INSTRUCTIONAL COACHES' PERCEPTIONS OF SKILLS AND TEACHER SELF-EFFICACY ACROSS CONTENT AREAS IN A K-12 SETTING

by

Whitney Brooke Goostree

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

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ABSTRACT

Teaching is one of the most important components of student achievement. To be influential in the classroom, teachers need to have strong self-efficacy, which refers to their belief that they can plan and make good judgments on best practices. Instructional leaders in a building can aid teachers and promote teacher self-efficacy by supplying resources and instructional support, while also casting vision and setting goals. However, due to the demands and time restrictions placed on administrators in schools, instructional coaches can support the instructional climate by supporting teachers and providing necessary guidance and tools to promote teacher self-efficacy. The purpose of this causal-comparative study was to determine if instructional coach self-efficacy significantly impacted teacher self-efficacy in a suburban district in a southern state. The Teachers' Sense of Efficacy Scale (TSES) was distributed to all content-area teachers, kindergarten through twelfth grade, in a suburban district in a southern state through email; additionally, all instructional coaches in the district were invited to complete The Instructional Coaching Skills Instrument (ICSI). The sample included 100 content area teachers and 30 instructional coaches. The one-way analysis of variance (ANOVA) was used to determine if significant differences existed between the groups of the independent variable on the dependent variable. Results were not statistically significant; however, scores on TSES were consistently above average.

Keywords: teacher self-efficacy, self-efficacy, educational leadership, instructional leadership practices, instructional coaches

Dedication

This culminating miracle is first dedicated to the Holy One who continuously opened doors and made a way for this dream to come to fruition. Without the strength of God, example of Jesus, and guidance of the Holy Spirit, this dissertation would not been possible. Secondly, I dedicate this to my soulmate, cheerleader, and best friend, Ryan; you are without a doubt the best thing to have happened to me this side of Heaven. Thank you for pushing me toward excellence and sharpening me during difficult times. I also dedicate this to my children Ross, Dax, and Hattie; I pray this accomplishment sets a foundation for you to achieve anything your heart dreams of in the future. I am beyond blessed to have had this opportunity, and it is because of the love, devotion, and patience of those closest to me.

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would not be here without your diligence and dedication to student success and learning. You saw beyond a test score or grade and met us where we were to propel us into a future of achievement, success, and dreaming because you believed in each student radically. I love you! To Jim Miller, I cried when I saw your name on my schedule for Honors Geometry during freshmen year of high school because your reputation truly preceded you. However, you challenged me daily to improve myself and think critically. To this day, I believe your class was one of the hardest I have ever taken. Through your battle with cancer, you never lost your wit, charm, and joy, and you taught me to fight through the circumstances to achieve greatness. Finally, to Tehra Lynn, my colleague and friend. You taught me to "roll with the punches" and "not sweat the small stuff." Your love for life and positivity were lessons I learned from you that were necessary during this season of my life. I will celebrate with a milkshake in your honor after graduation. Thank you from the bottom of my heart; I am eternally grateful to each person listed here!

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One-Way Analysis of Variance (ANOVA)

Every Student Succeeds Act (ESSA)

Instructional Coaching Skills Instrument (ICSI)

CHAPTER ONE: INTRODUCTION

Overview

Few studies have been conducted that analyze the impact of instructional coaches on school environments and teacher success (Kane & Rosenquist, 2019). Some researchers have examined the relationship between instructional coaches and teacher self-efficacy, especially in literacy (Cantrell & Hughes, 2008); however, there is limited information regarding its impact on content areas and grade levels. This chapter begins with an overview of the historical, social, and theoretical contexts regarding the role instructional coaches play in educational leadership and the impact on teacher self-efficacy. The problem statement follows, then the purpose statement, implications for future research, significance of the study, and research questions.

Background

In 2015, President Barack Obama signed the Every Student Succeeds Act which was an updated version No Child Left Behind from President George W. Bush's administration in 2002 ("Every", n.d.). Where No Child Left Behind had exposed achievement gaps among various demographic groups, the Every Student Succeeds Act called for increased accountability, and plans to strengthen the state of education nationwide. With these new expectations, the responsibility of improving instruction and increasing student outcomes fell on the local school entity, which meant that educational leaders had to be mindful of the instructional practices within their buildings more than ever in the history of education.

Strong, effective educational leadership creates an environment with functional systems that impact teaching and learning through influence (Pietsch & Tulowitzki, 2017; Bellibas & Liu, 2017). Cansoy and Parlar (2018) stated that educational leadership involved setting objectives, creating a harmonious environment, organizing the culture based on shared values

and beliefs, supervising, modeling, and creating learning opportunities for all stakeholders. The responsibility of a school's instructional quality falls on building-level administrators who should be managing curriculum and instruction, supervising teachers, creating a climate conducive to strong instruction, and monitoring the progress of students (Pietsch & Tulowitzki, 2017). Additionally, many studies have shown connections between educational leadership and teacher self-efficacy (Hipp & Bredeson, 1995; Ross & Gray, 2006; Bellibas & Liu, 2017). Educational leaders can stimulate teacher self-esteem and motivation by being directly involved with instructional practices which can increase a teacher's self-efficacy (Bellibas & Liu, 2017).

Because of the increased accountability placed on schools through the Every Student Succeeds Act (ESSA), leaders are expected to provide job-embedded professional learning opportunities, like professional learning communities, to improve teacher effectiveness and quality of education for students (Learning Forward, 2020). Although much responsibility falls on the building-level administrator, there are often too many expectations and instructional tasks to complete for a one person. Therefore, administrators have incorporated instructional coaches as a human resource to promote improvement in curriculum and instruction (Learning Forward, 2020). Most instructional coaches work directly with teachers in core content areas to strengthen instruction and is often part of building-level change initiatives (Denton & Hasbrouck, 2009; Tanner, Quintis, & Gamboa, Jr., 2017). Because instructional coaches work directly to support teachers in improving classroom strategies and provide job-embedded professional learning, it is plausible that instructional coaching has an impact on teacher self-efficacy.

Teacher self-efficacy is often studied in educational research because data support a strong relationship between teachers with high levels of self-efficacy and student achievement. Zee and Koomen (2016) mention that teachers with high levels of self-efficacy utilize planning

strategies to maximize student achievement and minimize behavioral issue in conjunction with instructional support from principals or instructional coaches. This is especially important at the secondary level where teachers are expected to be content experts in addition to implementing research-based instructional strategies.

Historical Context

Instructional leadership gained attention during the 1950s as practice-based wisdom was shared among principals and other stakeholders; Edwin Bridges initiated the research on instructional leadership in 1967 (Hallinger & Wang, 2015). Bridges advocated for a definitive definition of practice-based instructional leadership and discussed the disconnect between leaders addressing needs of the school and being instructional leaders (Hallinger & Wang, 2015). During the 1960s and 1970s, little guidance was offered for educational leaders, but in the 1980s the effective schools movement stimulated dialogue significantly (Hallinger & Wang, 2015). Researchers began to analyze how schools in diverse communities were improving student outcomes in order to identify processes, features, and strategies; one of the major findings was the importance of school principal involvement (Hallinger & Wang, 2015). In the 1990s and 2020s, The Far West Lab instructional management framework was developed by Stephen Bossert and colleagues. Other researchers began to identify common characteristics of effective instructional leaders, such as culture building, rigorous expectations, and goal setting (Hallinger & Murphy, 1985; Hallinger & Wang, 2015). At the dawn of the new century, focus turned from debating leadership styles to the impact of instructional leadership in schools, and understanding the connection between strong school leaders and school improvement became a global quest (Hallinger & Wang, 2015).

During the last quarter of the 20th century, educational leaders and stakeholders became disgruntled with the lack of professional learning opportunities for teachers and called for more job-embedded options (Denton & Hasbrouck, 2009). In response, Beverly Showers and Bruce Joyce began developing coaching models to create an avenue for skills and wisdom to pass from professional development to instructional practice (Denton & Hasbrouck, 2009). Showers and Joyce (1996) found weekly coaching sessions with experts or peers prompted teachers to implement new instructional strategies and practices. During the late 1980s and early 1990s there was limited research on instructional coaching models; however, the dawn of a new decade brought federal laws and initiatives, including the Elementary and Secondary Education Act of 2000, the Reading Excellence Act, and No Child Left Behind (Denton & Hasbrouck, 2009). These new acts brought about the need for more instructional coaches and subsequent funding (Denton & Hasbrouck, 2009). Additionally, with the changes in the Individuals with Disabilities Education Act in 2004 and introduction of Response to Intervention, instructional coaches were looked-for to support the ongoing changes involving tiered instruction to meet student needs (Denton & Hasbrouck, 2009). The next decade of literature on instructional coaching brought various types of coaching models: technical coaching, problem-solving coaching, cognitive coaching, team-building coaching, reform coaching, instructional consultation, and collaborative consultation (Denton & Hasbrouck, 2009). Many of these models are used in conjunction to meet the needs of teachers and staff around the nation.

The concept of self-efficacy originated with Bandura (1977) and his social cognitive theory. In the late 1960s, researchers from the RAND organization began to explore the idea of self-efficacy in education. With the work of Rotter (1966), and the social learning theory, the discussion and research of teacher self-efficacy began (Tschannen-Moran, Anita, & Hoy, 1998).

In 1976, RAND published a study connecting reading scores of minority students with teacher efficacy and another study found that the continuation of federally funded projects after funding ceased was predicted by teacher efficacy (Tschannen-Moran et al., 1998). Other instruments to measure teacher efficacy were developed during the 1980s including Rose and Medway's Teacher Locus of Control, Guskey's Responsibility for Student Achievement, the Webb Efficacy Scale, and Gibson and Dembo's Teacher Efficacy Scale (Tschannen-Moran et al., 1998). These instruments identify teacher behaviors that connect with productive classroom environments and student success. After the turn of the century, considering other instruments and prior research, Tschannen-Moran and Hoy (2001) developed The Teachers' Sense of Efficacy Scale which is used in two formats to evaluate teacher self-efficacy, and identify correlations between educational behavior and teacher self-efficacy.

Social Context

With the implementation of President Barack Obama's Race to the Top initiative in 2012, many states adopted teacher evaluation processes to ensure high-quality instruction was taking place in all classrooms and to receive federal funding ("Race", n.d.). The evaluation systems involve pre-conferences, supervision rounds with observations, and post-conferences; the supervisor judges a teacher performance and ability to implement curriculum standards, assess students for mastery, and cultivate an environment conducive to learning (Mireles-Rios & Becchio, 2018). Because of government initiatives and updated laws like the Every Student Succeeds Act, educational leaders are expected to hold teachers accountable for their performance. Teacher scores and student achievement culminate in a school effectiveness score which may become available to the public on district and state websites. If teachers are not performing well it reflects on school leaders and puts pressure on them to improve instruction.

The leader then has a responsibility to provide actionable feedback to teachers and become involved with instructional practices which can impact teacher self-efficacy (Mireles-Rios & Becchio, 2018). Although this responsibility falls on the leader, other managerial duties often take precedence over instructional support (i.e. discipline, safety, community interactions), and this is where instructional coaches can provide assistance implementing research-based strategies and feedback through coaching sessions.

Theoretical Context

Bandura (1977) structured his social cognitive and self-efficacy theories around the definition that efficacy is the belief in one's ability to complete a task successfully and produce positive outcomes. Klassen and Chui (2010) confirmed that self-efficacy is a person's belief in their ability to complete a plan of action successfully. According to Bandura (1977), efficacy expectations will likely determine the effort and persistence a person exhibits when faced with problems. Bandura (1993) also posited that people with higher self-efficacy will set more challenging goals and strive to meet them. This behavior is reflected in education with teachers' personal beliefs about success in the classroom with curriculum and instruction.

Tschannen-Moran and Hoy (2001) stated that teacher self-efficacy is a belief that the teacher can create plans and form best judgments to impact the classroom and student achievement; they also state that teacher self-efficacy has three components: efficacy of student engagement, instructional strategies, and classroom management. Bandura (1977) held that self-efficacy is influenced by four causes: mastery experiences, physiological and emotional states, vicarious experiences, and social persuasion. For teachers, mastery experiences are the most important because "the perception that a performance has been successful raises efficacy beliefs"

(Tschannen-Moran et al., 1998, p. 211). Many mastery experiences come in the form of instructional practices and curriculum involvement.

Problem Statement

According to Bellibas and Liu (2017), effective teaching is the most important component in improving student achievement and teacher self-efficacy has a strong impact on effective teaching. In addition, an educational leader's instructional leadership impacts teacher self-efficacy. Effective leaders focus on teacher development, promoting activities to improve instructional practices (Cansoy & Parlar, 2018; Bellibas & Liu, 2017). Furthermore, Bellibas and Liu (2017) found that building teacher self-efficacy is one of the most powerful ways leaders can indirectly impact student achievement; however, due to many mandates and expectations, principals often struggle to fulfill the roles of instructional leaders. Instructional coaches can fill this gap in instructional support and professional learning. Research suggests that coaches should spend most of their time working directly with teachers or groups of teachers to transfer knowledge, but they found most coaches were spending limited time per week working directly with teachers and the most time involved with whole-school reform initiatives (Kane & Rosenquist, 2018; Kane & Rosenquist, 2019). Although the district involved in my study had an instructional coach in every building except two high schools, some were split between school buildings, limiting the time that could be spent providing instructional support and job-embedded professional learning. Some research indicates that many teachers do not believe instructional coaches can help resolve instructional problems when their time is limited time working with teachers (Bean et al., 2010; Kane & Rosenquist, 2019). Because time allocation and job descriptions for instructional coaches varied between buildings in the district I studied, it is unknown how coaches view their skills and effectiveness on teachers' classroom practices due to

lack of time spent working directly with teachers. Therefore, the problem is that the impact of an instructional coaches' self-perceptions of skills on teacher self-efficacy is not known across all grade bands and content areas.

Purpose Statement

The purpose of this causal-comparative study was to determine if instructional coach self-efficacy significantly impacted teacher self-efficacy in a suburban district in a southern state. Instructional coach self-perception of coaching skill is the independent variable and teacher self-efficacy is the dependent variable. Instructional coach scores were ordered from least to most (low, medium, high) to establish necessary groups to conduct the one-way analysis of variance (ANOVA). Instructional coach self-perception of skills were reported by way of The Instructional Coaching Skills Instrument (ICSI) developed by Howley, Dudek, Rittenberg, and Larson (2014). Teacher self-efficacy was defined as "teachers' belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated" (Guskey & Passaro, 1994, p. 628). Teacher self-efficacy was measured using The Teachers' Sense of Efficacy Scale developed by Tschannen-Moran and Hoy (2001). The sample consisted of 100 kindergarten through twelfth grade content area teachers, and 30 instructional coaches in one suburban district in a southern state. The ANOVA was used to determine if a significant difference existed.

Significance of the Study

According to (Bellibas & Liu, 2017) educational leadership influences teacher practices and beliefs which impacts teaching and learning. They found that the positive relationship between leadership and teacher self-efficacy can positively influence teacher self-esteem and motivation which affects instructional practices (Bellibas & Liu, 2017). Cansoy and Parlar

(2018) found a significant relationship between school leadership and teacher self-efficacy; positing that educational leaders can strengthen self-efficacy by promoting common objectives, supplying resources, and supporting flexible classroom environments. It is plausible that instructional coaches can fulfill this role.

There is much research on the impact of instructional coaches in schools (Bean et al., 2010; Brady et al., 2009; Cantrell & Hughes, 2008), but little on the impact across content areas and grade levels, and fewer have been designed to measure the impact in a district where instructional coach time varies. Kane and Rosenquist (2018) warned district leaders about spreading instructional coaches too thin and suggested coaches serve in a single school to maximize impact. This study will add to the body of research by identifying whether instructional coach self-efficacy has an impact on teacher self-efficacy.

Research Question

The research question for this study was:

RQ1. Is there a difference between teacher self-efficacy in schools according to The Teachers' Sense of Efficacy Scale among high, moderate, and low scoring groups of instructional coach self-perceptions of skills measured by the Instructional Coaching Skills Instrument?

Definitions

1. *Educational Leader Instructional Behavior* - "The act of defining the school mission, managing the instructional program, and promoting a positive learning climate" (Hallinger & Murphy, 1985, p. 220).
2. *Instructional Coach* -

> Someone whose primary professional responsibility is to bring practices that have been studied using a variety of research methods into classrooms by working with adults rather than students. Instructional coaches, as described here, may spend some time working with groups of teachers and may have other administrative responsibilities, but they set aside a significant portion of their time to offer classroom modeling, supportive feedback, and specific observations of individual teaching practices. (Kowal & Steiner, 2007, p. 2)

3. *One-Way Analysis of Variance (ANOVA)* - "A statistical analysis that tests whether there are statistically significant differences between group means on scores on a quantitative outcome variable across two or more groups" (Warner, 2013, p. 1071).
4. *Principal* - "Principals are central figures in schools whose actions directly shape their schools' climate. Research finds principals especially influential over the organizational climate of the school where they are able to foster trusting, cooperative, and open environments where input from staff is welcome" (Price, 2012, p. 40).
5. *Self-efficacy* - "An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes" (Bandura, 1977, p. 193).
6. *Teacher self-efficacy* - "Teachers' belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated" (Guskey & Passaro, 1994, p. 628).

CHAPTER TWO: LITERATURE REVIEW

Overview

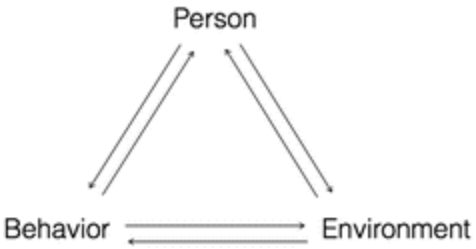
Chapter Two will situate the study within the theoretical framework and provide the related research. Instructional leadership roles, practices, and models within schools will be examined. The concept of coaching will be thoroughly explained, including explanations of characteristics, roles, models, and connections with teachers. Teacher self-efficacy will be examined to identify the relationship between instructional leadership, coaching, and teacher's beliefs about performance in the classroom.

Theoretical Framework

This study was guided by the theoretical framework of Albert Bandura's social cognitive theory. Bandura (1977) began building the foundation for self-efficacy and teacher self-efficacy during his research with social learning theory, which later Bandura renamed social cognitive theory. Bandura believed human learning took place within social interactions and presented a triadic reciprocality model of causality (Figure 1) to explain the relationship between behaviors, environmental factors, and the person (Schunk, 2016).

Figure 1

Triadic Reciprocality Model of Causality



Note. Reprinted from Schunk (2016).

Bandura (1977) posited, “cognitive processes play a prominent role in the acquisition and retention of new behavior patterns” (p. 192). Learning results from observing models who serves as examples for future actions by the observer. The process is solidified with adjustments from feedback (Bandura, 1977). Individuals strengthen the cognitive processes by receiving consequences, interpreting what behavior is acceptable, and behaving appropriately (Bandura, 1977). These ideas collectively create and influence efficacy expectations.

Bandura (1977) defined self-efficacy as “the conviction that one can successfully execute the behavior required to produce outcomes” (p. 193). People with high levels of self-efficacy are more likely to tackle difficult tasks or dedicate themselves to achieving lofty goals; additionally, people with high self-efficacy anticipate successful situations and prepare supports where those with low levels perceive future scenarios with doubt (Bandura, 1993). Bandura (1977) suggests that self-efficacy beliefs are influenced by four sources: mastery experiences/performance accomplishments, vicarious experiences, verbal persuasion, and affective states. Mastery experiences or performance accomplishments are based on a person’s collective successes or failures, which can raise or lower self-efficacy beliefs; if a person’s self-efficacy is high due to continuous success, a sporadic failure will have little impact (Bandura, 1977). Vicarious experiences influence self-efficacy—seeing others model success or failure in threatening situations—but they tend to have less impact than verbal persuasion, which Bandura (1977) described as affirmation of one’s ability to deal successfully with a situation. Finally, affective states or emotional arousal influence self-efficacy; stress impacts a person’s willingness to be involved in vulnerable situations (Bandura, 1977). The self-efficacy work of Bandura informed this exploration of teacher self-efficacy.

Teacher self-efficacy significantly relates to student achievement and other factors in the classroom (Tschannen-Moran et al., 1998; Zee & Koomen, 2016) and is defined as "teachers' belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated" (Guskey & Passaro, 1994, p. 628). Bandura (1993) posited that a teacher's instructional efficacy beliefs influence their classroom culture. Gibson and Dembo (1984) concluded that teachers with high levels of self-efficacy adhere to an academic focus within the classroom, maintain an attitude of flexibility with interruptions in routines, and hold all students to high expectations by providing supportive feedback. Others have worked to extend the ideas of teacher self-efficacy through extensive research and instrument creation (Gibson & Dembo, 1984; Guskey & Passaro, 1994; Tschannen-Moran et al., 1998). I used The Teachers' Sense of Efficacy Scale (TSES) developed by Tschannen-Moran and Hoy (2001) to gather data using the 24-item scale, which will be explained in chapter three. To achieve high self-efficacy, teachers need successful mastery experiences, modeling from vicarious experiences, and verbal affirmation to confirm their capabilities. Such opportunities can be provided by instructional leaders, especially instructional coaches.

Related Literature

Instructional Leadership

Leadership has been defined using several terms, traits, and expectations; the definition often depends on the context, situation, or environment. In a school setting, the leader, usually the principal, can influence the culture and climate by exhibiting a collective vision, providing a positive climate, and managing instruction (Hallinger & Murphy, 1985). The past few decades, educational leaders have been tasked with initiating school reform and are moving from managerial to instructional roles. Because of this, educational leaders find themselves involved

in social processes of change (Daly et al., 2015). Illustrating instructional leadership models and the roles instructional leaders play provides insight into how these agents of change impact the school environment.

Instructional Leadership Models

Hallinger and Murphy (1985) developed an instructional leadership model in response to the lack of research available on instructional management and what the role of instructional leaders should be. The insight creating the foundation for their model was gleaned from instructional management behavior exhibited by 10 elementary school principals (Hallinger & Murphy, 1985). From their research, three dimensions emerged with eleven job specifications. They concluded the three main functions of an instructional leader were "defining the school mission, managing the instructional program, and promoting a positive learning climate" (Hallinger & Murphy, 1985, p. 220). Within these three dimensions lie the factors that demonstrate instructional leader behavior (See Table 1).

Table 1

Dimensions of Instructional Leadership

Defining the Mission	Managing Instructional Programs	Promoting School Climate
• Framing School Goals • Communicating School Goals	• Supervising and Evaluating Instruction • Coordinating Curriculum • Monitoring Student Progress	• Protecting Instructional Time • Promoting Professional Development • Maintaining High Visibility • Providing Incentives for Teachers • Enforcing Academic Standards • Providing incentives for Students

Note. Hallinger & Murphy (1985).

Through extensive research Murphy (1990) extended the work and created another model establishing four dimensions, and sixteen instructional behaviors emerged. Defining the mission remained a prominent dimension, but Murphy (1990) expanded the role of managing instructional programs and divided the dimension of promoting school climate into two distinct elements: promoting an academic climate, and establishing a supportive work environment (Murphy, 1990). Murphy's model can be seen in Table 2.

Table 2

Murphy's Model of Instructional Leadership

Developing Mission and Goals	Managing the Educational Production Function	Promoting an Academic Learning Climate	Developing a Supportive Work Environment
• Framing School Goals • Communicating School Goals	• Supervising and Evaluating Instruction • Promoting Quality Instruction • Coordinating Curriculum • Monitoring Student Progress • Allocating and Protecting Instructional Time	• Establishing Positive Expectations and Standards • Promoting Professional Development • Maintaining High Visibility • Providing Incentives for Teachers	• Creating a Safe and Orderly Learning Environment • Providing Meaningful Student Involvement • Developing Staff Collaboration and Cohesion • Securing Outsi Resources • Establishing Home to School Links

Note. Murphy (1990)

As new instructional leadership models continued to emerge and redefine roles, expectations, and behaviors, Weber (1996) created an instructional leadership model, not just for the principal or building-level administrator, but for anyone within the school environment,

adding that that a leader was still important as a point-of-contact or final authority for decisions. This model came during a time when shared leadership was becoming more prominent among leaders, teachers, and coaches, allowing others influence and ownership of the overall school mission and vision. This model identified five dimensions of instructional leadership: defining the school mission, managing curriculum and instruction, promoting a positive learning environment, observing and improving instruction, and assessing the instructional program (Weber, 1996). A summary of each dimension can be seen in Table 3 below.

Table 3

Weber's Model of Instructional Leadership

Defining the School Mission	Managing Curriculum and Instruction	Promoting a Positive Learning Environment	Observing and Improving Instruction	Assessing the Instructional Program
• Conveying the Mission and Vision to All Stakeholders	• Ensures Classroom Practices are Aligned to the Mission and Vision • Provides Best Practices for Instruction • Exhibits Data-Driven Instructional Strategies Through Models	• Promotes a Positive Learning Climate by Conveying Goals • Establishes High Expectations • Establishes an Orderly Learning Environment	• Improves Instruction Through Classroom Observation • Provides Professional Development Opportunities for Growth	• Assists with Planning, Designing, Administering, and Analysis of Assessments to Evaluate Curriculum

Note. Weber (1996)

Each model impacted the state of instructional leadership and provided the foundation for roles and expectations of instructional leaders within the school setting.

Roles and Behaviors of Instructional Leaders

Research suggests that good, effective schools are led by principals and educational leaders who involve themselves in the teaching and learning process (Murphy et al., 2016). Additionally, Kalman and Arslan (2016) stated that strong instructional leaders can build schools with high achievement. With the development of the Principal Instructional Management Rating Scale and extensive research on instructional leadership, Hallinger (1990) found strong, instructional leaders are successful at defining the school goals and mission, managing instructional initiatives, and promoting a positive school culture.

Successful leaders, including those in instructional settings, are strong at casting vision, articulating why the mission exists, and communicating how objectives and goals will be met (Hallinger et al., 2013; Kouzes & Posner, 2017; Sinek, 2014). When Hallinger and Murphy (1985) established their framework for instructional leadership, they explained that defining the school mission involved conveying the vision to stakeholders to create a shared purpose, align the mission with school goals, and consistently communicate those to the faculty, staff, and students. Because core values and the mission often determine the culture of a school, the instructional leader must work to ensure that all members of the school community feel empowered and motivated to achieve goals (Zahed-Babelan et al., 2019). Defining the mission and setting high expectations through attainable goals can create a foundation for strong instructional initiatives.

To promote instructional initiatives, the leader must supervise and evaluate instruction, coordinate curriculum, and monitor student progress (Hallinger & Murphy, 1985). To translate goals into actionable strategies, instructional leaders must involve themselves in classrooms through observations and direct feedback (Neumerski, 2012). Instructional leaders often use the

clinical observation model of pre-conferences, formal observation, and post-conferences, to provide feedback and improve teacher practices (Mireles-Rios & Becchio, 2018). Although these processes are meant to provide direction and support for the teacher, some may see the feedback as judgmental and punitive. Yada et al. (2019) concluded that "verbal persuasion delivered by a principal or by a member of the school management team is seen as a formal appraisal for the purpose of teacher evaluation rather than as positive feedback to improve classroom teaching" (p. 20). Instructional leaders without management titles, like coaches, may be better suited to support the instructional initiatives of the school. Instructional leaders must also monitor student progress. Bloom et al. (2015) correlated strong educational leadership with positive outcomes, like student achievement. For instructional leaders to see the results come to fruition, they must collaborate with teachers and be change agents to create quality assessments using school goals and missions as a guide and assist teachers in analyzing the data for future instructional plans (Hallinger & Murphy, 1985; Murphy et al., 2016).

The instructional leader must also promote a positive climate and learning environment. To do so, Hallinger and Murphy (1985) stated that a leader must protect instructional time and promote job-embedded professional development and activities. (Cansoy & Parlar, 2018; Bellibas & Liu, 2017) maintain visibility in the school building, provide incentives for teachers and learning, and promote high standards and expectations. Although very important, Kalman and Arslan (2016) reported principals found it one of the hardest roles to fill depending on the socioeconomic status of the school and teacher motivation. Leaders can also create a positive learning environment by fostering relationships and promoting collaboration to improve teacher motivation and self-esteem (Zahed-Babelan et al., 2019; Bellibas & Liu, 2017). Instructional leaders can promote a strong culture by strengthening teacher self-efficacy by communicating

common goals, securing resources, and allowing for flexibility (Cansoy & Parlar, 2018). Additionally, Zahed-Babelan et al. (2019) found when instructional leaders provide teachers, staff, and students with choices and promote a sense of autonomy, it stimulates a positive school culture and overall well-being of the school.

Although competent instructional leaders define the school goals and mission, manage instructional initiatives, and promote a positive school culture, the overall expectations placed on the principal or building-level leader continue to accumulate. Principals reported spending only 10 to 20 percent of their time on instructional behavior during their normal schedules because of overwhelming pressure to implement school reform (Murphy et al. 2016): however, the gap in instructional support can be filled by another instructional leader—the coach.

Coaching

Federal laws like the Every Child Succeeds Act (ESSA) and No Child Left Behind mandate that principals and school leaders support teachers with job-embedded professional development to improve instructional practices, and although these new responsibilities have been thrust upon building administrators, their managerial duties of personnel management, safety protocols, and other tasks remain (Murphy et al., 2016). Although coaching has become a widespread initiative to offer teachers specific, on-going professional development, there are multiple models with different definitions, expectations, and roles. Due to multiple frameworks and little empirical evidence, no consensus exists on which model is best or what the role of a coach should be in different content areas, grade levels, or school districts (Neumerski, 2012; Kurz et al., 2017).

Definition of Coaching

Although definitions of coaching vary, most agree on the general roles and expectations. Denton and Hasbrouck (2009) stated that coaching is "a way to support teachers in their efforts to provide high-quality teaching in academic areas including reading, math, and science . . . it is also a component in school change initiatives" (p. 151). Sailors and Shanklin (2010) defined coaching as "sustained classroom-based support from a qualified and knowledgeable individual who models research-based strategies and explores with teachers how to incorporate these practices using the teacher's own students" (p. 1). Additionally, coaches have assumed the responsibility of providing direct, on-going, job-embedded professional development for teachers in response to feedback from clinical observation cycles from instructional leaders (Denton & Hasbrouck, 2009; Kurz et al., 2017). Coaches have also been referred to by various titles: instructional coach, literacy coach, peer coach, content area coach, reform coach, cognitive coach, or instructional facilitator (Denton & Hasbrouck, 2009). Analyzing characteristics, roles, and time allocation can help create a general definition of this ever-changing instructional position.

Coaching Characteristics. Definitions of coach vary; however, three main areas have emerged that exemplify characteristics of an effective coach: pedagogical knowledge, content expertise, and interpersonal skills (Kowal & Steiner, 2007). Coaches are considered a resource for specific professional development. Showers and Joyce (1996) explained the purpose of coaching is to help teachers transfer knowledge into instructional strategies and practices, thus coaches must have considerable pedagogical knowledge and many differentiation strategies, which Knight (2016) refers to as an "instructional playbook." Coaches must understand how students learn and possess the ability to problem-solve with teachers, analyze a situation, and

determine which strategy is best to meet student needs (Kowal & Steiner, 2007; Denton & Hasbrouck, 2009).

Coaches should possess instructional expertise in various content areas to support teachers with implementing content-specific strategies and making curriculum decisions (Devine et al., 2013). It is especially important in the higher grades where teachers need to be content experts, and text complexity increases (Kowal & Steiner, 2007). With the implementation of Response to Intervention in many schools, coaches also often need to identify and assist students with specific learning disabilities (e.g., reading comprehension, dyslexia, and fluency) and expedite research-based strategies (Kowal & Steiner, 2007; Denton & Hasbrouck, 2009).

Lastly, and possibly most importantly, coaches need to possess strong interpersonal skills. Walkowiak (2016) suggested that an effective coach will first work to build relationships with teachers by establishing trust and collaboration. For a coach to establish these relationships, they must be flexible and adapt to different situations and different personalities using interpersonal skills. Knight (2016) advised coaches have a strong understanding of working with adults and responding to criticism and resistance. Tschannen-Moran and Carter (2016) posited that coaches must be "tactful, compassionate, and sensitive to teachers' needs" (p. 288), which requires a high emotional intelligence. Knight (2016) recommended that coaches listen to concerns and struggles and communicate truths in ways teachers will internalize. Although much research illuminates the characteristics of good coaches, many differences exist in the roles and activities coaches play.

Coaching Roles and Activities. The role of coaches vary school-to school, but providing job-embedded teacher development and instructional observation does not (Denton & Hasbrouck, 2009). Bean (2004) suggested that coaching activities fall into three categories: 1)

informal support through relationship building and curriculum support, 2) somewhat formal and direct support to identify strengths and areas of growth, as well as analyze data and student work, and 3) formal and intense support including modeling and classroom observation with feedback. Through each of these levels, the coach can form a relationship with teachers and support classroom instruction and ultimately student achievement.

As previously mentioned, coaches must have strong, interpersonal skills and possess the ability to build relationships with teachers to be effective in their roles (Knight, 2016). Bean (2004) suggested that coaches must have prior, successful teaching experiences to build rapport with teachers and create an environment of trust. To build these relationships, coaches can have informal meetings to share common interests, share resources and curriculum strategies, and discuss school goals and state standards. Devine et al. (2013) noted the importance of content planning to create high-quality instruction and curriculum to meet different types of learners. Because the goal of coaching is often to change teacher instructional behavior, the coach must establish a relationship of trust to compel teachers to participate in activities that may seem foreign, risky, or scary (Walkowiak, 2016).

During intense support, coaches may strive to set focused goals based on a teacher strengths and weaknesses derived from the administration or personal communication; much of the conversation should be data-driven emphasizing student outcomes (Walkowiak, 2016). Coaches might also work on co-planning lessons with teachers to ensure research-based strategies are being implemented. This level of support should encourage reflection from the teacher to ensure permanent change is initiated and implemented (Bean, 2004).

Knight (2016) posited that a coach be knowledgeable of the coaching cycle because that is where accountability begins adding, “effective coaching is more than a few conversations;

effective coaching leads to socially significant improvements in teaching and learning. If student learning is not improving, instructional coaching isn't working" (p. 28). To initiate observation cycles, Devine et al. (2013) recommended coaches partner with principals and work with willing teachers or those appointed by the building-level leader. Because the coach's role is to break down barriers and support the teacher, powerful but realistic strategies should be shared with the teacher for smooth transition and implementation (Devine et al., 2013). Although all three levels are important in the coaching role, not every coach allots the same amount of time to each one.

Coaching Time Allocation. Not only do instructional coaching roles and activities differ in most situations, time allocation varies also. Deussen et al. (2007) found that coaches situate themselves in five different roles based on the amount of time they dedicate to the activities they deem most important: data-oriented coaches, student-oriented coaches, managerial coaches, and teacher-oriented coaches (individual teachers), and teacher-oriented coaches (groups of teachers). Data-oriented coaches spent 45% of their time on assessments and data analysis, including student progress, intervention needs, and grouping students (Deussen et al., 2007; Denton & Hasbrouck, 2009). Student-oriented coaches work more closely with students, providing necessary interventions directly to those struggling, with only 16% of their time in coaching interactions with teachers (Deussen et al., 2007; Denton & Hasbrouck, 2009). Managerial coaches spend approximately 50% of their time on meeting preparations and paperwork, and both groups of teacher-oriented coaches spend 50% of their time focused on coaching activities with individual teachers or groups of teachers (Deussen et al., 2007; Denton & Hasbrouck, 2009). Advocating for maximum impact, Kane and Rosenquist (2018) explained:

> District leaders must also ensure that district-hired coaches are not spread too thin across too many schools: Coaches must be allowed to work in ongoing ways in a single school,

> so that they might develop substantive, ongoing relationships not only with teachers but also with principals. (p. 21)

Despite the differences, coaches need to spend most their time working directly with teachers to build instructional capacity and bolster teacher self-efficacy through effective coaching models.

Coaching Models

Instructional coaches are used in a variety of capacities and models depending on the school environment, district or school expectations, and teacher personality. In the 1980s, Joyce and Showers ushered in coaching in education by introducing peer coaching. Teachers formed partnerships and incorporated strategies like modeling, co-teaching, and feedback to train and support each other (Showers & Joyce, 1996). Although this model proved successful for transferring knowledge, teachers have historically struggled to find time to perform peer observations due to the expectations and workload of their own classrooms. Therefore, other models of coaching have emerged relying heavily on an individual coach without designated classroom responsibilities. Numerous coaching models exist. This review is focused on cognitive coaching, content-focused coaching, student-focused coaching, and instructional coaching.

Cognitive Coaching. Educators can learn, grow, and change throughout their careers (Costa & Garmston, n.d.). Garmston (1993) identified cognitive coaching as a way for teachers to explore strategical thinking and practices adding that the process is accomplished by a three-step clinical supervision cycle: pre-conference, observation, and post- conference. During the pre-conference, the coach asks questions to guide the teacher to identify strengths and areas needing exploration and expansion (Garmston, 1993; Moche, 2000). The coach uses observation to gather non-evaluative data of the new strategy or initiative and prepares to present it to the

teacher. In cognitive coaching, teachers maintain autonomy because they are evaluating the success of the lesson, not the coach (Garmston, 1993). The post- conference phase consists of the coach questioning the teacher about the lesson and providing an opportunity to reflect and elaborate on areas of reinforcement and refinement (Moche, 2000). In the beginning of the cycle, the coach directs the teacher to engage in self-monitoring, self-analyzing, and self-evaluating, but as the relationship progresses, the coach relinquishes guidance and empowers the teacher to maintain autonomy in these areas (Garmston, 1993).

Cognitive coaching involves three goals: trust, learning, and autonomy (Costa & Garmston, n.d.). Trust (for the process) is vital because coaches must understand that change and transformation may be slow while the teacher must trust that the coach is there to support reflection and growth (Costa & Garmston, n.d.). Learning is also essential for coaches and teachers. Coaches must learn to ask applicable, probing questions to initiate creative thinking, and teachers must navigate new ways of thinking to implement effective teaching methods (Moche, 2000). The success of the cognitive coaching relationship relies heavily on the amount of autonomy given to the teacher. Empowering teachers to have ownership of their lessons and instructional decisions affirms their expertise and promotes active participation in the coaching cycle (Moche, 2000).

Content-Focused Coaching. Many school districts pair content-focused coaches with professional learning communities and teachers in content areas needing specialized support, especially mathematics and literacy. Content-focused coaches support teachers by providing scaffolded opportunities to implement research-based instructional practices within their content expertise (Coburn & Russell, 2008; Gibbons & Cobb, 2016). Gibbons and Cobb (2016)

recommended that content-focused coaches have a history of implementing high-quality instructional practices and a desire to support the development of teachers in specific disciplines.

Di Domenico, Elish-Piper, Manderino, and LAllier (2018) noted that collaboration between coaches and teachers in content-specific settings take a great deal of time to build. Gibbons and Cobb (2016) described three practices that help: co-teaching, modeling, and debriefing after classroom observation. Co-teaching allows teachers to experience teaching situations with an expert and receive feedback. Modeling gives teachers the opportunity to observe high-quality instruction, interactions, and outcomes (Gibbons & Cobb, 2016). Coaches can also observe teachers and provide post-conference feedback which may propel them to reflect on their practices and determine how their actions impact the learning process. Becker et al. (2019) found emphasizing collaborative planning, feedback, and reflection through content-focused coaching increased the quality of collaboration among pre-service teachers. Each practice expands mastery and vicarious experiences which can improve overall self-efficacy (Bandura, 1977).

Student-Focused Coaching. The student-focused coaching model is often used in the content area of literacy; however, it is not content-specific and aims at improving overall student outcome (Hasbrouck, 2017). This collaborative model creates a barrier between coaching and evaluation to ensure teachers grow professionally and improve instructional practices focused on student achievement (Hasbrouck, 2017). Hasbrouck and Denton (2007) stated that the model is student-focused in that the emphasis is on decisions and interventions directly related to student outcome, strength,s and weakness instead of teacher change.

Hasbrouck (2017) recommended that coaches utilizing this model should have successful teaching experience, deep knowledge of a content area, and a desire to collaborate with teachers.

Additionally, student-focused coaches must understand and select one of three roles; facilitator, teacher/learner, or collaborative problem solver (Hasbrouck & Denton, 2007; Hasbrouck, 2017). As a facilitator, student-focused coaches regularly contact every teacher in their care, not just strugglers, to support them collaboratively and promote effective practices (Hasbrouck & Denton, 2007; Hasbrouck, 2017). They also help with everyday classroom tasks to show their willingness to assist in any capacity. The emphasis is on relationships and building trust (Hasbrouck, 2017). Responding to the needs of teachers in the teacher/learner role means coaches provide job-embedded professional learning similar to the other coaching models. Hasbrouck and Denton (2007) classified student-focused coaching to clarify that coaches hold equal (albeit different) roles, stressing that all should continue to grow and learn from their colleagues. The collaborative problem solver role requires coaches to identify problems concerning individual students or subgroups of students (Hasbrouck, 2017). The coach provides academic, behavioral, and social/emotional professional development through a four-phase process: 1) presenting the problem, 2) setting goals, 3) implementing plans, and 4) revisiting goals and plans (Hasbrouck, 2017). Hasbrouck (2017) added that the role of student-focused coaches would likely overlap with the role of a response to intervention coordinator because teachers often need support making data-based decisions.

Instructional Coaching. Content-focused coaches work to support teachers in specialized content areas, instructional coaches provide job-embedded professional development in all academic areas. Many are tapped by administrators to implement whole-school reform initiatives and support teachers with resources and strategies (Denton & Hasbrouck, 2009). Instructional coaching encompasses many characteristics of other coaching models. Knight (2016) posited instructional coaches must be able to work effectively with adults, build trust,

employ an effective coaching cycle, understand effective pedagogy, gather and analyze data, communicate and lead effectively, and have the support of the school and district. Knight (2006) added that coaches must have sufficient time to work with teachers.

Although the relationship between an instructional coach and teacher is nonevaluative, the coaching cycle is used for accountability. Knight (2016) developed an instructional coaching cycle that provides autonomy for teachers and holds all parties accountable. This three-stage cycle includes identifying, learning, and improving. During the identifying stage, the coach and teacher examine student work, data, and classroom evidence to set student achievement goals. The learning stage is focused on the teacher learning new strategies or practices. It is often accomplished through modeling or peer observation (Knight, 2016). The improving stage requires teachers to implement the new practice while the coach observes and gathers data; after which, the teacher and coach discuss progress and whether a new strategy should be incorporated (Knight, 2016). This instructional coaching cycle helps strengthen the relationship between teacher and coach, support overall academic initiatives of the school, and provides job-embedded professional development in a timely manner.

Coaching and Teachers

Although coaching models differ, one commonality entails supporting and promoting the professional growth of teachers. Coaching is situational, and many coaches struggle to maintain a balance between different expectations of school and district, especially regarding time allotment to teachers and school building. Bean et al. (2010) found that coaches spent, on average, 35.7% of their time working on teacher development. Because almost two-thirds of their time is spent on other activities, analyzing teacher perceptions, resistance, and the overall impact of coaching on teachers is warranted.

Professional Development. Student learning and achievement remain top priorities for administrators, but if teachers—a core element—lack appropriate skills, practices, and resources, it will not come to fruition. As per ESSA, teachers must complete a set amount of professional development hours for contract obligations, career advancement, and license renewal. Yoon et al. (2007) found more than 14 hours of professional development had a positive effect on student achievement and projected that students can increase scores by 21 percentile points if their teachers have substantial professional development. Crow (2015) echoed the ESSA requirements of professional development by stating its need to be sustained, job-embedded, and data-driven. Gallucci et al. (2010) suggested that some teachers struggle implementing more rigorous initiatives and that support is needed to incorporate them. Coaching functions as professional development for teachers because coaches have the mastery experience and can provide resources and strategies to equip teachers (Kowal & Steiner, 2007). Yoon et al. (2007) noted that No Child Left Behind (now ESSA) requires that professional development align with state content standards and assessments in order to improve teacher content knowledge and use of research-based strategies. Desimone and Pak (2017) opined that coaching meets the five features of effective professional development: content focus, active learning opportunities, coherence, sustained duration, and collective participation. Regardless of what model a school or district uses, these expectations can be addressed by instructional coaches who have the knowledge and skill to support teachers in these areas, as long as the teachers are receptive of the support.

Teacher Perceptions. Research indicates that the transferability of knowledge acquired from professional development is enhanced when it is situation specific and involves modeling and feedback (Showers & Joyce, 1996; Denton & Hasbrouck, 2009; Shernoff et al., 2017).

Coaches can provide this support; however, time allotment is a factor (Kane & Rosenquist, 2019; Bean et al., 2010). Bean et al. (2010) noted that many teachers had no interaction with coaches and that teachers noticed when they did not. Allotting little or no time to teachers produced a negative perception; teachers reported a lack of support, resources, and strategies to improve instruction (Bean et al., 2010). Conversely, some teachers view coaches as intrusive and evaluative (Shernoff et al., 2017). Regardless, 90% of the teachers in the Bean et al. (2010) study reported turning to coaches as a resource (Bean et al., 2010).

In one study, teachers perceived the role of an instructional coach as a professional development resource providing new perspectives, information, and strategies tailored to individual classrooms. Teachers were concerned, however, whether a coach could fully understand the context of the school setting and student demographics (Shernoff et al., 2017). Teacher perception can influence a coach's impact on teacher preparedness, student achievement, and the school.

Impact. Time allotments differ in and between school buildings, and many coaches have different roles and mandated by schools and the administrators (Denton & Hasbrouck, 2009). Although different models are utilized, the main goal of coaching is to provide teachers tools to improve student achievement, and research has shown that coaching improves student achievement (Bean et al., 2010; Matsumura et al., 2013; Shidler, 2009; Campbell & Malkus, 2011). Using meta-analysis, Kraft et al. (2018) concluded that the coaching program used plays a role in the significance of the impact; content-specific programs being more influential, and that coaching was equally effective across all grade levels. Coaches who want to impact student achievement must diligently support teachers; building their self-efficacy and capacity to excel.

Teacher Self-Efficacy

According to social cognitive theory, human behavior is based on outcome expectations and efficacy expectations Bandura, 1977). Outcome expectations are anticipated results and efficacy expectations are beliefs about competency (Guskey & Passaro, 1994). In the school environment, constructs merge to form teacher beliefs about influencing student learning, in other words, teacher self-efficacy. Teacher self-efficacy has been connected to teacher and student outcomes, well-being, and job satisfaction (Zee & Koomen, 2016).

Overview

With the development of TSES by Tschannen-Moran et al. (1998), three constructs emerged to describe teacher self-efficacy: instructional practices, classroom management, and student engagement. Researchers have found each can have a positive effect on a teacher self-efficacy, especially coupled with mastery experiences and verbal persuasion (Tschannen-Moran & Hoy, 2001; Yada et al., 2019; Wilson et al., 2020; Perera & John, 2020; Granziera & Perera, 2019). With proper support and resources, teachers with high self-efficacy increase their overall effectiveness, impact student outcomes, increase job satisfaction, and avoid burnout (Perera & John, 2020).

Instructional Practices, Management, and Engagement. Instructional practices, classroom management, and student engagement are important aspects of any classroom, regardless of grade level or content area, and teachers can increase their strategies and skill through mastery experiences and professional learning opportunities. Wilson et al. (2020) said that mastery experiences are a strong predictor of teacher self-efficacy in instructional strategies and classroom management; Granziera and Perera (2019) found that mastery experiences may impact student engagement. When teachers engage in mastery experiences, they develop

capacity to implement research-based strategies to improve instruction, management, and engagement, while also building self-efficacy. Holzberger et al. (2013) conducted a longitudinal study and confirmed the work of previous studies indicating teachers with high self-efficacy exhibit superior instructional quality. Additionally, teachers who tend to take time to build relationships, show care, and provide emotional support to students increase classroom interaction, and build their own self-efficacy (Huang et al., 2019; Perera & John, 2020). Teachers with high self-efficacy are confident they can execute necessary skills to keep students engaged and on-task thus decrease negative behavior (Zee & Koomen, 2016; Granziera & Perera, 2019). If teachers can build self-efficacy about their ability to execute strategies within these three constructs, their overall job satisfaction is likely to be affected.

Job Satisfaction. Using meta-analysis, Zee and Koomen (2016) found, across grade levels, that most studies indicated a positive connection between teacher self-efficacy and job satisfaction. Duyar et al. (2013) posited that self-efficacy is so closely related to job satisfaction because it indicates internal competence. Although a positive correlation exists, research suggests other factors play a role in the relationship, including stress, student engagement, and school climate (Zee & Koomen, 2016; Lev et al., 2018; Granziera & Perera, 2019; Klassen & Chiu, 2010). Klassen and Chiu (2010) found that teachers with unsuccessful experiences had lower self-efficacy due to higher stress and ultimately lower job satisfaction; supporting the claim from Granziera and Perera (2019) that mastery experiences are one of the most influential sources of self-efficacy. Student engagement was also linked to job satisfaction. When teachers believe they are impacting student learning, their self-efficacy increases (Lev et al., 2018). Finally, teachers well-adjusted to the school culture and find it to be a professional climate have higher self-efficacy and report better job satisfaction (Lev et al., 2018; Perera et al., 2018).

Burnout. Huk et al. (2018) found that low efficacy of instructional practices negatively impacted accomplishment and caused burnout. Additionally, low efficacy in classroom management causes emotional exhaustion and burnout which are associated with fatigue and cynicism toward students. If teachers cannot maintain order, they may feel emotionally drained (Huk et al., 2018; Kim & Buric, 2019; Naz et al., 2017). When teachers lack positive experiences that bolster self-efficacy, they may experience exhaustion, feel undervalued, and struggle with job commitment. Positive experiences can be provided by instructional coaches.

Teacher Self-Efficacy and Instructional Leadership

Bandura (1977) suggested four things impact self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states. Tschannen-Moran and Hoy (2001) asserted that teachers with high self-efficacy are more likely to set higher goals and take risks and that teachers need to feel supported in realistic settings to undertake the tasks. The instructional leader establishes the overall culture and climate in a school building. Cansoy and Parlar (2017) adapted the four components to correspond with instructional leadership: learning through professional experiences, following school models, communicating how student success can be improved, and creating a healthy school culture. Leaders can impact teacher self-efficacy and collective efficacy in the school by creating a clear vision, empowering teachers with purpose, and equipping them with resources to overcome instructional obstacles (Cansoy & Parlar, 2017; Liu & Hallinger, 2018).

Research reveals a significant and direct relationship between instructional leadership and teacher self-efficacy (Bellibas & Liu, 2017; Liu et al., 2020). Liu and Hallinger (2018) also concluded that instructional leadership promotes motivation and engagement in professional development of teachers. Liu et al. (2020) suggested instructional leadership can impact teacher

self-efficacy when emphasis is placed on instructional improvement. They also found that direct instructional supervision (observations, monitoring student work, providing strategies and resources) impacted teacher self-efficacy significantly. Cansoy and Parlar (2017) reported that feedback from instructional leader observations can impact teacher self-efficacy and the collective efficacy the school. Although instructional leaders can increase teacher self-efficacy by providing responsibilities (Cansoy & Parlar, 2017), many do not have time to provide them. Coaches can fill the gap and strengthen teacher self-efficacy by providing time, resources, and skills for professional growth through instructional support.

Teacher Self-Efficacy and Coaching

Each model of coaching provides opportunities for coaches to engage teachers in mastery experiences to learn and grow professionally. Many of these experiences are often tailored content areas or specific student needs and can increase a teacher's self-efficacy, especially in heavily studied content areas like literacy (Cantrell & Hughes, 2008). Goker (2006) found that preservice teachers increased self-efficacy through mastery experiences and feedback from peer coaching situations. Weber et al. (2019) found video-based coaching improved self-efficacy, especially when feedback was involved.

Because coaching is a form of job-embedded professional development for teachers, it is plausible that it may affect teacher self-efficacy. Tschannen-Moran & McMaster (2009) analyzed four professional development formats and their impact on teacher self-efficacy; of the four, the mastery experience of implementing a strategy in the teacher's classroom with the help of a coach was the most powerful. The findings of Cantrell and Hughes (2008) align with previous findings. Teachers in their study reported higher self-efficacy when they could implement, practice, and master a literary technique while observing other teachers model.

Ross (1992) found no connection between coaching, teacher self-efficacy, and student achievement; however, he found student achievement was higher in classrooms where teachers interacted more frequently with a coach and possessed higher self-efficacy. To build teacher efficacy in the classroom, Shindler (2009) recommended that coaches use the cognitive coaching model and focus on specific content, modeling best practices, and observing. He warned coaches about damaging teacher self-efficacy by spending too much time in the classroom and assuming control of the instruction. According to Cantrell and Hughes (2008), teachers felt collaborating with other educators in professional development would bolster their self-efficacy, but that there was not enough time to implement and develop new skills. Cantrell and Hughes (2008) also found that teachers were hesitant to try new strategies because they feared failure and losing control of the classroom which suggests low self-efficacy and a need for support. Because research shows that coaches are spread too thin, often overseeing multiple whole-school reform initiatives (Kane & Rosenquist, 2018; Kane & Rosenquist, 2019), there is a deficiency of full-time coaches. The deficiency may affect teacher self-efficacy, although this relationship has not been examined.

Summary

Chapter Two included the theoretical framework and related literature on instructional leadership, coaching, and teacher self-efficacy. The literature was viewed through the lens of Bandura's (1977) social cognitive theory, focusing on the concept of self-efficacy, including mastery experiences, vicarious experiences, verbal persuasion, and physiological states. Research suggests a link between instructional leadership behaviors, coaching, and teacher self-efficacy and each of these relationships was examined. Although the past several decades

produced numerous studies on teacher self-efficacy, few focused on coaching, and even fewer analyzed the relationship between instructional coach self-efficacy and teacher self-efficacy.

CHAPTER THREE: METHODS

Overview

This chapter begins with a description of the design, research questions, and hypothesis. Details regarding the participants and setting, and instrumentation follow. Data collection, procedures, and data analysis conclude the chapter.

Design

This study featured a non-experimental, causal-comparative design. A causal-comparative design was chosen because the objective of the study was to provide evidence and investigate a cause-and-effect relationship between categorical groups in a nonexperimental setting (Gall et al., 2007). It is important to note that the instructional coaching took place prior to the data collection, and the results were not manipulated. Gall et al. (2007) stated that individuals are not randomly assigned to groups in a causal-comparative design and that variables are not manipulated; this aligns with the design of the study. Data were collected through The Teachers' Sense of Efficacy Scale (TSES), The Instructional Coaching Skills Instrument (ICSI) and surveys. The objective of the study was to identify the significance between the independent variable (instructional coach self-efficacy related to coaching skills), grouped by high, medium, and low scores) and the dependent variable (teacher self-efficacy). Instructional coach self-efficacy is defined as coaches' confidence in their ability to "provide on-site professional development to assist teachers in making changes in their practice in the direction of the policy" (Coburn & Woulfin, 2012, p. 5). Teacher self-efficacy is defined as a "teachers' belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated" (Guskey & Passaro, 1994, p. 628).

Research Question

RQ1: Is there a difference between *teacher self-efficacy as* measured by the Teachers' Sense of Efficacy Scale, among *high, moderate, and low scoring groups of instructional coach self-efficacy as measured* by the Instructional Coaching Skills Instrument?

Hypothesis

The null hypothesis for this study is:

$H_0$1: There is no significant difference among teachers' self-efficacy scores as measured by The Teachers' Sense of Efficacy Scale among high, moderate, and low scoring groups of instructional coaches' self-perceptions of skills measured by the Instructional Coaching Skills Instrument.

Participants and Setting

The participants for this study were drawn from a convenience sample of kindergarten through twelfth grade content area teachers from a large, suburban district in a southern state during the fall semester of the 2020-2021 school year. The sample was convenient because of the location and easy access. According to the most current data from the district website, the district had 29,358 students during the 2018-2019 school year, with 76.4% of students being classified as white, 12.5% as Black, 8.4% as Hispanic or Latino, 2.2% as Asian, and 0.4% as Native American. Approximately one in every four students was economically disadvantaged, and the student with disability percentage was approximately 13.4%. There were 47 schools in the district employing 2,163 teachers, kindergarten through twelfth grade. In addition, there were 35 instructional coaches in the district.

Teachers who participated in this study ranged in age from 23 to 62 years with an average of 14 years of teaching experience. The participants were a generalization of the population.

One hundred teachers participated which does not meet the required minimum for a medium effect size. To achieve a medium effect size with statistical power of .7 at the .05 alpha level, at least 126 participants are needed; therefore, the response rate for the survey needed to be at least 5.8% to achieve the desired level (Gall et al., 2007). The sample was obtained from the 35 instructional coaches and 45 schools with an instructional coach. Teachers with a certified teaching license in core content areas (mathematics, English/Language Arts, science, and history) were invited to participate through a district-wide, electronic mailing list. See Table 4 for demographic information.

Table 4

Demographics of Teacher Participants

	Groups		
	EST	MST	HST
Gender			
Male	00	11	7
Female	18	23	41
n	18	34	48
Race			
Caucasian	18	31	48
Hispanic	00	1	00
African American	00	1	00
Other	00	1	00
n	18	34	48

The district employed 35 instructional coaches who served in all but two buildings kindergarten through twelfth grade; there were 21 elementary (K-5) coaches and 14 secondary (6-12) coaches. Instructional coaches had certified teaching licenses and had obtained or were in the process of obtaining an instructional coaching certificate from a local university. The certificate required twelve hours of courses focusing on styles of coaching, professional learning for adults, and cultural awareness. The coaches were employed full-time by the district and served one or two schools.

Instrumentation

Two instruments were used to collect data: TSES and ICSI. TSES was used to measure teacher self-efficacy through a 24-item questionnaire, and the ICSI was used to measure instructional coach self-efficacy through an 8-item questionnaire. Teachers were asked to identify their schools in order to connect them to their respective instructional coach. Demographic questions were integrated in the survey including gender, ethnicity, years of certified teaching experience, status as an elementary, middle, or high school teacher, and number of years serving in a school within the district.

Teachers' Sense of Efficacy Scale

TSES, developed by Tschannen-Moran and Hoy (2001), was used to determine teacher self-efficacy and vetted through an extensive, detailed process. The final product contains a 24-item long form and 12-item short form; the long form was used for this study. The items in TSES fall into three categories: student engagement, instructional strategies, and classroom management. Each item is rated thusly: 1-nothing, 3-very little, 5-some influence, 7-quite a bit, and 9-a great deal (Tschannen-Moran & Hoy, 2001). For the long form, total scores range from 24 to 216 points. Some of the items were adapted from Bandura's self-efficacy scale, while

others were created by a group of experts, two researchers, and eight graduate students, to characterize tasks not on Bandura's scale (Tschannen-Moran & Hoy, 2001).

Validity and reliability of TSES were analyzed through three studies. The original scale included 52 questions, but 20 were eliminated because the criterion loadings were above 0.60 for only 31 of them, with one additional question addressing motivation registering 0.595 (the desired level for inclusion in the instrument was 0.6). The researchers chose to include the question because they deemed the content important. More questions were eliminated in the second study to bring the total to 18. The purpose was to remove items with the lowest loadings among the three factors, that loaded on more than one factor, and that seemed repetitive (Tschannen-Moran & Hoy, 2001). The means were calculated for each subscale, and the reliability scores for α were determined: engagement was 0.82, instruction was 0.81, and management was 0.72 (Tschannen-Moran & Hoy, 2001). In addition, the scale's reliability was found to be 0.95.

Although two phases had been completed, discrepancies were found in the management scale, and the third study confirmed the issues. Emmer's Teacher Efficacy for Classroom Management Scale was reviewed to create new questions for the subpart, and a field test was completed in the third study among teachers and preservice teachers. Study three found the following reliabilities for the subscales: 0.91 for instruction, 0.90 for management, and 0.87 for engagement (Tschannen-Moran & Hoy, 2001). Finally, it was concluded that the 24-item long form, which is being used for this study, had a reliability score using Cronbach's alpha of 0.94. To check validity, correlations were examined between TSES and three scales: Rand ($r = 0.18$ and 0.53, $p < 0.01$), Gibson and Dembo's personal teaching efficacy factor (PES) ($r = 0.64$, $p < 0.01$), and the general teacher efficacy factor (GTE)($r = 0.16$, $p < 0.01$) (Tschannen-Moran &

Hoy, 2001). Because of the reliability and validity of these scales, they have been used in multiple studies to gather data on teacher self-efficacy (e.g., Page, Pendergraft, & Wilson, 2014; Smul, Heirweg, Van Keer, Devos, & Vandevelde, 2018; Cao, Shang, & Meng, 2020). With the permission of the developer (Appendix B), TSES was used for this study.

Instructional Coaching Skills Instrument

ICSI, used to measure coach self-efficacy, was created by Howley et al. (2014) and vetted through three pilot studies with the final product being an eight-item survey with Likert scale scoring from 1 (lowest) to 5 (highest). Data were collected from teachers, principals, and undergraduate education students, and each of the participants were connected with Ohio University. Each phase included the following coaching domains: feedback (only the first pilot test), relationship skills, guidance, modeled instructional practices, flexibility, reflective inquiry, organization of activities, conflict resolution, and presentation of difficult questions to others (Howley et al., 2014).

During the first pilot test, 102 teachers responded to the 10-item survey, and all participants rated themselves above three on each question, with two means being above four. The authors created a two-factor solution with factor 1 (Task-focused Leadership) and factor 2 (Relationship-focused Leadership) accounting for 51% and 13% of the variance, respectively (Howley et al., 2014). In factor 1, five of the items had high factor loadings greater than or equal to 0.60, and factor 2 had one item greater than or equal to 0.60 (Howley et al., 2014). Because one item was not relationship focused, it was removed, and a one-factor solution was created that accounted for 53% of the variance. All but one of the remaining nine items loaded greater than or equal to 0.60 (Howley et al., 2014). Finally, the researchers removed the one item loading below 0.60, and this one-factor design accounted for 57% of the variance. For reliability, alpha

was calculated with the ten-item and eight-item survey; both resulted in a high reliability of 0.89 leading researchers to drop the two items with medium loading factors (Howley et al., 2014).

The second pilot test included 242 completed surveys. Participants responded more favorably to items involving less confrontational practices with others. During this phase, the variance was 60% for the one-factor solution; each of the factors had loadings greater than or equal to 0.67 (Howley et al., 2014). Cronbach's alpha was calculated to be 0.90, and the overall Guttman split-half reliability was 0.87 (Howley et al., 2014). These values suggest the instrument is robust.

The third pilot test consisted of 160 undergraduate education majors. During this final phase, researchers found means to be above a three on each item, with the highest item correlating directly with coaching—providing directive feedback (Howley et al., 2014). The one-factor solution accounted for 55% of the variance, and the lowest item factor loading was 0.70 (Howley et al., 2014). Cronbach's alpha was calculated to be 0.89. With this scale being fairly new, very few, if any, studies have utilized it with most studies only citing the instrument as a reference. However, with the approval from the creator (Appendix C), this instrument was used to measure the independent variable in this study.

Procedures

During the summer of 2020, I sought approval through electronic mail from Dr. Tschannen-Moran to use TSES; approval was obtained on May 28, 2020 (Appendix B). Approval through electronic mail was also secured from Dr. Aimee Howley on August 26, 2020, to use ICSI (Appendix D). Before beginning this study and gathering data from human participants, Institutional Review Board (IRB) approval was sought and approved by Liberty University during the of Fall 2020 (Appendix A). In addition, school district administrators were

asked to administer the survey to all teachers in the district by email. The purpose and research plan/procedures were communicated to the instrument creators and school district administrators as a transparency and integrity agency. Once permissions were granted, implementation of the study began.

A survey using Survey Monkey, an online survey tool, was created. The survey began with a statement of consent acknowledging participation. Protection of confidential information was ensured and the option to abstain from participation provided. Potential participants checked the box and typed their name if they were willing to participate. The survey continued with demographic questions: grade-level (elementary, middle, or high school), years of experience, gender, nationality, and time teaching in the district. The participants were also asked if they worked full time at one school or had duties in two schools. Additionally, participants were asked to choose their school to match the instructional coach with the teacher. The remaining questions were derived from TSES long form (24-items). Once complete, I constructed an email explaining the purpose of the study and included the link to the online survey. Using convenience sampling, an email was forwarded to all core content teachers in the school district through its online email server (March 22, 2021), with a response date (April 16, 2021). Attempting to meet and exceed the desired response rate, follow-up emails were sent through the district's email server (April 5, 2021), to 2,163 teachers. The approximate completion time of this survey was 8-10 minutes.

Survey Monkey was also used to create ICSI. The survey began with a statement of consent acknowledging participation. Protection of confidential information was ensured and the option to abstain from participation provided. The survey continued with demographic questions: grade-level (elementary, middle, or high school), years of experience as an

instructional coach, gender, nationality, and time in education. Additionally, participants were asked if they worked full time at one school or had duties in two schools. The remaining questions were derived from ICSI (eight items). Once complete, an email explaining the purpose of the study and included the link to the online survey was created. Using convenience sampling, emails were forwarded to all 35 instructional coaches in the school district through the district's online email server (March 22, 2021), with a response date (April 16, 2021). Endeavoring to achieve or exceed the desired response rate, follow-up emails were sent through the district's email server (April 5, 2021). The approximate completion time of the survey was five minutes. It was important to note the responses on this survey were based on previous instructional coaching experiences, and the instructional coaching was not manipulated by the researcher.

After the April 16 deadline, all data were downloaded from the online survey tool into a Microsoft Excel worksheet. Demographic data were coded as follows: grade level (1-elementary school, 2-middle school, 3-high school), years of teaching experience, gender (1-male, 2-female), and nationality (1-White, 2-Black, 3-Hispanic, 4-Other). Schools were identified by the numbers 1-45 because two high schools did not have instructional coaches, and instructional coaches were labeled with the numbers of the schools they served to identify associations. All data were then uploaded into Statistical Package for the Social Sciences (SPSS) software and appropriate statistical analyses tests were conducted.

To compare the variance among instructional coaches, three groups were created: high perception of skills, moderate perception of skills, and low perception of skills. Because of the cumulative mastery experiences among instructional coaches and high levels of instructional expertise, it is possible that instructional coaches with a stronger perception of skills were able to

better equip and support teachers, positively affecting their self-efficacy (Bandura, 1993; Devine et al., 2013). These groups were created based on overall instructional coach responses to ICSI. The survey responses were ordered from instructional coaches, least to greatest, to create the three groups. Teacher responses from TSES were matched according to the instructional coach who served in the building, and these groups were used to determine if instructional coaches with higher self-efficacy equate with teachers with higher levels of self-efficacy.

Data Analysis

The one-way analysis of variance (ANOVA) was administered to test the hypothesis, i.e., determine if there is was a significant difference between teachers' self-efficacy in schools based on the (high, moderate, and low groups) of instructional coach's self-efficacy. Additionally, the ANOVA was used to examine the statistical difference among three, nominal groups of the independent variable (Gall et al., 2007). This analysis was chosen because it was appropriate for comparing the variance among the independent variable groups (high perception of skills, moderate perception of skills, and low perception of skills) based on the dependent variable (teachers' self-reported efficacy). To obtain the three groups for the independent variable, instructional coach scores were ordered from least to greatest and grouped into three categories (high, moderate, and low). The scores placed in the high group fell in the top third of the data, with scores in the middle third placed in the moderate group. Instructional coach scores in the bottom third of the data were placed in the low group.

Descriptive statistics were calculated, including the mean and standard deviation. Necessary assumption testing was conducted prior to running the analysis. Scores formed an interval scale of measurement; any values that did not meet this requirement were discarded (Warner, 2013) through data screening identifying missing data, incomplete surveys,

inconsistencies, and outliers. A frequency test was run to ensure all data was account for well as a box and whisker plot to detect extreme outliers. The Kolmogorov-Smirnov test was used due to the sample size exceeding 50 participants; a significance level of .05 was used to determine tenability of the assumption (Warner, 2013). The third assumption to be met was that population variances were equal (Gall et al., 2007). The assumption of homogeneity of variance was examined using the Levene's test of Equality of Error Variance (Warner, 2013). I established α as .05 (two-tailed) and a medium effect size with power of .7, which meant the desired sample size needed to be 126 participants, with 42 in each group. Additionally, η^2 was used to measure the effect size. If the null hypothesis was rejected, further testing would be needed, and the post hoc Tukey HSD statistical procedure was used to determine differences among groups.

CHAPTER FOUR: FINDINGS

Overview

This chapter presents the study's quantitative results and addresses the research question to determine if differences exist among groups of teachers' self-efficacy based on their instructional coach's perception of coaching skills. Descriptive statistics will be presented for both the independent and dependent variables followed by specific results acquired from the data analyses. These specific results include assumption testing results, the one-way analysis of variance (ANOVA) testing results, post hoc test results, and additional t-test results to support the overall study.

Research Question

RQ1: Is there a difference between *teachers' self-efficacy* in schools measured by the Teachers' Sense of Efficacy Scale among *high, moderate, and low scoring groups of instructional coaches' self-perceptions of skills* measured by the Instructional Coaching Skills Instrument?

Null Hypothesis

$H_0$1: There is no significant difference between teachers' self-efficacy scores as measured by The Teachers' Sense of Efficacy Scale among high, moderate, and low scoring groups of instructional coaches' self-perceptions of skills measured by the Instructional Coaching Skills Instrument.

Descriptive Statistics

Descriptive statistics were generated regarding the research question. For Research Question One, thirty instructional coach responses to demographic questions and The Instructional Coaching Skills Instrument (ICSI) were analyzed and organized to form three

groups for the independent variable; additionally, 100 teacher responses to demographic questions and The Teacher Sense of Efficacy Scale (TSES) were gathered for the dependent variable. It is important to note that the teachers had previous experiences being coached by the instructional coaches also part of this research. The sample of 30 instructional coaches included 15 elementary school coaches, 11 middle school coaches, and four high school coaches; among the 30 coaches, six coaches worked in two school buildings; 24 served a single building full time. Additionally, the coaches varied slightly in years of experience as instructional coach (M =3.033, SD =1.85). The sample of 100 kindergarten through twelfth grade content area teachers included 18 elementary teachers, 34 middle school teachers, and 48 high school teachers. See Tables 5 and 6 for descriptive statistics for years of teaching experience by grade level.

Table 5

Descriptive Statistics for Years of Teaching Experience by Grade Level for Coaches

Group	*M*	*SD*	*N*
Elementary School Coaches (EC)	16.04	5.2	15
Middle School Coaches (MSC)	16.03	5.26	11
High School Coaches (HSC)	17.06	4.09	4
Total	16.03	5.26	30

Table 6

Descriptive Statistics for Years of Teaching Experience by Grade Level for Teachers

Group	*M*	*SD*	*N*
Elementary School Teachers (EST)	14.5	9.8	18
Middle School Teachers (MST)	13.6	9.26	34
High School Teachers (HST)	14.1	9.42	48
Total	13.92	9.4	100

Due to the nature of the study, instructional coach scores on ICSI were averaged (*M* =4.46, *SD* =0.42), and the 30 scores were ordered numerically from least to greatest to create three groups for the independent variable. The ten highest scores created Group 1, the middle ten scores created Group 2, and the lowest ten scores created Group 3. Teacher scores on TSES were individually averaged and placed in the group to match the teacher's instructional coach who served in the respective school building. Tables 7 and 8 display descriptive statistics for these three groups.

Table 7

Descriptive Statistics for Years of Coaching Experience by Coaching Group

Group	*M*	*SD*	*N*
Coach Group 1(CG1)	2.6	1.84	10
Coach Group 2 (CG2)	3.5	1.84	10
Coach Group 3 (CG3)	3	1.94	10
Total	3.03	1.85	30

Table 8

Descriptive Statistics for TSES Scores by Group (Teachers)

Group	*M*	*SD*	*N*
Teachers Group 1 (Low)	7.10	1.02	37
Teachers Group 2 (Moderate)	6.94	.91	31
Teachers Group 3 (High)	7.02	.73	32
Total	7.03	.90	100

Results

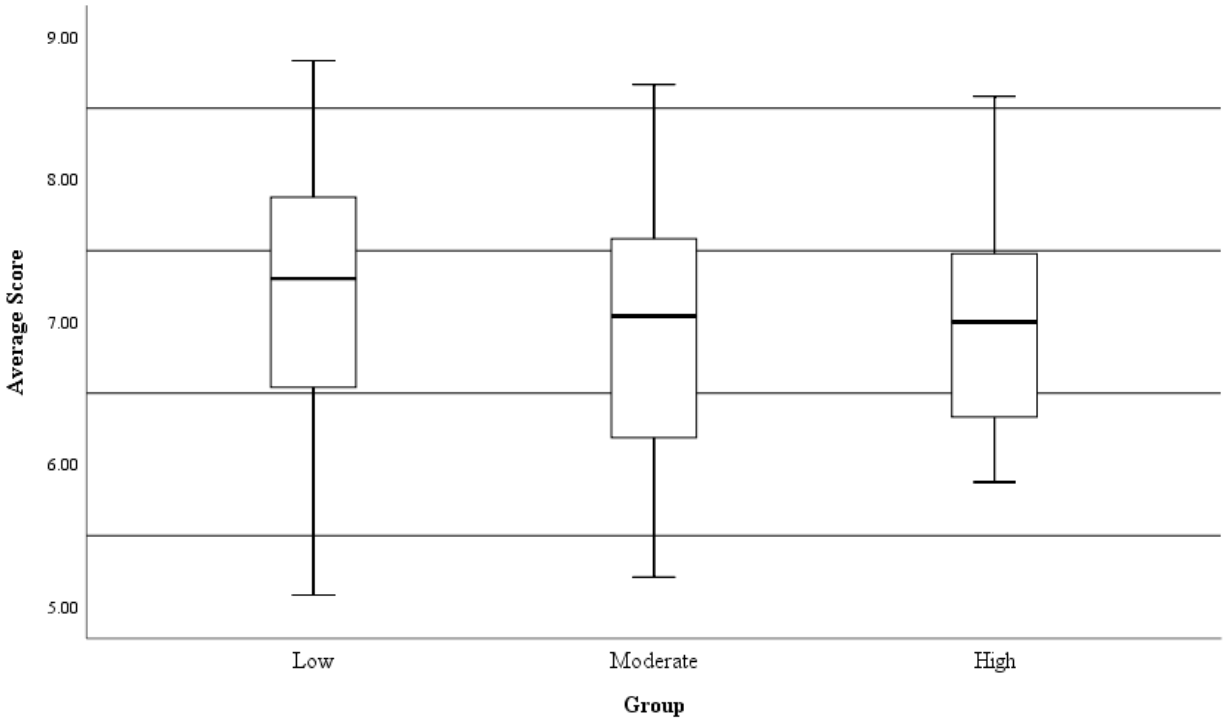
The following section presents assumption testing and results from the data screening for the research question. The null hypothesis is also discussed. be rejected.

Data Screening

The data sets for the independent and dependent variables were screened for inconsistencies and incomplete data. Two teacher responses for the dependent variable were eliminated due to incomplete answers on TSES, which did not allow for an overall average score for that participant, reducing the total from 102 to 100. The data set for average teacher scores on TSES was screened for outliers using a box and whisker plot, and no extreme outliers were found (Warner, 2013). The results are shown in Figure 2.

Figure 2

Box Plot for Average Teacher Scores on TSES



Assumption Testing

The ANOVA was used to test the null hypothesis which addressed if differences exist between teachers' self-efficacy scores among high, moderate, and low scoring groups of instructional coaches' self-perceptions of skills. The ANOVA required that the assumption of normality be met, which was tested using the Kolmogorov-Smirnov test due to the sample size exceeding 50 (N=100) (Gall, Gall, & Borg, 2007). The assumption was tenable (Table 9).

Table 9

Kolmogorov-Smirnov Test of Normality for Teacher TSES Scores

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Group	Statistic	df	Sig.	Statistic	df	Sig.
Average Score	Low	.130	37	.141	.942	37	.052
	Moderate	.090	31	.200*	.975	31	.663
	High	.095	32	.200*	.963	32	.340

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The homogeneity of variances was also examined using Levene's test of Equality of Error Variance. The assumption was tenable, $F(2, 97) = .105$ (Table 10)

Table 10

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
Average Score	Based on Mean	2.306	2	97	.105
	Based on Median	1.943	2	97	.149
	Based on Median and with adjusted df	1.943	2	87.701	.149
	Based on trimmed mean	2.263	2	97	.109

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Average Score

b. Design: Intercept + Group

Because each assumption was tenable, the ANOVA was used to test the null hypothesis: There is no significant difference among teachers' self-efficacy scores as measured by The Teachers' Sense of Efficacy Scale among high, moderate, and low scoring groups of instructional coaches' self-perceptions of skills measured by the Instructional Coaching Skills

Instrument. There was no statistically significant difference in teachers' self-efficacy between the three groups where F(df, error) = .267, $p > .05$. Partial eta squared equaled ($\eta^2_{part} = .005$). Therefore, the null hypothesis was not rejected (Table 11). There was no statistically significant difference in teacher's self-efficacy scores as measured by TSES among high (M = 7.02, SD = .73), medium (M = 6.94, SD = .91), and low (M = 7.10, SD = 1.02).

Table 11

Tests of Between-Subjects Effects

Dependent Variable: Average Score

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.435[a]	2	.217	.267	.766	.005
Intercept	4900.930	1	4900.930	6026.995	.000	.984
Group	.435	2	.217	.267	.766	.005
Error	78.877	97	.813			
Total	5016.054	100				
Corrected Total	79.312	99				

a. R Squared = .005 (Adjusted R Squared = -.015)

CHAPTER FIVE: CONCLUSIONS

Overview

The purpose of this causal-comparative study was to determine if instructional coach self-efficacy significantly impacted teacher self-efficacy in a suburban district in a southern state. Three groups were created based on instructional coach average scores. Teacher scores were matched to the group where their coach was placed. This chapter includes discussion, implications, limitations, and recommendations for future research.

Discussion

The objective of this study was to determine if teachers with higher self-efficacy scores according to TSES served in buildings with instructional coaches who also had high self-perceptions of skills based on The Instructional Coaching Skills Instrument (ICSI) The following research question guided the study.

RQ1: Is there a difference between teachers' self-efficacy in schools measured by The Teachers' Sense of Efficacy Scale among high, moderate, and low scoring groups of instructional coaches' self-perceptions of skills measured by the Instructional Coaching Skills Instrument?

Thirty responses from instructional coaches who served in either an elementary, middle, or high school setting were used to create the three groups for the independent variable. Teacher scores on TSES were averaged for the 24-item questionnaire created by Tschannen-Moran and Hoy (2001) and matched with the instructional coach who served in their building; 102 responses from teachers were collected with only 100 being useable due to incomplete data. Although the response rate did not meet the requirement to achieve the medium effect size, all options were exhausted to obtain dat. Principals were emailed twice to contact content area teachers in the

district. Personal emails were also sent to teachers known to teach in content areas across all three grades.

Once the independent variable was grouped into thirds and teacher scores were matched to the correct group to create the dependent variable, the one-way analysis of variance (ANOVA) was used to determine if differences existed among the three groups. Although the average scores for all three groups on The Teachers' Sense of Efficacy Scale (TSES) hovered close to an above average score of 7, there was not a statistically significant difference among them (p = .766). The null hypothesis was not rejected.

Although the results were not statistically significant, they do align with the theoretical framework of Bandura's social cognitive theory and self-efficacy research (Bandura, 1977; Bandura, 1993). Because the average self-reported score on TSES for all 100 teachers was higher on the scale at approximately 7, it could be argued that many of the teachers had a strong sense of self-efficacy and felt confident in their abilities in the classroom. It is plausible that this was due to mastery experiences, vicarious experiences, verbal persuasion, and affective states provided or initiated by strong, instructional leadership, including instructional coaches in their buildings, which supports the research of Yada et al. (2019), Wilson et al. (2020), Perera and John (2020), and Granziera and Perera (2019). In addition, Wilson et al. (2020) and Granziera and Perera (2019) affirmed the impact of mastery experiences on teacher self-efficacy in the constructs of instructional strategies, classroom management, and student engagement, and coaches often provide these mastery experiences through coaching rounds and feedback cycles. For the English/language arts teachers in the district, the implementation of a tool during the 2020-21 school year provided feedback on a new curriculum initiative. The feedback provided opportunities for coaching conversations and lesson modeling, which could enhance mastery and

vicarious experiences.

Regarding the connection between teacher self-efficacy and coaching, many teachers grow professionally due to job-embedded professional learning provided by instructional coaches with strong pedagogical knowledge, content expertise, and interpersonal skills (Kowal & Steiner, 2007). Skilled coaches can also help teachers transfer such knowledge into applicable instructional practices, especially at higher grades where content expertise is needed (Showers & Joyce, 1996; Kowal & Steiner, 2007). Because most of the coaches (all but two) had content specific backgrounds in English/language arts, mathematics, science, social studies/history, or a combination of these, the result of a higher score for the 100 responses may also be explained. The coach is likely able to provide content-specific feedback that directly impacts teacher pedagogical knowledge and instructional strategies. Additionally, when coaches provide content-specific support to teachers, it often builds rapport and trust with the teacher that can lead to collaboration and better outcomes (Walkowiak, 2016).

Although much research supports the need for job-embedded professional learning, Gallucci et al. (2010) posited that some educators have difficulty implementing high standards with new initiatives and need instructional support to meet the desired expectations. Wookfolk Hoy and Burke-Spero (2005) posited that teacher self-efficacy tends to increase initially, but trends downward once they encounter difficult situations. Many researchers have explored the connection between instructional coaches and teacher self-efficacy, but few have examined the connection during a pandemic, with districts on abnormal schedules. For this study, the district operated normally with students in class five days a week. Secondary students spent most of the school year on a hybrid schedule of in-person learning (two days a week) and virtual learning (three days a week). Because of Covid-19 and inconsistent schedules, teacher self-efficacy

scores might be impacted due to high levels of stress (Zee & Komen, 2016); however, for this study, scores on TSES remained high. This data could stimulate outside districts to investigate what protocols and initiatives were implemented and how coaches and instructional leaders supported teachers during the pandemic year.

The literature review also explained multiple coaching models used in school settings, including cognitive coaching, content-focused coaching, student-focused coaching, and instructional coaching. Each of the coaches in this study had or were in the process of obtaining instructional coaching certificates from a local university requiring twelve hours focused on coaching teachers. For the courses, cognitive coaching was the primary model. Although the district's coaches were trained in the cognitive coaching model, many were also instructional coaches who focused on content areas. Gibbons and Cobb (2016) posited that content-focused coaches help teachers implement high-quality instructional practices, co-teaching, and modeling, which can impact a teacher's overall sense of efficacy through mastery and vicarious experiences. Teachers with coaching opportunities in my study experienced multiple coaching models. Because the models in the district focused heavily on instructional techniques and strategies, it could be assumed the results were not significant because TSES is designed to measure aspects of classroom management, student engagement, and instructional practices.

The instructional coaches in this district spanned all three grade bands (elementary, middle, and high school), and the average self-efficacy score was consistent. The data aligns with the research of Kraft et al. (2018) that coaching is equally impactful across all grade levels. Kraft et al. (2018) also found that content-specific coaching programs have the most impact and are the most helpful for teachers. Gibbons and Cobb (2016) stated that content-specific coaches are effective at supporting teachers implement high-quality instructional practices. The

participants in this study were content area teachers (English/language arts, mathematics, science, and social studies/history), which could explain the generally higher scores.

Finally, Kane and Rosequist (2018) argued that districts should assign instructional coaches to a single school to allow them to work directly with teachers and administrators and maximize impact. For my study, most of the elementary schools, the middle schools, and one of the high schools had a dedicated instructional coach. Although these coaches support, plan, and work with district-level leaders, most of their time is spent with teachers and school-level initiatives which could explain the above average teacher self-efficacy scores on TSES. Many schools do not have dedicated instructional coaches; the data could help educational leaders understand the benefits of instructional coaching.

Implications

Data generated from this study were not statistically significant; however, it supports the findings within the body of research. Researchers have argued that instructional coaches are spread too thin and are expected to fulfill many administrative tasks. Kane and Rosenquist (2018, 2019) suggested that a lack of full-time coaches in a building could impact teacher self-efficacy because when coaches are required to spend time on administrative tasks, their time conducting observation rounds, performing coaching cycles, and providing direct feedback is limited. This aligns with the conclusion of Deussen et al. (2007). Of the 30 instructional coaches who participated, twenty-six were full-time in one building, meaning they only served one school and faculty. It has not been elsewhere, but the results suggest that teachers with a full-time coach have higher self-efficacy. Most scores on the TSES for teachers were above average although this cannot be assumed merely from this study's results.

Most studies in the current body of research focus on the impact of instructional coaches on specific content areas (e.g., literacy or mathematics). This study included content area teachers with backgrounds in English/language arts, mathematics, science, social studies/history, or a combination therein. Although no significant results for individual content areas were found, most teacher scores on TSES were above average. This suggests that instructional coaches impact all major content areas across grade levels, which could also be due to content-focused coaching within the district.

Limitations

This study has multiple limitations that can and should be considered. This study consisted of a small sample size due to the convenience sampling utilized to gather data; although the researcher contacted principals twice and emailed multiple teachers personally, the response rate only reached 100 participants, which did not meet the expectations for a medium effect size and could affect the internal validity of the study. The researcher assumed the desired response rate was not met because some principals, particularly elementary administrators, did not forward the email to all faculty due to the large number of other research studies happening throughout the district. Also, the timing of the study could have limited the response rate because of teacher preparation for upcoming state testing and lack of time to complete unnecessary tasks. To address this limitation, the researcher could have conducted the study after state testing was complete or personally emailed all teachers, instead of relying on principals to complete this expectation; however, this would have required additional permissions from the district. Additionally, teachers in grades kindergarten through twelfth grade responded to the survey; however, there was not a set number of teachers that were matched to each instructional coach. This means that some instructional coaches may have had multiple teachers respond to be

included in the study, where some may have had only one or two. This inconsistency could have skewed the data and affected the overall outcome of the study.

Due to the researcher using a causal-comparative study, other limitations exist. The researcher used a convenience sample instead of a true, random sample, and this limits the ability to generalize findings to other groups. The use of a causal-comparative study also limits the researcher's ability to imply causation between variables because many outside variables that could impact a coach's self-perception of skills and a teacher's perception of self-efficacy were not accounted for in the study.

In addition to the above limitations, the setting of the study could have also played a role in the study's results. The district has only employed instructional coaches over the past six years, and until the 2019-2020 school year, every school did not have a coach. Many schools have also struggled with appropriate implementation of the coaching program, with many utilizing the instructional coaches to accomplish administrative tasks. This could be seen as a limitation because the instructional coaches may have false perceptions of their coaching skills, and this could have skewed the score on the Instructional Coaching Skills Instrument. Finally, the use of the Instructional Coaching Skills Instrument created by Howley et al. (2014) could possibly been seen as a limitation due to the small number of studies the instrument has been utilized in collecting data. With these limitations, it is not possible to generalize any findings to other groups or demographic regions.

Recommendations for Future Research

After reviewing the results from this study, the following recommendations are being made for future research regarding instructional coaches and teacher self-efficacy. Because the sample size was small, it would be advantageous to expand the sample to include multiple

districts that utilize instructional coaches in school buildings kindergarten through twelfth grade, and this would allow the results to be generalized for other populations. This expansion would also need to include multiple teachers connected to each instructional coach to ensure that data was not skewed because this was a major limitation of this study. Additionally, future research might include the opportunity for teachers to share the amount of quality time spent with the instructional coach; this would strengthen the connection of the coaching relationship which could increase the overall validity of the study.

Another beneficial recommendation would be to compare the self-efficacy of teachers who receive job-embedded professional learning from an instructional coach and those who do not receive this support. Although this has been studied in certain contexts, this comparison would be extremely helpful in the secondary setting, particularly in high schools. This information would give districts data that could be useful in advocating for additional personnel in the form of instructional coaches.

Although the one-way ANOVA was desirable for the researcher in this study, it might not have been the most applicable design for this type of data. For the study's design, future research might analyze a correlational design using Pearson's *r* to examine if a relationship exists between an instructional coach's scores and a teacher's self-efficacy score. To extend this recommendation, it would be helpful to identify the instructional coaches' content areas of expertise (English/language arts, mathematics, science, social studies/history) and examine the strength of the relationship between their self-perceived coaching skills and teachers' self-efficacy in the same content area. This quantitative data could accompany qualitative data in the form of focus groups or case studies to create a mixed-methods study or a stand-alone qualitative study. A qualitative study would be extremely beneficial, especially at the secondary level,

because there is limited research on the impact of instructional coaches at the middle and high school grade bands. This data could strengthen the body of knowledge by gaining insight into how instructional coaches benefit teachers who are often considered content experts in their respective fields and how teachers view the effectiveness of instructional coaches. Finally, the district utilized in this study has only employed instructional coaches for the last seven years. Future research could compare this or similar districts to others exhibiting more longevity in the utilization of instructional coaches, which could likely show some interesting results. The researcher might also recommend future research on comparing the district in this study that require coaches to obtain an instructional coaching certificate to those that do not to determine if there is a significant difference between teachers' self-efficacy.

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APPENDIX A

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

March 1, 2021

Whitney Goostree
Kevin Struble

Re: IRB Exemption - IRB-FY20-21-362 Instructional Coaches' Perceptions of Skills and Teacher Self-Efficacy across Content Areas in a K-12 Setting

Dear Whitney Goostree, Kevin Struble:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:
101(b):

Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

Your stamped consent form can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

APPENDIX B

William & Mary
School of Education

MEGAN TSCHANNEN-MORAN, PHD
PROFESSOR OF EDUCATIONAL LEADERSHIP

May 28, 2020

Whitney,

You have my permission to use the Teacher Sense of Efficacy Scale (formerly called the Ohio State Teacher Sense of Efficacy Scale), which I developed with Anita Woolfolk Hoy, in your research.

You can find a copy of the measure and scoring directions on my web site at http://wmpeople.wm.edu/site/page/mxtsch .

Please use the following as the proper citation:

> Tschannen-Moran, M & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.

I will also attach directions you can follow to access my password protected web site, where you can find the supporting references for this measure as well as other articles I have written on this and related topics.

All the best,

Megan Tschannen-Moran
William & Mary School of Education

APPENDIX C

On Wed, Aug 26, 2020 at 9:36 AM Goostree, Whitney Brooke [redacted] wrote:

> Good morning!
>
> My name is Whitney Goostree, and I am a doctoral student at Liberty University studying curriculum and instruction. My study is called *Instructional Coaches' Allocation of Time and Teacher Self-Efficacy in Secondary Schools.* Currently, I have decided to use the TSES for self-efficacy but have struggled to identify an instrument to improve my independent variable of instructional coaches' time use in schools.
>
> Through researching, I came upon your article and believe the instrument will allow me to collect the data needed to identify instructional coaches' skills and their personal beliefs of effectiveness. Would you please consider allowing me to use the instrument in this study?
>
> I truly appreciate your time and consideration.
>
> Sincerely,
>
> Whitney Goostree

Aimee Howley [redacted]
Wed 8/26/2020 8:40 AM
To: Goostree, Whitney Brooke [redacted]

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Whitney,

Sure. Feel free to use the instrument (with proper attribution, of course).

Best of luck with your research.

Aimee