted all participants who volunteered to be in the study. This allowed for a form of random assignment as the researcher did not create the classes of students. Using all particpants who volunteered helped to minimize any biases the research may have had. Limitation and delimitation was also addressed in summarizing the results.

Validity and reliability of results. The study was conducted with fidelity to ensure that the data measure what it proposed to measure. Data validity was addressed throughout the course of the study. Multiple sources of data were analyzed to heighten the validity and reliability of the

study. State and district-wide assessments were used to gather information on student learning outcomes. An established survey tool, the ERAS, was used to measure student attitude toward reading. These steps were taken to heighten the validity and reliability of the results. The instruments used in the study were used in their current form without any modifications.

One threat to validity was the teachers' instruction and the time between the Beginning of Year District Benchmark (BOYDBM) and the Middle of Year District Benchmark (MockSTAAR, the 2017 STAAR Test). Teacher implementation was a concern when conducting a study about coaching. The BOYDBM is the 2017 fourth-grade State of Texas Assessment of Academic Readiness (STAAR) test. Another threat to data validity was the interaction effects of testing. Since there were multiple treatments over time, changes in student achievement could be impacted by many variables other than the treatment (Creswell, 2013). Coaching had to remain consistent to determine if it had any impact on student reading achievement. Therefore, during the individual and group coaching sessions, the coach conducted the session the same way each time. The teacher and coached used student evidence to co-plan instruction, aligned all learning target to the standard, focused on effective instructional practices, used a standard planning document, and used a results-based coaching tool to gather information to measure the impact of coaching on teaching and learning (see Appendix D). During the implementation of the treatment, the literacy strategies were used in the teacher's daily practice; The teachers reported how they implemented the strategies during the coaching session after implementation.

To minimize the threat to validity, all teacher participants received the same number of coaching sessions, and assessments were done at the same time in all classes. All the teachers received group and individual coaching sessions. The coach met individually with each teacher once weekly for coaching, and once every three weeks for a group coaching session. The coach

also modeled instruction only once in each teacher's class. Data were collected at the end of each coaching cycle from each class. One other threat to the validity of the study was the small sample size. Midway through the study, one of the three teachers left the study. The new teacher agreed to join the coaching. However, she was a new teacher with no teaching experience. She had only student teaching experience, but not in fifth-grade. Since the sample size was small, the researcher agreed to keep the teacher and students in the study.

Internal validity and consistency were maintained by using the STAAR test without any modifications. The STAAR test was a reliable instrument for measuring student reading achievement with a consistent internal coefficient of 0.91 (TEA, 2017). The ERAS, a highly reliable instrument with an internal consistency coefficient of 0.89 for fifth-grade, was used to measure student attitude (McKenna, 1990). To ensure the validity and reliability of the data, the researcher continued to collect data from all of the three fifth-grade classes. To ensure that bias was eliminated and ensure the validity of the data, the researcher continually challenged preexisting assumptions. Reliability of the study was determined by adhering to the rigorous guidelines of IRB and rigorous analysis of the data.

Limitations and delimitations. Limitations and delimitations are conditions that might influence a study. Limitations are beyond the control of the researcher and place restrictions on the methodology (Adams & Lawrence, 2015). Conversely, delimitations are the boundaries set by the researcher for the study (Creswell, 2014). The delimitations included a change in time for the treatment as well as a change in teacher participants. The study started in October rather than September, as proposed, due to a natural disaster that delayed the start of school. The brief time frame for the coaching model did not allow the teachers and coach the necessary time to practice and master new skills before implementing all the components of the treatment. The most

significant limitation of the study was the coach's inability to co-teach with the teachers, model instruction, and observe the teachers' instruction. Additionally, one teacher, Spring, left the study halfway through the school year. However, the new teacher consented to become a part of the study, which allowed the researcher to continue the study with three teachers and their students. Another delimitation of the study was the use of archival data for the control group; the biggest disadvantage in using archival data is that the data were not collected with the researcher's hypothesis in mind (Adams & Lawrence, 2015).

Research questions and hypotheses. The researcher addressed two research questions and hypotheses in the study. The research questions that guided the study were:

RQ1. What is the impact of student-centered coaching on the reading achievement of elementary school students?

a. What is the difference in reading achievement of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic school year 2016–2017?

RQ2. What is the difference in the reading achievement scores between the BOYDPM and the STAAR of the experimental group 2017–2018 academic year?

RQ3. What is the impact, if any, of student-centered coaching on the attitude of elementary school students?

b. What is the impact of coaching on student attitude toward reading as measured by the differences in the pretest and posttest administration of the ERAS?

Hypotheses. The null and alternative hypotheses for the study were:

$H_01.$ There is a difference between the reading scores of students whose teacher

received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017

H1. There is a difference between the reading scores of the students whose teachers received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017.

$H_0$2. There is no difference between the BOYDPM and STAAR assessment of the Experimental group.

H2. There is a difference between the BOYDPM and STAAR score and the MockSTAAR and STAAR assessment of the experimental group.

Data analysis procedure. The researcher used student data from the BOYDBM, MockSTAAR, and STAAR to determine the impact of coaching on the students' learning outcomes. Data were collected in October 2017 and again in February 2018. The independent samples *t* test was used to answer research question number 1. According to Laerd Statistics (2016), the independent-samples *t* test is used to determine if a difference exists between the means of two independent groups on a continuous dependent variable. More specifically, it will let you determine whether the difference between these two groups is statistically significant. There are six assumptions that had to be met to use the *t* test. The researcher ran a *t*-test analysis comparing the BOYDBM between the control and experimental group. The six assumptions needed for an independent samples *t* test are addressed below.

Assumption 1: One dependent variable that is measured at the continuous level. In this study, student achievement was measured using the BOYDBM and the MockSTAAR assessments measured from 0 to 100.

Assumption 2: There is one independent variable that consists of two categorical, independent groups. In the study, the independent variable consists of dichotomous group membership: control or experimental.

Assumption 3: Independence of observation. In this study, there was no relationship between the observations in control and independent group. The intervention group was the fifth grade 2017–2018 students, and the comparison group were the assessment data from the fifth grade, 2016–2017 students.

Assumption 4: There should be no significant outliers among the dependent variable data for each corresponding independent variable. In this study, this assumption was not met.

Assumption 5: Both groups of dependent variables, the control, and experimental group should be normally distributed. In this study, this assumption was not met, and thus, a nonparametric analysis was used instead of the t test. The histogram does not show a normal bell-shaped curve for a normal distribution (see figure 2).
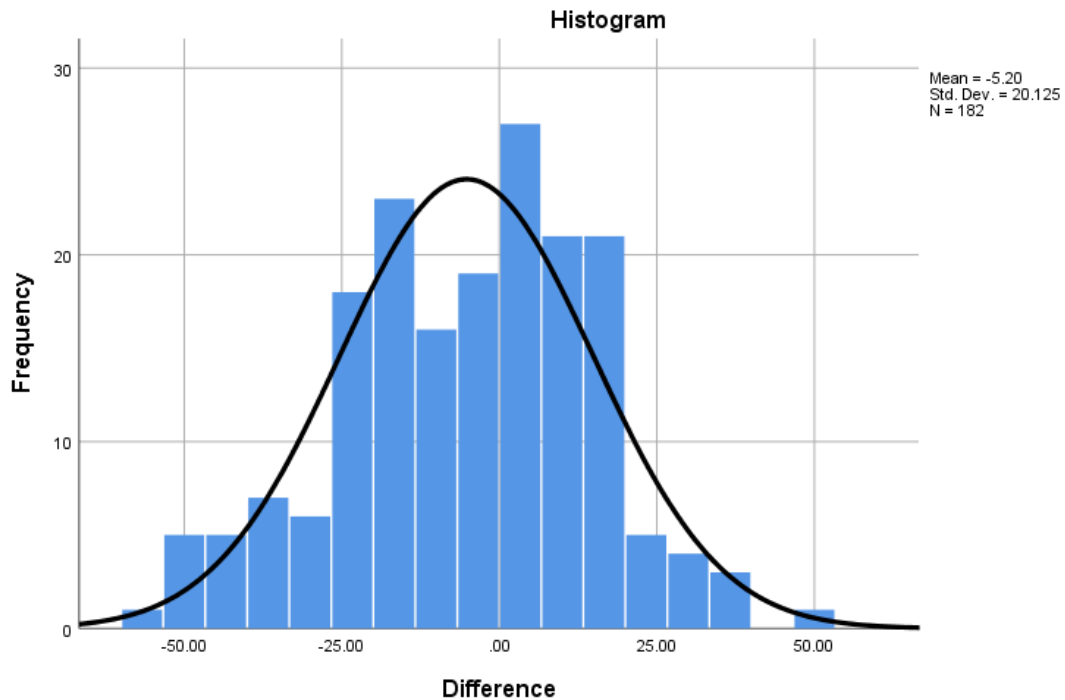
Figure 2. Distribution of BOYDPM values among the control group.

Assumption 6: Homogeneity of variance. In this study, homogeneity of variance in each group experimental vs. control was tested using Levene's test. The p values ($F = .19$, $p = .66$) is greater than .05, therefore this assumption may be met. However, other assumptions were not met, so a nonparametric test was used.

An independent samples t test was also used to compare the MockSTAAR between the control and the experimental group. The following six assumptions were addressed.

Assumption 1: The dependent variable is continuous. This assumption was met.

Assumption 2: The independent variable is dichotomous. In this study, this assumption is met since the independent variable consists of group membership: control or experimental.

Assumption 3: There is independence of observation. In this study, there was independence of observation.

Assumption 4: There should be no outliers among the dependent variable data for each corresponding independent variable. In this study, this assumption was not met.

Assumption 5: Both groups of dependent variables, control group, and experimental group, should be normally distributed. In this study, this assumption was violated, and thus, a nonparametric analysis was used instead of a t test. The histogram did not show a normal bell curve.

Assumption 6: There is a homogeneity of variance in each group. In this study, this was tested using Levene's test. The p-value ($F = 12.4$, $p = .00$) is less than .05. Therefore, the assumption was violated.

To address question 2, a repeated measures t test was used to determine the if there was a statistically significant difference between the BOYDBM and the STAAR assessment for the

experimental group 2017–2018 academic year. All four assumptions for the repeated measures *t* test were met.

Assumption 1: The dependent variable must be a continuous variable. In this study, the dependent variable student achievement was measured using the BOYDPM, MockSTAAR, and STAAR.

Assumption 2: Observations are independent of each other. In this study, there was no relationship between the observations.

Assumption 3: The dependent variable should have a normal distribution. In this study, the distribution is approximately normal/bell shapes (see figure 3).

Assumption 4: The dependent variable should not have outliers. In this study, the value 50 may or may not be an outlier, so it was okay to proceed with the repeated measures *t* test.
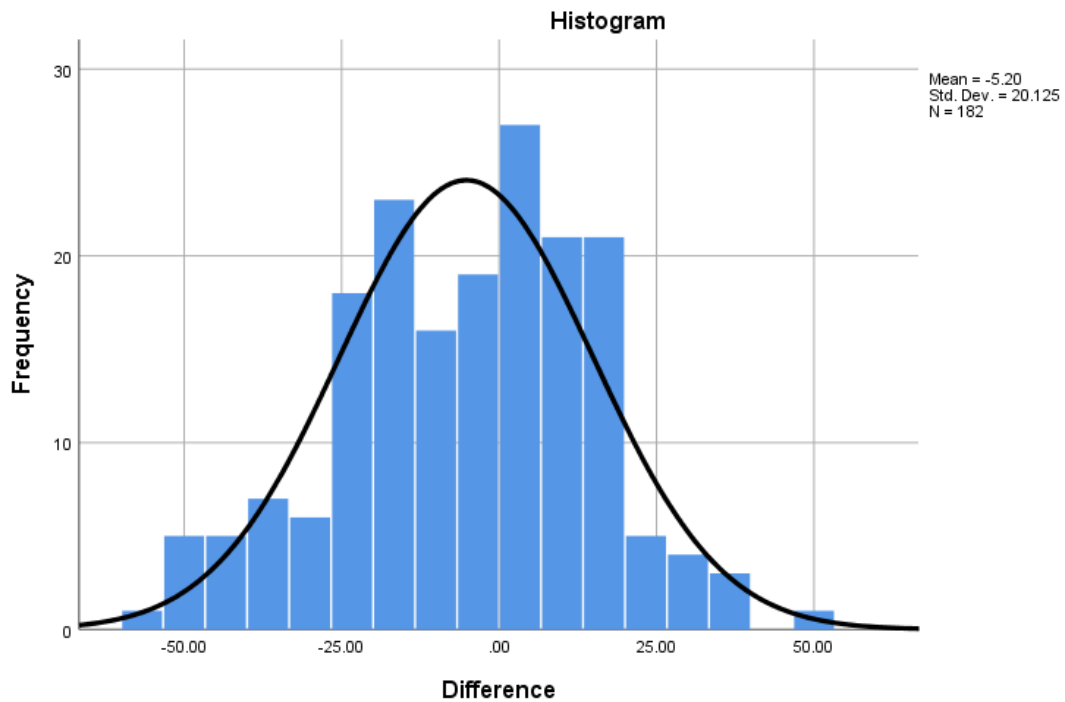
Figure 3. Difference between BOYDPM and STAAR.

The following procedures were used to prepare the data for analysis. The raw data from the BOYDPM and the MockSTAAR were deidentified and organized into an excel spreadsheet. Then assumption testing was conducted to determine if the *t* test was the appropriate analysis to answer the research questions 1**,** What is the difference in reading achievement of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic school year 2016–2017? Second, the raw data from the survey instrument was compiled into an excel spreadsheet. Then the researcher conducted descriptive statistical analysis to answer the third research question, what is the impact of coaching on student attitude toward reading as measured by the pretest and posttest administration of the ERAS?

Detailed Analysis

Quantitative data. In order to investigate the research questions and the null hypotheses, the Mann-Whitney U test, the repeated measures *t* test, and a sign test were used. To answer the first research question (What is the difference in the reading achievement of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017?) the 2017–2018 student assessment data for each of the teachers (experiment group) was compared to 2016–2017 students' assessment data for the teachers' 2016–2017 school year students (control group) to determine if coaching had any impact on student achievement. The BOYDBM (2017 4th Grade STAAR test) was administered as a pretest measure to get a baseline before the coaching cycle began. Reading checkpoint scores for each teacher were collected to measure how students were performing and determining next steps in the coaching cycle. Over the 20 week cycle, student-

centered coaching was administered, and the MockSTAAR was given in February to measure the impact of coaching on reading achievement.

RQ1. What is the impact, if any, of student-centered coaching on the reading achievement of elementary school students?

    a.   What is the difference in the reading achievement of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017?

$H_0$1. There is no difference between the reading scores of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017.

H1. There is a difference between the reading scores of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017.

Null hypothesis one states: There is no difference between the reading scores of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017. The researcher wanted to run an independent sample *t* test to evaluate the null hypothesis. The independent variable was student-centered coaching. Reading scores on the September administration of the district benchmark (BOYDBM) and the February administration of the district benchmark (MockSTAAR) were used to measure reading achievement, the dependent variable. However, since two of the assumptions for the *t* test were violated a Mann-Whitney U test was run to evaluate the null hypothesis. A Mann-Whitney U was run to determine if there were differences in the reading achievement scores, as measured by the BOYDPM, between control and

experimental groups. Distributions of the achievement scores for control and experimental groups were similar, as assessed by visual inspection. Median reading achievement score was not statistically significantly different between the control and experimental (71.56) groups, $U = 8146$, $z = -1.68$, $p = .09$. The results are presented in Tables 5 and 6.

A Mann-Whitney U test was also run to determine if there were differences in the reading achievement score between the control and experimental group. Distributions of the achievement scores as measured by the MockSTAAR scores for the control and experimental groups were similar, as assessed by visual inspection. Median achievement score was not statistically significantly different between the control (61.95) and experimental (68.93) groups, $U = 17145$, $z = -1.612$, $p = .11$. The analysis revealed no statistically significant difference in the average reading achievement between students whose teachers received the treatment and those whose teachers did not receive student-centered coaching. For the pretest, since the p-value .09, which is greater than .05, the researcher failed to reject the null hypothesis that there is no difference between the mean BOYDBM score of the experimental and control groups. However, there is a difference between the group averages, but the difference is not statistically significant (see table 5).

Table 4

Mann-Whitney U Test Results Comparing BOYDPM Between Control and Experimental Groups

Average Rank Experimental group	Average Rank Control group	Z	U	P-value
145	129	-1.68	8146	.09

For the posttest measure, the p-value is .11, which is greater than .05; the researcher failed to reject the null hypothesis that there is no difference between the mean MockSTAAR

score between experimental and control groups. However, there is a difference between the group averages, but the difference is not statistically significant (see table 6).

Table 5

Mann-Whitney U Test Results Comparing Mock STAAR Between Control and Experimental Groups

Average Rank Experimental group	Average Rank Control group	Z	U	P-value
141	126	-1.612	17145	.11

RQ2. What is the difference between the BOYDPM and STAAR score assessment of the experimental group?

H₀2. There is no difference between the BOYDPM and STAAR assessment of the experimental group.

H2. There is a difference between the BOYDPM and STAAR score assessment of the experimental group.

The null hypothesis for question 2 states: There is no difference between the BOYDPM and STAAR assessment of the experimental group. The experimental group assessment data were analyzed using a paired samples *t* test to investigate the second null hypothesis. According to Laerd Statistics (2015), the paired-samples *t* test is used to determine whether the mean difference between paired observations is statistically significantly different from zero. The participants are either the same individuals tested at two points or under two different conditions on the same dependent variable. In this study, the experimental group pretest and posttest scores were used for this measure.

The assumptions were met, and the test was run to determine if there was a statistically significant difference in the BOYDPM and the STAAR for the experimental group. The test indicated that there was a significant average difference between the BOYDBM and STAAR scores ($t = 3.5$, $p = 0.001$). On average, the BOYDPM scores were 5.2 lower than STAAR (95% CI [-8.1, -2.3]). Table 6 and 7 represents the descriptive statistics, and the paired samples t-test results for this null. The researcher rejected the null hypothesis and accepted the alternative hypothesis that there is a difference between the BOYDPM and STAAR score assessment of the experimental group.

Table 6

Descriptive Statistics

	N	Minimum	Maximum	*M*	*SD*
BOYDPM	184	11	97	67.38	19.004
STAAR	186	26.00%	100.00%	72.8226%	14.34048%

Table 7

Paired Samples t-Test Results

M	*SD*	*SEM*	Lower	Upper	*t*	*df*	Sig. (2 tailed)
BOYDPM - 5.20330 -STAAR	20.12495	1.49176	-8.14677	-2.25982	-3.488	181	0.001

Question three of the study addressed student attitude. Student attitude is a learning factor that has gone largely unexplored; as McKenna and Kear (1990) asserted, "the recent emphasis on enhanced reading proficiency has often ignored the role played by children's attitudes in the process of becoming literate" (p. 626). Thus, this study's third research question explored how coaching impacted the students' attitudes. The researcher analyzed pre- and post-treatment surveys to assess how the students felt about reading.

Student engagement and motivation are critical factors affecting student learning outcomes. Although research has shown a positive correlation between active student engagement and learning outcomes, efforts to increase learning outcomes have not focused on student engagement. According to Kidwell (2010), student engagement is active learning. Kidwell (2010) further purported that students who are not engaged in learning will not be motivated to learn. Occasionally, motivation to learn can be enhanced through external stimuli. However, sustained motivation is an intrinsic quality—students' attitude toward reading impacts how they perform in reading. A reading survey was administered with the experimental group as a pre- and post-treatment measure to determine how attitude impacted reading achievement.

The Elementary Reading Attitude Survey (ERAS), measuring students' attitude toward reading, was measured with a Likert like scale pictorial survey very upset Garfield = 1 point, mildly upset Garfield = 2 points, slightly smiling Garfield = 3 points and happiest Garfield = 4 points was administered as a pre- and post-treatment measure. The initial survey was administered to the students in October (see Appendix D). The students answered 20 questions about recreational and academic reading. Questions 1 through 10 assessed how the students felt about recreational reading, while questions 11 through 20 assessed the students' attitudes towards reading for learning. The students' surveys were analyzed to determine the difference between the pretest post administration of the survey. A total for each question was tallied, and an average for each question for the pre and posttest was found.

The research question states:

RQ3. What is the impact of coaching on student attitude toward reading as measured by the pretest and posttest administration of the ERAS?

Research question three was answered using descriptive statistics. The pretest mean was 59.45% with a range of 38–77% and the posttest mean 74.45, range 74.8%. The comparison showed that there was an average difference of 15.2. For questions 1–10 which represent attitude toward recreational reading, there was a 14-point difference between pre and post-survey. For academic reading, questions 11–20, there was a 16.4 difference. When analyzing the data, the researcher saw there was an increase in every question of the survey. The data indicated that the biggest shifts in attitude occurred between question 20, how do you feel about taking a reading test, at 37 and on question 9, how do you feel about going to a bookstore, with a 32 difference between pre and post-survey. Table 8 and figure 4 represents the ERAS.

Table 8

Descriptive Statistics for the sample

Survey Administration	*N*	Range	*M*	*SD*
Pre	111	38%-77%	59.45%	10.1%
Post	111	59%- 84%	74.8%	7.1%
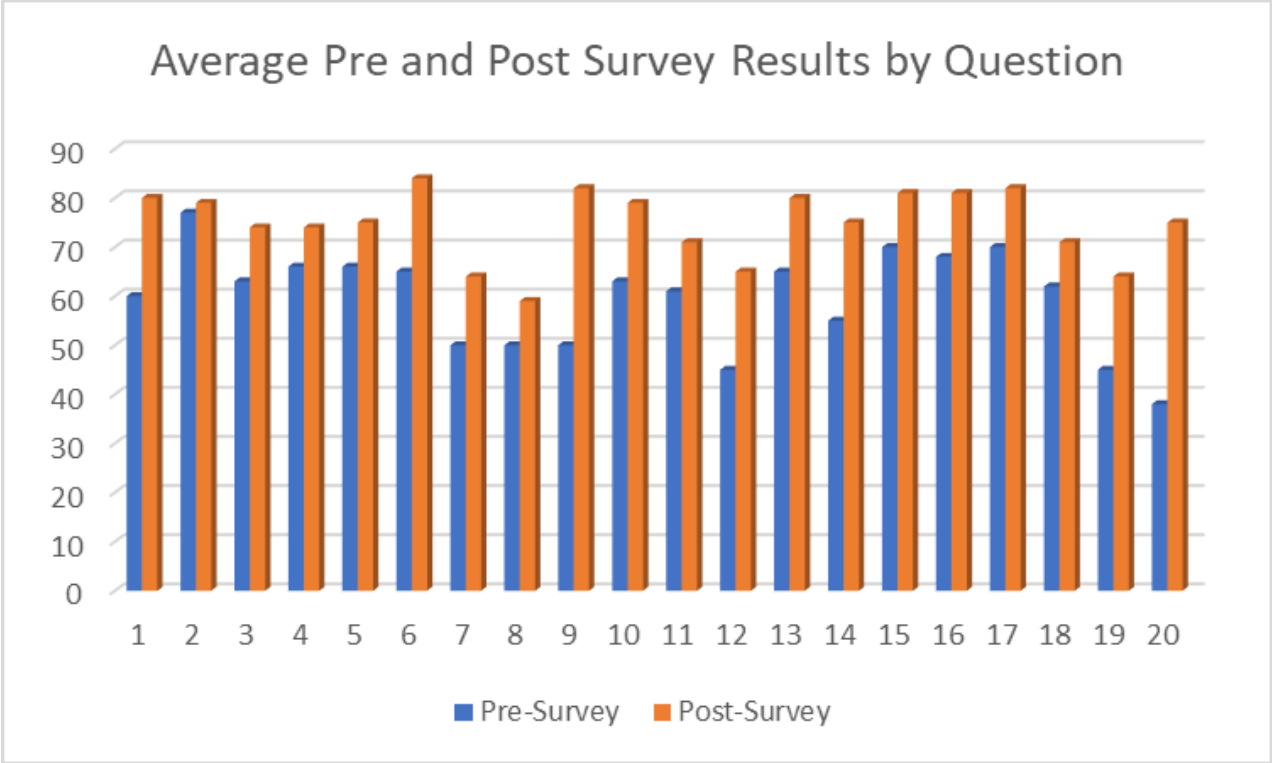
Figure 4. Average pre- and post-survey results by questions.

Summary

The sample population the study consisted of 276 elementary school students and three teachers from Education Academy, a Title 1 school in a large district in Texas. All of of the students in the control and the experimental groups were fifth graders, who were taught by the teachers. The control group was made up of 132 students from the teachers 2016–2017 academic year. The experimental group was made up of 144 students in the teachers 2017–2018 academic year classes. The students all took a pretest (BOYDPM) and posttest (MockSTAAR) assessment as a measure of student achievement. The study attempted to answer two questions about the impact of student-centered coaching on student achievement, and one question about the impact of student-centered coaching on students' attitude toward reading. The Mann-Whitney U test and repeated-measures *t* test were used to answer the questions about the impact of student-centered

coaching on student achievement using a pretest posttest measure. Standard Package for Social Sciences, SPSS was used to perform the analysis.

When answering research question one, the researcher failed to reject the null hypothesis that there was no difference between the reading achievement of the control group, 2016–2017 academic year students and the experimental group, 2017–2018 academic year students. The differences were not statistically significant. In answering research question two, the researcher rejected the null hypothesis that there is a difference between the BOYDPM and STAAR score assessment of the experimental group. In answering question three, the data revealed that there was a positive change in attitude toward reading after student-centered coaching occurred.

The following chapter has an introduction, a summary of the results, a discussion of the results, discussion of the result as it pertains to literature, limitations, implications of the results for practice, recommendation for further research, and a conclusion.

Chapter 5: Discussion and Conclusion

Introduction

The era of teacher accountability has led to schools working through various initiatives to increase teacher capacity and improve student learning outcomes. Studies conducted across the country have highlighted the impact of best practices, teachers' perceptions of coaching, teacher experiences, and professional development on student achievement (Garet, Porter, Desimone, Birman, & Yoon, 2001). Since teachers are the foundation for student learning, building teacher capacity must be a priority for districts and schools. In order to impact student learning, schools need to provide teachers with practical professional development (Guskey, 2000). Killion (2008) stated that "staff development that begins with the end in mind is the first step to ensuring students will benefit from staff development" (p. 21). Student-centered coaching is a site-based professional model that builds on this premise of beginning with the end in mind.

This current quantitative quasi-experimental study was conducted to explore the impact of student-centered coaching on student reading achievement and student attitude toward reading in a large district in Texas. The researcher intended for the study to add to the body of knowledge on student improvement through coaching as site-based staff development. The study also will inform district conversations on improving student learning outcomes on state-mandated assessment STAAR. A convenient sampling approach was used to select a sample of teachers and students to participate in the study. The sample included a control group (2016–2017 academic year) with 133 students, an experimental group (2017–2018 academic year) with 144 students for a total of $N = 276$ students and three teachers.

Summary of the Results

To examine the impact of student-centered coaching, on student achievement and student attitude toward reading, the researcher answered three questions. A quantitative methodology with a quasi-experimental pretest-posttest with control and experimental group design was used for the study. Student achievement data were collected using the Beginning of year District Benchmark (STAAR) as a pretest measure and the MockSTAAR as a posttest measure. The State of Texas Assessment of Academic Readiness (STAAR) was used to measure a posttest measure for the experimental group since the control group was archival data and the students were not in the school during the treatment. The 2016–2017 academic year students BOYDPM and MockSTAAR archival data were used as a control group for comparison with the experimental group, 2017–2018 academic year students BOYDPM and MockSTAAR data. Data analysis included the use of both descriptive and inferential statistics. Descriptive statistics were used to describe the sample and to answer the third research question. Inferential statistics were used to answer research questions one and two. The Mann-Whitney U test and the repeated-measures t test were used to answer the second research question. Statistical significance was determined at the standard alpha, $p < 0.05$.

Research question one. What is the impact, if any, of student-centered coaching on the reading achievement of elementary school students?

a. What is the difference in the reading achievement of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017?

H_01. There is no difference between the reading scores of students whose teacher

received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017.

  H1. There is a difference between the reading scores of students whose teacher received student-centered coaching for academic year 2017–2018 and those whose teacher did not receive coaching for academic year 2016–2017.

After data analysis, the researcher failed to reject the null hypothesis and accept the alternative hypothesis. There was no statistically significant difference in the reading achievement of the control and experimental groups as it relates to the BOYDPM, (the pretest) measure, $U = 8146$, $z = -1.68$, $p = .09$. There was no statistically significant difference in the reading achievement of the experimental group students and the control group after student-centered coaching as it relates to the MockSTAAR (posttest), $U = 17145$, $z = -1.612$, $p = .11$ or $p < 0.05$.

  Research question two. What is the difference between the BOYDPM and STAAR score and the difference between the MockSTAAR and STAAR assessment of the experimental group?

  H$_0$2. There is no difference between the BOYDPM and STAAR assessment of the experimental group.

  H2. There is a difference between the BOYDPM and STAAR score assessment of the experimental group.

After analyzing the data, the researcher rejected the null and accepted the alternative hypothesis as it relates to the experimental group reading achievement. The repeated measures *t* test indicated that there was a significant difference between the BOYDPM and the STAAR scores, $t = -3.488$ p 0.001 or $p < 0.05$.

Research question three. What is the impact, if any, of student-centered coaching on the attitude of elementary school students toward reading?

a. What is the impact of coaching on student attitude toward reading as measured by the pretest and posttest administration of the ERAS?

Data analysis for this question revealed that there was a positive change in student attitude between pre and post-survey measures for the experimental group. 111 students took the survey, the mean score for the presurvey was 59.45%, and post mean 74.8%. A mean score of 59 indicated that the students had a relatively indifferent attitude towards reading. The mean score of the pretest of 75 indicates that the students had a very positive attitude toward reading.

Discussion of the Results

This quantitative quasi-experimental study was designed to understand the impact of student-centered coaching (as site-based staff development) on achievement and attitude. Descriptive data about the sample identified a diversity that is reflected in the large school district in Texas. Most of the students in the sample are Hispanics (57%), which is representative of the school district where the study took place, (the largest group in the district are Hispanics at 44%). The sample also represented socio-economic backgrounds that are representative of other Title I schools. The descriptive data for the teacher participants revealed that the teachers were all highly qualified as defined by the Texas Education Agency (TEA).

The data were analyzed to answer question one to determine the difference between the reading scores of the students whose teacher received coaching and those who did not. The Mann-Whitney U test was used to answer. After the data was analyzed, the researcher failed to reject the null hypothesis one as it relates to control and experimental group. There was no

statistically significant difference in the MockSTAAR score of the control and experimental

group, $U = 17145$, $z = -1.612$, $p = .11$.

Data were analyzed to answer question two to determine the difference between the

BOYDPM (pretest) and STAAR (posttest) score assessment of the experimental group. The

Repeated Measured revealed that there was a statistically significant difference between the

pretest post measure, $t = -3.488$ p 0.001 or $p < 0.05$. There was an impact of coaching on the

reading achievement of the experimental group as measured by the BOYDPM and STAAR

assessments.

Finally, data were analyzed to answer question three to determine if the difference

between pre and post-survey administration of the ERAS. There was a difference in the averages

of each question.

- Question 1, how do you feel when you read a book on a rainy day, pre-post was 20

  points.

- Question 2, how do you feel when you read a book in school during free time, was 2

  points.

- Question 3, how do you feel about reading for fun, was 11 points.

- Question 4, how do you feel about getting a book for a present, was 8 points.

- Question 5, how do you feel about spending free time reading a book, was 8 points.

- Question 6, how do you feel about starting a new book, was 19 points.

- Question 7, how do you feel about reading during summer vacation, was 14 points.

- Question 8, how do you feel about reading instead of playing, was 9 points.

- Question 9, how do you feel about going to a bookstore, was 32 points.

- Question 10, how do you feel about reading different kinds of book, was 16 points.

- Question 11, how do you feel when a teacher asks you questions about what you read, was 8 points.

- Question 12, how do you feel about reading workbook pages and worksheets, was 20 points.

- Question 13, how do you feel about reading in school, was 15 points.

- Question14, how do you feel about reading your schoolbooks, was 20 points.

- Question 15, how do you feel about learning from a book, was 11 points.

- Question 16, how do you feel when its time for reading in class, was 13 points.

- Question 17, how do you feel about stories you read in reading class, was 12 points.

- Question 18, how do you feel when you read out loud in class, was 9 points.

- Question 19, how do you feel about using a dictionary, was 19 points.

- Question 20, how do you feel about taking a reading test, was 37 points.

The students' change in attitude indicated that coaching impacted their attitude in a positive way.

Discussion of Results in Relation to the Literature

All students in the nation's public school system have a constitutional right to a high-quality education. New mandates, outlined by ESSA, regarding teacher accountability and student achievement, have made the need for effective professional development paramount. The teacher is the key factor in effective educational reform; therefore, effective professional development is needed to solidify teachers' skills (Guskey, 2002). Student quality of education and teacher professional development are inextricably linked. Student-centered coaching provides the professional development that teachers need to effectively meet the learning needs of students (Sweeney & Harris, 2017).

The present study examined the impact of student-centered coaching as a site-based professional development model on the achievement and about the attitude toward reading of elementary school students. The study found that student-centered coaching, which is being used in 1200 K–12 school across the country had a statistically significant impact on the reading achievement of elementary students. The results of this study are supported by research on the topic of coaching and its impact on student achievement. According to Kraft, Blazar, and Hogan (2018), there is a casual relationship between coaching and student achievement. However, there is limited research on the impact of student-centered coaching, specifically. A 2019 white paper research study by Sweeney of 87 coaches throughout the state of Iowa, who were in year 2 and 3 of implementation of student-centered coaching, indicated that after a 4–6-week coaching cycle, students grew an average of 86% proficiency. In response to question one, there was no statistically significant difference between the control and experimental groups pretest (BOYDPM), $U = 8146$, $z = -1.68$, $p = .09$ and posttest (MockSTAAR), $U = 17145$, $z = -1.612$, $p = .11$ scores. The differences that were indicated by the analysis was not statistically significant.

The findings in response to question two that there was a statistically significant difference between the pretest (BOYDPM), and the posttest (STAAR) $t = 3.5$, $p = 0.001$, is supported by research. On average, the BOYDPM scores were 5.2 lower than the STAAR. A study of content-focused coaching indicated that coaching had positively impacted student achievement (Matsumura et al., 2012). Another study by Edwards, Neill, and Faust (2015) indicated that there was a statistically significant difference between the composite test scores of students in schools with literacy coaches and those in schools without literacy coaches, $F(1, 1586 = 10.89$; $p = .001$, $\eta^2 = .007$. A study by Foster (2018), stated that pairing coaching with group training produced a larger effect on instruction and achievement.

In response to question three, coaching had a positive impact on the attitude of the students in the experimental group, which is supported by research. Petscher (2010), indicated that student attitude impacted their reading achievement. Julian (2017), in a study to determine the effectiveness of project-based course on student attitude toward mathematics, found that students' attitude improved.

Limitations

The quasi-experimental study had several limitations that affected the study. First, the greatest limitation of the study was achievement data. The use of archival data for the control group enhanced the nonequivalent nature of random sampling. The control group information was based on archival data, so the students were not in the school receiving instruction at the same time as the experimental group. Therefore, the researcher added a second research question to compare the pre-test (BOYDBM) and posttest (STAAR) of the experimental group. The data was limiting because it did not compare students that were receiving instruction during the same school year. As a result, the researcher was unable to use the independent samples *t* test as an analysis tool. However, since the study contained two categorical and continuous dependent variables, a Mann-Whitney U test was used to compare the control and experimental groups achievement.

Second, the sample was the small sample side. The researcher prosed using three grade levels for the study. However, the site principal only consented to one grade level. This limitation and the use of convenience sampling method limited the study in that the experimental group and the control group may not have been accurate representations of fifth graders across the school district.

A third limitation of the study was that one of the original teachers in the study left the study in December. The teacher that took over the teacher's class in January consented to become apart of the study. However, the teacher was new to the profession and had only student-teaching experience. This change in instructor and the teachers' experience may have had an impact on the students learning outcomes.

A fourth limitation was time. The period for implementation was shortened due to two acts of nature. Shortly after the start of the school year, the school was closed for about two weeks due to a hurricane. This resulted in a loss of instructional time that was not made up. Then during the middle of the study, another act of nature, an ice storm cost another four days of instructional days. These almost three weeks of missed instruction cause the district and school to condense objectives and limited the coaching sessions. Instead of coaching cycles lasting 4–6 weeks, they were shortened to 3–4 weeks in an attempt to follow the district scope and sequence.

A delimitation of this study was the researcher's choice to not fully implement all components of the coaching. Another delimitation was using the 2016–2017 academic year fifth-grade students' archival data as the control group. In reflection, using the 2016–2017 fourth-grade student archival data would have allowed the researcher to make a comparison about the same students.

Implications of the Study for Practice, Policy, and Theory

Implications for practice. The data suggest that student-centered coaching was an effective site-based professional development model to improve student achievement. When comparing the experimental group scores for pretest (BOYDPM) and posttest (STAAR) for the experimental group, the results showed there was a statistically significant difference as a result of coaching. Teachers can improve their instructional practice by engaging in coaching that

focuses on the student's specific learning need. Administrators can make sure that they provide teachers with time to meet for individual and group coaching so they can grow their capacity. The practical application of student-centered coaching suggested that receiving coaching at the school level was beneficial for teachers. Whether student-centered coaching would be used as a daily or weekly planning, coaching offers a practical way to offer teachers staff development that meet teachers and students need.

Implications for policy. The findings of this study indicated that student-centered coaching implemented at Education Academy in a large district in Texas is effective for increasing student achievement and has a positive impact on student attitude toward reading. The findings have implications for stakeholders who make decisions about equipping teachers with tools to effectively meet the needs of all learners. Coaching conversations with teachers showed that the teachers experienced growth in their instructional practice because of the coaching they received. The teachers who participated in the study were open to receiving coaching and engaging in learning communities on campus. The teachers implemented new strategies more consistently because of coaching, which led to increased learning outcomes for individual students. The teachers also reported having a stronger sense of collegiality and were comfortable sharing their learning. Additionally, the teachers indicated that coaching gave them an opportunity to receive the support that was relevant and related to their content, which enhanced their learning.

Elementary school leadership should consider using student-centered coaching to help teachers develop their skillset to meet student learning needs. According to Kennedy (2016) student achievement will not increase without changing teacher knowledge and classroom practices. However, training sessions, a standard form of professional development (Darling-

Hammond et al., 2009), are thought to have benefits in improving teachers' knowledge; does not address the complex nature of teachers' practice and how they apply their knowledge and skills in the classroom (Kennedy, 2016). Student-centered coaching is the lever for improving teachers' classroom instruction and transferring knowledge into practice.

Therefore, from a policy perspective, coaching must be weighed from the effects on teacher and student learning and the coaching cost. A Knight 2012 study of coaching across three schools found the cost per teacher ranged from $3,300 to around $5,200. However, with the billions of dollars that districts spend on professional development, coaching must not be deemed prohibitively expensive. Rather, policy makers and administrators should consider if coaching would be a more effective way to mazimize professional development funds.

Implications for theory. Piaget's theory of cognitive development is represented in student-centered coaching, which is central to this study. Student-centered coaching is a coaching model that focuses on the implementation of instruction that builds on student knowledge. Constructivism promotes learning through doing. Students learn by doing as evidnt in the growth of both the students and teacher learns in the current study. This study was a work to identify most effective way to connect staff development and student achievement.

Recommendations for Future Research

First future research should include longitudinal research to examine the impact of student-centered coaching on student reading outcomes. The current study was conducted for an abbreviated period of time from October through February of the 2017–2018 academic year. This time limitation impacted the full implementation of student-centered coaching. Therefore, a longer student may enhance the finding. Elish-Piper and L'Allier (2011) indicated that it took time for teachers to implement coaching instruction and time for students to show academic

improvement. Thus, there is a need for further studies that confirm the impact of sustained job-embedded staff development on increased teacher capacity. Secondly, future research should also examine data from formative assessments and student work rather than merely data from summative assessments and standardized tests. The current study focused mainly on summative data to determine achievement. Sweeney (2011) argued that student assessments are only useful if they provide insights into what students know and understand; in other words, student assessments should make their learning visible. Specifically, they argued that "if all we know about a particular student is that she got 70% of the questions right on a subtraction quiz, we can only guess what it will take in order to keep moving her learning forward" (Sweeney, 2011, p. 107). Therefore, future studies should include information from classroom observations instruments that measure teachers' pedagogical practices, teacher- student interactions, information about classroom culture, and students engagement.

Additionally, future research could focus on trends and patterns regarding teachers' perceptions of students' abilities to learn; this research could include data analysis about teacher efficacy. According to Fisher, Frey, and Hattie (2017), teacher efficacy has an effect size of 1.57, which indicates that it has a strong impact on student learning outcomes. The current study did not look at teacher efficacy, which could have limited the findings.

The results of the study add more gravity to the idea that coaching and student achievement are interdependent (Elish-Piper & L'Allier, 2007; Walpole & McKenna, 2008). School districts and schools should include site-based professional development that is focused on the learning needs of both teachers and students. These professional development opportunities should include observations of teachers in their classrooms and training that that affords teachers opportunities to adapt the learning to meet their individual learning needs and

styles. If teachers are expected to help students develop the skills and competencies of knowledge-creation, teachers themselves should continually be building professional knowledge (Fullan, 2006).

Conclusion

Recent school reform policies in the U.S. have been heavily focused on teacher accountability. Teachers must be equipped to meet the mandates of these new education policies. Student learning outcomes are inextricably linked with teacher effectiveness. Thus, it is not surprising that educational research has continuously linked improved student learning outcomes with teacher professional development. This study revealed that teachers benefited from coaching as an on-site professional development model. Since learners cannot learn by themselves, but from the actions taught by others, effective learning requires effective teaching (McLeod, 2016). The teachers in the study indicated that student-centered coaching helped them to improve their practice because they were engaged in peer interactions. Learning that occurs in a collaborative environment leads to increased teacher effectiveness. When professional development addresses teachers' skills, alongside strategy development and deepening content knowledge, teachers' instruction is more impactful and leads to higher student learning outcomes (DeMonte, 2013). If the goal of professional development is to equip teachers with the tools to improve student learning, then professional development must be sustained over time and must occur in the teachers' work environment. Student-centered coaching has proven to be an effective model for helping teachers incorporate strategies in their teaching daily that allow them to meet the diverse needs of their students better.

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Appendix A: IRB Approval

DATE: October 13, 2017
TO: Merlette Frederick-Williams
FROM: Concordia University–Portland IRB (CU IRB)
PROJECT TITLE: [1104244-1, -2, -3] The Effects of Student-Centered Coaching on the Reading Achievement of Elementary Student and Teacher Instructional Practice
REFERENCE #: EDD-20170721-Mendes-Frederick Williams
SUBMISSION TYPE: New Project

ACTION: APPROVED APPROVAL
DATE: September 20, 2017
EXPIRATION DATE: August 31, 2018
REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this project. The Concordia University–Portland IRB (CU IRB) has APPROVED your submission. This approval is based on an appropriate risk/ benefit ratio. All research must be conducted in accordance with this approved submission.

Your project includes research that will be conducted within an institution that is not Concordia University. As such, you need to have their permission to conduct research. You are responsible for contacting and following the procedures and policies of Concordia University and the other institution where you conduct research.

This submission has received Expedited Review based on the applicable federal regulations.

Attached is a stamped copy of the approved consent/assent form(s). You must use this/these stamped versions. The consent form has been edited slightly and stamped as approved. Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding, followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and the research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. The form needed to request a revision is called a Modification Request Form, which is available at www.cu-portland.edu/IRB/Forms.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please email the CU IRB Director directly, at obranch@cu-portland.edu, if you have an unanticipated problem or other such urgent question or report.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project requires continuing review from the CU IRB on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with enough time for review and continued approval before the expiration date of August 31, 2018.

You must submit a close-out report at the expiration of your project or upon completion of your project. The Close-out Report Form is available at www.cu-portland.edu/IRB/Forms.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Dr. OraLee Branch at 503-493-6390 or irb@cu-portland.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Concordia University-Portland IRB (CU IRB)'s records. October 13, 2017

Appendix B: Consent Form

Dear Parents and Guardians,

I am writing because I will be conducting a research study. I will work with your child's teacher; together, we will develop lessons to teach reading concepts. The reason we are doing this is to investigate the effects of student-centered coaching on student reading achievement and students' attitude toward reading. I am conducting this study, as my graduate-level research with Concordia University–Portland, with Professor Dr. John Mendes as my faculty advisor.

Your child will be asked to complete a survey about his/her feelings about reading. This will be done during a class meeting time in school. Your child will not miss instructional class time. If your child does not want to this, or you do not want your child to do this, then your child can read independently as an alternative during this time. This activity will take approximately 15 minutes.

Your child does not have to do this. It is optional. There will be no penalty for not participating. In the same way, there is no advantage or favoritism for your child participating. If your child wants to stop participating, he/she can stop even if this is in the middle of the activity.

The activity for this study is scheduled for September 28th, 2017. We expect approximately 186 students to participate.

The results will be collected in a way that protects the student's identity. The name and other identifying characteristics of your child will not be stored with the answers/observations specific to you or your child. To do this, we will give your child a code that only I will know. The code, and not the name or other identifying characteristics, will be stored with this private information. Reports will be made in group aggregate form; such as the average and general group findings, with no individual identifying information linked to the information.

The results of the study could benefit children and the school systems by helping the teachers develop and plan instruction that helps motivate students and improve reading achievement.

We will ask your child if he/she wants to participate. For us to ask your child, we need your permission or consent. If you decide to participate, you are free to withdraw your consent and stop your child's participation at any time without penalty.

Please read the parental consent form on the next page. If you agree, please fill out the form below and return this page before September 27nd, 2017.

Parent Consent

As the parent or guardian of the child _____,
I consent to my child's participation in the research study conducted by Merlette Williams. I understand that my child's identity is confidential, and my child's participation can be withdrawn at any time.

_____   _____
Parent/Guardian Name   Date

_____   _____
Parent/Guardian signature   Date

    If you have any questions or concerns, you can call me at [redacted] or send me an email [redacted]. You can also let your child's teacher know if you have questions.

    I have also attached a second copy of this page for you to keep for your records. The Concordia University–Portland IRB approved this study. If you want to talk with a participant advocate, you can contact Dr. OraLee Branch (email obranch@cu-portland.edu or call 503-493-6390).

    Sincerely,
Merlette Frederick-Williams
Email: [redacted]

Appendix C: Student Assent

Coaching on Student Achievement and Attitude about Reading

Student Assent

I am doing a study about how much students are learning. I will coach your teachers. Then they will use those strategies with you. I will look at your last year STAAR score and this year's DPM, and your checkpoint scores. You will also take a reading survey. This will tell me how you feel about reading.

Sign this page, if you assent:

Name of Student: _____

Signature of Student:

_____

Date: _____

Name of Investigator: <u>Merlette C Frederick-Williams</u>

Signature of Investigator:

_____

Date: _____

Appendix D: Result-Based Coaching Tool

Results-Based Coaching Tool				
Teacher:		**Coach:**		
Coaching Cycle Focus:		**Dates of Coaching Cycle:**		
Standards-Based Goal What is the goal for student learning?	**Focus for Teacher Learning** What instructional practices will help students reach the goal?	**Student-Centered Coaching** What coaching practices were implemented during this coaching cycle?	**Teacher Learning** As a result of the coaching, what instructional practices are being used on a consistent basis?	**Student Learning** How did student achievement increase as a result of the coaching?
Students will… **Standard(s):** **Learning Targets:** *I can...* **Baseline Data:** _ Emerging _ Developing _ Meeting _ Exceeding _ % of students were able to demonstrate proficiency of the learning targets.	**Teacher will…**	**Coach and Teacher did…** *(Check those that apply)* ☐ Goal setting ☐ Creating learning targets ☐ Analysis of student work ☐ Co-Teaching ☐ Collecting student evidence during the class period ☐ Collaborative planning ☐ Shared learning to build knowledge of content and pedagogy	**Teacher is...**	**Students are...** **Post Assessment Data:** _ Emerging _ Developing _ Meeting _ Exceeding _ % of students were able to demonstrate proficiency of the learning targets. *Follow up for students who didn't reach the goal:*

Teacher Reflections	Coach Reflections
What worked well for you during our collaboration and coaching cycle? How has your teaching been positively impacted?	What worked well for you during our collaboration and coaching cycle?
How do you feel our collaboration positively impacted the students?	How do you feel our collaboration positively impacted the students?
What were any challenges or missed opportunities during our work together?	What were any challenges or missed opportunities during our work together?
What are some next steps in your teaching?	What are some next steps in my coaching?

Appendix E: Elementary Reading Attitudes Survey

Questions	4 = Happy Garfield	3 = Slightly Smiling Garfield	2 = Mildly Upset Garfield	1 = Very Upset Garfield
1. How do you feel when you read a book on a rainy day?				
2. How do you feel when you read a book in school during free time?				
3. How do you feel about reading for fun at home?				
4. How do you feel about getting a book for a present?				
5. How do you feel about spending free time reading a book?				
6. How do you feel about starting a new book?				
7. How do you feel about reading during summer vacation?				
8. How do you feel about reading instead of playing?				
9. How do you feel about going to a bookstore?				
10. How do you feel about reading different kinds of books?				
11. How do you feel when a teacher asks you questions about what you read?				
12. How do you feel about reading workbook pages and worksheets?				
13. How do you feel about reading in school?				
14. How do you feel about reading your school books?				
15. How do you feel about learning from a book?				
16. How do you feel when it's time for reading in class?				
17. How do you feel about stories you read in reading class?				
18. How do you feel when you read aloud?				
19. How do you feel reading a dictionary?				
20. How do you feel about taking a reading test?				

Elementary Reading Attitude Survey Scoring Sheet

Student Name_____

Teacher_____

Grade_____ Administration Date_____

Scoring Guide   4 points Happiest Garfield   3 points Slightly smiling Garfield
                   2 points Mildly upset Garfield 1 point Very upset Garfield

 Recreational reading   Academic reading

1. ____   1. ____

2. ____   2. ____

3. ____   3. ____

4. ____   4. ____

5. ____   5. ____

6. ____   6. ____

7. ____   7. ____

8. ____   8. ____

9. ____   9. ____

10. ____   10. ____

Raw Score: ____   Raw Score: ____

Full scale raw score . . . . (Recreational + Academic): _____

Percentile ranks: . . . . Recreational

                         . . . . Academic

                         . . . . Full scale

Appendix F: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy.

This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does "fraudulent" mean?

"Fraudulent" work is any material submitted for evaluation that is falsely or improperly presented as one's own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate's final work without full and complete documentation.

What is "unauthorized" assistance?

"Unauthorized assistance" refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another's work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

Statement of Original Work (Continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.

2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association.*

Merlette C Frederick-Williams

Digital Signature

Merlette Connela Frederick-Williams

Name (Typed)

April 4, 2019

Date