INSTRUCTIONAL COACHING AS A PREDICTOR OF COLLECTIVE EFFICACY

by

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A DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Education in the
Department of Educational Leadership, Policy, and
Technology Studies in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2018

ABSTRACT

This study examined the relationship between the effectiveness of a school's instructional coaching program and collective teacher efficacy. Instructional coaching is the concept of providing ongoing, on-site support for teachers on how to use best practice teaching methods and how to assess the effect these methods have on instruction (Knight, 2005; Showers, 1996). Collective efficacy is the belief or expectation of a group (Bandura, 1997; Ross, Gray, & Gray 2003; Goddard, Hoy, & Hoy 2000). Tschannen-Moran and Barr (2004) add that collective efficacy is the shared perception that teachers in a given school have in making an educational difference in their students over and above the educational influence of their homes and communities.

This quantitative study involved a sample of 80 pre-kindergarten through sixth grade teachers within 59 Alabama public elementary schools. The measurement tools used in this study were the Instructional Coaching Evaluation Survey (Florida PS/RtI Project, 2013) and the Collective Efficacy Scale (Goddard & Hoy, 2003).

The independent variable for this study was the perceived effectiveness of the instructional coaching program at a given school, while the dependent variable for this study was the school's level of collective efficacy. A correlational analysis and a regression analysis were both conducted to determine the relationships among the variables. Findings from this study suggest a positive relationship between the perceived effectiveness of a school's instructional coaching program and its collective efficacy. This study adds to the existing research regarding the influence of teacher learning, professional development, and efficacy.

DEDICATION

This dissertation is dedicated to my family. Michael, you have made countless sacrifices in order to help further my education. You never complained during my graduate school season of life but rather provided endless support and encouragement to motivate me to finish. You are my superhero and best friend. Eli, you have been a joy through this entire process. You are and always will be the greatest earthly blessing God has given me.

This dedication section would not be complete without mentioning the loudest voices in my cheering section of life: my parents. Thank you Mom, Dad, and Glenda. Because of you, I have never taken for granted the importance of education. I appreciate that you believed in me when I did not believe in myself. This journey was made easier because I had the love and encouragement of a big brother. John, thank you for always being there for me when I needed it most and for always being a voice of discernment. Most of all, I am eternally grateful to my Lord and Savior Jesus Christ who guided me through each second of this process.

LIST OF ABBREVIATIONS AND SYMBOLS

a	Cronbach's index of internal consistency
ANOVA	Analysis of Variance
ARI	Alabama Reading Initiative
CE	Collective efficacy
CE-Scale	Collective Efficacy Scale
FRL	Free and reduced lunch
ICES	Instructional Coaching Evaluation Survey
IRB	Institutional Review Board
NAEP	National Assessment of Educational Progress
N	Number of participants
p	Probability of a value
PQ	Principal Questionnaire
r	Pearson correlation coefficient
SD	Standard deviation
SES	Socioeconomic status
SPSS	Statistical Package for the Social Science
TQ	Teaching Questionnaire

ACKNOWLEDGMENTS

I would like to extend my appreciation to Dr. John Tarter, my dissertation chair. Thank you for your patience and guidance over the past two years. You maintained high expectations for me throughout this process and helped guide me through learning how to interpret empirical literature.

I would also like to thank my committee members, Dr. Roxanne Mitchell (Co-Chair), Dr. Julianne Coleman, Dr. Billy Jenkins, and Dr. Jing Ping Sun. Thank you for your advice, support, and guidance during my research. Special thanks to Vanessa Williams at the College of Education at The University of Alabama for helping organize my proposal and defense. I am blessed to have been a part of the Rigatoni Cohort. You have each been influential to me along this journey. I am especially grateful for the friendship of Leslie Thorn and Brandon Turner. Your encouraging words pushed me through the difficult days.

Without many mentors over the years who have inspired me and invested in my life, I would definitely not have achieved this dream. Some of these heroes of mine include my parents, my husband Michael, Mrs. Nell Brooks, Dr. Carlos Nelson, and Mr. Kevin Davis.

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CHAPTER 1:

INTRODUCTION

School administrators have an influential role regarding the success of student learning. However, the role of principals is arguably one of the most challenging jobs in education due to the time and energy required of them. This demanding role often prevents principals from focusing solely on improving student learning. Therefore, many administrators rely on the help of a school instructional coach to assist teachers with professional development.

Recently, Hattie (2016) discovered that collective efficacy was the greatest contributing factor for student achievement. Thus, one would consider that if a school leader could increase the efficacy level of the faculty, student learning would be positively affected. This chapter details the background for this study, statement of the research problem, need and purpose for the study, research method, statement of research questions, hypothesis, assumptions, limitations of the study, and definition of terms. The chapter also explores whether or not instructional coaches affect the efficaciousness of a school faculty.

Background of the Study

Educational leaders provide opportunities for teachers to receive quality professional development in order for their staff to continuously grow in their profession and to improve student achievement. Ball and Cohen (1999) researched the push toward educational reform to attain higher test scores, improve curriculum and instruction, and better the decision-making process in school leadership. While professional development is implemented in schools across

the country, the effectiveness of teacher coaching in producing better instructional practices or increasing student achievement is often not supported with sufficient evidence (Guskey, 2014).

Research has documented that professional learning has a direct correlation to increased teacher self-efficacy (Goddard, Hoy, & Woolfolk-Hoy, 2000; Mawhinney, Hass, & Wood, 2006; Pajares, 1996; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). One of the first researchers to explore this concept was Bandura (1993, 1997) who broadened efficacious beliefs to that of the organizational whole using schools as the unit of analysis rather than individual teachers.

The personal efficacy that teachers internalize is the extent to which they believe they can influence student learning. Bandura (1995) concluded that a teacher will reflect the greatest level of self-efficacy once they experience mastery in a task. Many public schools have added an instructional coach to their staff to assist teachers in implementing the strategies they learned during a professional development session. Many of these instructional coaches are able to build teacher self-efficacy by modeling the strategy in a classroom for the teacher to observe. When teachers observe modeled behavior along with a successful experience of their own, their efficacy is strengthened (Bandura, 1995). When teachers have a heightened level of self-efficacy, they have intrinsic motivation because they believe they can help students be successful (Tschannen-Moran & Hoy, 2001). Furthermore, when a group of teachers within a school believe their colleagues can greatly increase student achievement, the school is said to have a strong level of collective efficacy.

Once educators complete professional development, their knowledge has improved and classroom practice has been influenced for the better (Guskey, 2014). The writings of Ball and Cohen (1999) suggest that cultivating knowledge, skills, and values is the primary purpose of teacher learning because it influences student achievement. In order for educational training to

best affect student performance, three steps must be achieved. First, professional development must demonstrate an increase in teacher knowledge. Second, the learned skill must improve classroom teaching. Third, classroom teaching should increase student mastery (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007).

Need and Purpose

Due to the potential for instructional coaches to affect teaching practices across the district, there is a need for additional studies that examine possible connections between instructional coaches and collective efficacy within the school. The literature suggests that professional learning has a positive influence on teacher efficacy (Goddard et al., 2000). Hattie (2017) found that collective efficacy was the greatest influence on improving student learning. How, then, does instructional coaching influence the collective efficacy level of the faculty?

The purpose of this study is to move beyond simple reason to empirically test the idea that instructional coaches help foster a learning environment where teachers believe the faculty as a whole is positively influencing student learning. This study measured the relationship between the effectiveness instructional coaches are perceived to have by teachers and collective efficacy within a school. This study targeted elementary school teachers in Grades pre-Kindergarten through 6 in public elementary schools in the state of Alabama. The research consisted of a survey where teachers reported their perception of the effectiveness of the instructional coaching program within their school. In addition, teachers were also surveyed regarding the degree of collective efficacy that exists in their organization. The study measured the relationship between the effectiveness of the school's instructional coaching program and the collective efficacy among the faculty.

This research study is significant because teachers and school leaders are constantly being held to higher standards with high-stakes tests. According to the 2015 National Assessment of Educational Progress (NAEP) report, Alabama ranked 40th in the nation in fourth grade reading scores. In order to show improvement in student achievement, it is important to determine if there is a positive relationship between instructional coaching and school collective efficacy. The intention of this study was to utilize this information to assist school leaders in determining the effect that instructional coaches have on the collective efficacy within the school.

Guskey (2014) suggests that an educator's knowledge often increases yet does not affect student learning to the degree it was intended. In planning for successful teacher training to improve student learning, school leaders must question the influence the training will have on school effectiveness. It is not enough for a school to be made up of teachers with strong self-efficacy levels but also to have a strong sense of collective efficacy among their coworkers in order for the school as a whole to be successful. School leaders spend a great deal of time and energy on teacher evaluations that measure teachers' skill levels and growth throughout their career. However, teacher training must also target school-wide progress toward a specific goal that will allow teachers to progress together as a united group rather than as separate individuals. There is a wealth of research on the effectiveness of individual teacher efficacy; however, there is still much to be learned about the effects of school-wide collective efficacy on overall school effectiveness (Bandura, 1997). While instructional coaches have been placed in elementary schools for several years, the research about their validity in helping amplify training initiatives and ultimately influencing the efficaciousness of the school is scarce. Knowledge about the

effect instructional partners have on school efficacy would be beneficial to both school administrators and district leaders.

The literature suggests that previous research has determined a positive connection between teacher learning and efficacy levels among teachers. Given that perspective, the role of an instructional coach is to improve teacher learning due to the influence that professional development has on student achievement. For this reason, this study should determine if the effectiveness of an instructional coaching program can predict the school collective efficacy level. This study is significant because it has the potential of contributing additional evidence as to how instructional coaches influence student learning.

Research Method

This study identified, examined, and measured the teachers' perceptions of the effectiveness that their instructional coaching program has and compared it with how collectively efficacious they believe the school faculty to be. A quantitative approach was utilized for this research, and a correlation analysis was conducted. The Instructional Coaching Evaluation Survey (Florida PS/RtI Project, 2013) and the Collective Efficacy Scale (Goddard & Hoy, 2003) were used to survey responses from teachers in 59 elementary schools in Alabama. Their responses to the questions regarding instructional coaches and collective efficacy were compared to determine if a correlation exists.

Research Question

The research question that guided this study is as follows:

Is there a relationship between the perceived effectiveness of a school's instructional coaching program and its collective efficacy?

Hypothesis

Hypothesis: As the perceived effectiveness of the instructional coaching program increases, collective efficacy also increases.

Definition of Terms

Teacher Efficacy--A teacher's belief in his or her own ability to bring about a positive change in student performance (Bandura, 1997). The degree to which a teacher feels capable of assisting students in their learning (Ware & Kitsantas, 2007).

Collective Efficacy--the belief or expectation of a group (Goddard et al., 2000). Collective efficacy also can be considered the shared perception that teachers in a given school have in making an educational difference in their students over and above the educational influence of their homes and communities (Tschannen-Moran & Barr, 2004).

Professional Development--Training teachers receive during the course of their job which allows an opportunity for them to improve their instructional practices in order to improve student learning (Darling-Hammond & McLaughlin, 1995).

Instructional Coach/Partner--A specialized educator who can provide teachers with resources, strategies, and knowledge of research (Knight, 2005).

Instructional Coaching--Ongoing, on-site support for teachers to help them utilize teaching methods and assess the influence these methods have on instruction (Knight, 2005; Showers, 1996).

Praxis--The act of applying new knowledge and skills (Knight, 2011).

Social Capital--Collaborative interaction between teachers (Kagle & Galosy, 2017).

Scope and Limitations

1. The population included in this study was limited to 59 public elementary schools in Alabama.

2. The schools included in this study were elementary schools (Grade 6 or under).

3. Participants in this study were selected based on school districts that were conveniently located to the researcher.

4. One possible limitation was the socioeconomic status (SES) of students. For this study, free and reduced lunch (FRL), a proxy variable of SES, was listed as a control variable.

Summary

This chapter provides a brief synopsis of the direction for this study. The chapter introduces the background of the study, purpose for the study, and definition of key terms that will be utilized in later chapters. The chapter also provides a description of the research method, research problem, and questions needing to be addressed along with the correlating hypothesis of the study. Additionally, this chapter includes limitations and assumptions for the study.

CHAPTER 2:

REVIEW OF RELATED LITERATURE

Introduction

This chapter reviews the literature on which the dissertation is based: the role of instructional coaches in the state of Alabama, the various aspects instructional partners have in successfully implementing teacher training concepts, and the attributes surrounding collective efficacy within a school. A theoretical framework will be established to examine how instructional coaching and collective efficacy relate to each other. A hypothesis will be discussed, which tests this theoretical framework.

Conceptual Framework

Distinguishing Between Self-efficacy and Collective Efficacy

In order to proceed with a discussion about efficacy, it is important to distinguish between the terms *self-efficacy* and *collective efficacy*. *Self-efficacy*, according to Bandura (1977), is defined as one's perceived ability to execute a task. Bandura's construct, which was developed over 40 years ago, had an influence on the concept of teacher efficacy. Gibson and Dembo (1984) define teacher efficacy as the extent to which a teacher believes he or she can influence student learning. The influence of teacher efficacy on student learning has been demonstrated through the research of Ashton and Webb (1986). Their findings suggest that teachers with low levels of self-efficacy would often be related to students' inabilities to learn and lack of motivation (Ashton & Webb, 1986). However, teachers with high levels of self-efficacy were considered to be persistent in helping students overcome academic struggles and

were able to deliver clear lessons with productive outcomes (Guskey, 1984; Stein & Wang, 1988; Vartuli, 2005).

Collective efficacy relates to a group rather than an individual (Goddard et al., 2004). In terms of a school, *collective efficacy* is defined as the beliefs the teachers have "concerning the performance capacity of a social system as a whole" (Bandura, 1997, p. 469). Therefore, when a school has a high collective efficacy level, the school's leaders have strong beliefs regarding how they perceive the faculty can influence student learning. Goddard and Goddard (2001) suggest that both self-efficacy and collective efficacy have a positive influence on student achievement.

Hattie's (2017) research, conducted to discover the variables that influence student achievement, compiles the results of more than 1,400 meta-analyses which include more than 300 million students. Hattie depicts his research results in terms of effect size (calculated using Cohen's *d*) to demonstrate the influence each variable has on student achievement (see Table 1). The table below is a reference to the meaning of *d* which will be used in other cited research.

Table 1

Effect Size Table

		ANOVA		Multiple	
	Means	Designs	Correlation	Regression	Chi Square
		Eta Square			
Magnitude	*d*	(n^2)	r	R^2	W or Φ (phi)
Small	< .20	.01	.10	.02	.1
Medium	.20-.80	.06	.30	.13	.3
Large	> .80	.14	.50	.26	.5

Note. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd edition). Mahwah, NJ: Lawrence Erlbaum.

One factor Hattie (2016) attributed to improving student learning was collective efficacy. In fact, Hattie discovered collective efficacy was the greatest contributing factor to student achievement with an effect size of $d = 1.57$ (Hattie, 2016). Hattie (2009) suggests that when

teachers participate in professional learning, the training is likely to influence teacher learning (d = 0.90), but less likely to affect student learning (d = 0.37). In a similar study, effects were lower for student learning (d = 0.47) and higher when measuring the relationship between professional learning and teacher knowledge (d = 1.11) (Harrison, 1980). This research finding is important because public schools are held accountable for student achievement, and state test scores are analyzed annually and compared against other states to determine which schools are showing progress and which ones are falling behind. Not only are the schools being held accountable for student achievement, but each teacher is also held accountable for the student success in his or her own classroom.

Another contributing factor to improving student learning is teacher training (Hattie, 2012). Ongoing professional development or on-the-job training is commonplace in most careers. The challenging task for teachers at the conclusion of professional development training is implementing the new initiative. Previous research has demonstrated a need for professional training to be followed up with ongoing support throughout the implementation process. Hattie's research (2012) demonstrated a d = 0.51 effect size when teachers were given professional development regarding increasing student achievement. Alabama has hired instructional coaches to support this professional learning process with teachers for the purpose of increasing student learning.

In 1998, the state of Alabama implemented the Alabama Reading Initiative (ARI) because more than 100,000 students were scoring below standard on the Stanford Achievement Test. The ARI was the first initiative that utilized instructional coaches to support teachers (Alabama School Connection, 2016). The purpose of the ARI initiative was to improve literacy

skills in Alabama students. Through the initiative, teachers were provided with professional development training regarding research-based teaching strategies.

Once a new teaching trend emerges, a wealth of resources are invested from state and local school districts to ensure teachers are trained in that area. Instead of providing sustained learning across curriculum, often teachers are given only a quick glimpse at the latest educational fad (Ball & Cohen, 1999). While Alabama teachers have plenty of opportunities to attend professional development workshops throughout each school year, the challenge remains getting the teachers to implement changes in the classroom to support learning. Bush (1984) discovered that traditional training only led to a 10% implementation in the classroom. Without the proper support, a new teaching strategy or concept is likely to be pushed aside because teachers are overwhelmed with many other duties. Due to school administrators not having the time to provide needed support, Alabama's school officials saw the need to hire instructional coaches to serve as a resource for teachers rather than for students.

Collective Efficacy

In order to discover which factors have the greatest influence on student achievement, researcher John Hattie explored more than 800 meta-analyses. His recent studies found collective efficacy to be the variable that affected student achievement the most, with an effect size of $d = 1.57$ (Hattie, 2016). Thus, collective efficacy is the number one variable contributing to student achievement (see Table 2). Hattie's research demonstrates that collective efficacy is twice as influential as teacher feedback and three times greater than the effect that the home environment has on student achievement (Hattie, 2012).

Table 2

Effect Size of Student Achievement Factors

Effect Size	Factors
1.57	Collective teacher efficacy
0.75	Feedback
0.72	Relationship between the teacher and the student
0.52	Socioeconomic status
0.52	Home environment
0.49	Parental Involvement
0.48	Motivation
0.43	School size
0.39	Leadership at the school level
0.29	Homework

Note. Hattie, J. (2012), Hattie, J. (2016), and Donohoo, J. (2017).

The Background of Collective Efficacy

In order to understand the concept of collective efficacy, one must first consider the history of efficacy (Sims, 2011). *Teacher efficacy* is defined as the extent to which teachers believe they are capable of helping students learn (Tschannen-Moran & Hoy, 2001). Teachers who believe they are helping students learn tend to positively affect student achievement (Henson, 2001). A related term to teacher efficacy is *collective efficacy*, which is defined as a teacher's belief in the capabilities of the whole faculty (Bandura, 1997). Collective efficacy is rooted in Bandura's social cognitive theory. His idea of socialization meant that patterns surface along the way as persons communicate in society. Thus, teachers are bound together in various social relationships as they interact with other teachers in their school (Hoy & Miskel, 2005). One factor that affects socialization behaviors that are observed are then repeated among the group. When a student believes he or she is achieving academically, he or she may choose to continue the behaviors that have led he or she to be successful. Similarly, when teachers

experience success, they may choose to continue exhibiting the behaviors that brought on the success (Bandura, 1969).

Bandura's findings suggest that the greater the degree to which teachers believe in the ability of their colleagues, the greater the influence on student achievement (Bandura, 1993). Collective efficacy, according to Tschannen-Moran and Barr (2004), is the collective perception that together teachers in the school make a greater difference on student learning than the influence of the child's home or community.

Studies focusing on collective efficacy have been conducted by a variety of researchers. Bandura (1986) found that collective efficacy requires the effort and judgment of a group and the willingness to keep the group working together. Mayer, Mullens, and Moore (2000) noted, "A school faculty collectively takes responsibility for student learning" (p. 36). In order to measure collective efficacy, Goddard (2002) created an instrument that analyzes teachers' perceptions of their coworkers' ability. In addition, Goddard discovered that 47% to 50% of the between-school variance in mathematics and reading achievement was related to collective efficacy. Furthermore, Goddard noted that in elementary schools, collective efficacy was a greater predictor of student achievement than socioeconomic status in the areas of reading and mathematics (Goddard et al., 2000). In a similar study, when collective efficacy was examined among high schools, efficacious levels were a more significant predictor of achievement in mathematics than socioeconomic status (Hoy, Sweetland, & Smith, 2002). Additionally, Adams and Forsyth (2006) noted that socioeconomic status was found to be inversely related to collective efficacy "suggesting that high poverty schools are predisposed to conditions that impede collective efficacy production" (p. 639).

Other studies have been conducted in recent years. In one research review of a 13-year span of studies on collective teacher efficacy, Ramos, Silva, Pontes, Fernandez, and Nina (2014) noted that 39% of the articles examined the influence that collective teacher efficacy had on student achievement. Furthermore, the researchers stated there was a direct positive correlation between efficacy and student achievement in every study conducted.

Importance of Collective Efficacy

Collective efficacy is important to both school administrators and researchers in the field of education in determining which variables have a strong influence on the emergence of efficacy among faculty. Donohoo (2017) suggests the current state of collective efficacy in a school can be improved by administrators intentionally creating an atmosphere that shifts the faculty climate. In order to increase efficacy on an individual or group level, administrators must cultivate an environment in which the overall instruction and organization are supported through positive collaboration among the faculty and staff. In addition, the administration must work to provide needed resources and a clear vision of the direction that the organization is headed (Chester & Beaudin, 1996). Ingersoll (2001) suggested that improving teaching conditions related to decision-making and support from the administration helps improve teacher retention. This increased freedom in decision-making and support from the administration gives the teachers a stronger belief in the school organization and positively affects their commitment to the school and to the field of teaching (Coladarci, 1992). Louis and Marks (1998) further stated that teachers are more committed when they believe they are sharing a common goal and vision with their colleagues. Yu, Leithwood, and Jantzi (2002) stated that collaboration within an organization will likely be heightened when there is a sense of shared responsibility among the group. In addition, when teachers are given the opportunity to collaborate with their peers and

share teaching strategies, they feel they are successful, and a heightened level of collective efficacy is achieved (Ross et al., 2003).

In one study, Mayer et al. (2000) discovered the importance of a school faculty working together to foster student learning. This idea, which they describe as cohesiveness, coincides with the research findings of Goddard et al. (2000), which state that collective efficacy and student success are positively correlated. When coaching behavior and team cohesion were studied, Gardner, Shields, Bredemeir, and Bostrom (1996) found that when a team's cohesion is high, the perceptions of a coach's actions through training and teacher support also increased.

School leaders can positively affect collective teacher efficacy by providing support, resources, and ample time for positive collaboration among the faculty (Chester & Beaudin, 1996; Weiss, 1999). Fullan and Quinn (2016) stated that teachers who intentionally foster teacher collaboration make the greatest investment in student learning. Similarly, Glanz (1995) encouraged professional collaboration rather than inspection of an evaluative model.

Ware and Kitsantas (2007) sought to discover whether or not beliefs in efficacy had an influence on teachers' professional commitment. In their study, more than 26,000 teachers were given the Public School Teacher questionnaire (TQ), and 6,000 principals were given the Public School Principal questionnaire (PQ). For this study, they utilized the following research question: "Given that schools are expected to meet state or district performance standards, do teacher efficacy beliefs in such schools predict teacher professional commitment?" (Ware & Kitsantas, 2007). The dependent variable for the study was teacher commitment to teaching with an alpha coefficient of .67, while the three independent variables focused on were as follows:

1. *Teacher Efficacy to Enlist Administrative Direction* (do teachers believe their principal supports their work). The reliability coefficient for this 1-5 range was .87.

2. *Collective Efficacy Regarding Teachers' Influence on Decision-Making* (the extent to which the teachers feel they have input in decisions regarding curriculum, training, and budgeting). The reliability coefficient for this 1-5 scale range was .78.

3. *Teacher Efficacy for Classroom Management* (the extent to which teachers believe they have control over classroom management). The reliability coefficient for this 1-5 scale range was .75.

The collective efficacy questions in the survey consisted of six items utilizing a Likert-type response from 1 (*no influence*) to 5 (*great deal of influence*). Ware and Kitsantas (2007) performed a multiple linear regression and discovered that "all three scales of efficacy were significant predictors ($p < .001$) of teacher commitment to teaching" (p. 307). Once a multiple linear regression was conducted, the researchers were able to determine that all three efficacy scales significantly predicted teacher commitment to teaching (Ware & Kitsantas, 2007). The results of the study indicated teacher commitment to instruction had a significant relationship with efficacy due to school leadership support, increased input in making school decisions, and increased freedom to manage their classrooms. Thus, school leaders can utilize these findings to increase teacher retention by providing a school climate conducive to collective efficacy.

Social cognitive theory centers on the concept that the perception teachers have of themselves and their organization affect their emotions, thoughts, and motivation in their daily job performance. Additionally, the overall beliefs of the organization can either enhance the school's social system or destroy it (Good & Brophy, 1986), or as Bandura (1997) stated, "The belief systems of the staff also create an organizational culture that can have a revitalizing or demoralizing effect on the perceived efficacy of its members" (p. 248). Goddard et al. (2000) considered collective efficacy as the product of the ongoing dynamics within the organization.

Collective efficacy differs from that of individual (self-) efficacy. While a teacher's self-efficacy refers to that individual teacher's perception of his or her classroom capabilities, collective efficacy involves the perception of the capabilities of the faculty as a unit (Goddard et al., 2000). Bandura (1993) discovered a positive relationship between a school's collective efficacy level and that of its academic performance. Furthermore, when elevated levels of collective efficacy are in place, student achievement is affected significantly (Goddard & Goddard, 2001). Teachers who work in schools where collective efficacy is high do not willingly accept a student's socioeconomic status as a cause for low grades. Instead, they do what it takes to ensure the student will be successful (Tschannen-Moran & Barr, 2003).

Teachers often work to develop best practice strategies by collaborating with their peers, which has been found to develop greater teacher efficacy (Chester & Beaudin, 1996; Ross, 1992). Through the process of collaboration, the culture of the school can be positively influenced by allowing for group problem solving and experimentation of instructional practices (Ross et al., 2004).

Some research has shown that collective efficacy may have more influence than teacher self-efficacy (Tschannen-Moran & Barr, 2003). Fuller and Izu (1986) found that schools with higher levels of collective efficacy also had higher levels of teacher efficacy. In addition, when student achievement was analyzed, Tschannen-Moran and Barr (2004) discovered the success of a school can be improved by increasing the "collective belief that teachers in the building can improve student learning" (p.192). In order to make assumptions regarding student achievement in mathematics and reading, some researchers have identified collective efficacy as a strong predictor of success (Bandura, 1993; Godddard et al., 2000). For example, in one study, teachers in 66 Virginia middle schools were surveyed with the Collective Teacher Belief Scale to

determine the teachers' perceptions of their influence as a whole in increasing student achievement. This 12-item instrument consisted of an internal reliability of .97. The overall findings, when compared with student scores on an English, writing, and mathematics assessment, demonstrated a significant positive correlation between student achievement and school collective efficacy (Tschannen-Moran & Barr, 2003). This finding demonstrates how collective efficacy has a positive influence on student learning. Before discussing how schools can increase their level of collective efficacy, it is important to first examine the sources of this concept.

Four Sources of Efficacy

Bandura (1986) and Goddard, Hoy, and Woolfolk-Hoy (2004) noted four sources of efficacy: mastery experience, vicarious experience, social persuasion, and affective states (see Table 3). The efficacy source with the most influence over increasing and maintaining collective efficacy is mastery experience. Over time, when teachers experience success and consider they have control over the students' achievement, they are more willing to believe that success can be achieved again (Donohoo, 2017).

The second source of efficacy is considered vicarious experience. Donohoo (2017) defined this concept as being the situation where teachers observe schools that have comparable socioeconomic statuses and challenges but are still able to succeed. Because the teachers see these successful examples of schools with similar hindrances, they are more likely to believe that their faculty can also achieve similar outcomes.

Social persuasion is the third source of efficacy and is effective when credible sources motivate the faculty on ways to overcome obstacles. Bandura (1977) states that the more trustworthy the source, the more likely the efficacy levels are to increase. Credible and

trustworthy sources may include instructional coaches, mentors, experts in the field of content, school leaders, etc.

The fourth source of efficacy is considered to be affective states and is the least influential of the four sources because it is rooted in emotions. Affective states is defined as how one views their ability to do their job and the "overall tone of the organization" (Tschannen-Moran & Barr, 2004, p. 190).

Table 3

Sources of Efficacy

Mastery Experience	Vicarious Experience	Social Persuasion	Affective States
Most influential			*Least influential*
When teacher teams have success and believe they had a part in the achievement.	When the faculty recognizes the success in another school (with similar qualities) and believe they can also achieve success.	When teachers are motivated by trustworthy and knowledgeable individuals to conquer challenges.	Where individuals feel "excitement or anxiety regarding their capability or incompetence". (Donohoo, p. 8, 2017).

Note. Bandura, 1986; Goddard et al., 2000; Goddard et al., 2004; Donohoo, 2017.

In terms of the aforementioned sources of efficacy, the next section of this chapter will argue how instructional coaching addresses the antecedents of collective efficacy. Furthermore, the literature will investigate the possible link between the concepts of coaching and collective efficacy.

Instructional Coaching

According to Glickman, Gordon, and Ross-Gordon (2001), effective supervision is the glue that holds together individual teachers' needs and school goals. Through effective supervision of instruction, school leaders can work actively with the faculty to develop successful instructional methods, teacher efficiency, and reflective practice (Glickman, Gordon,

& Ross-Gordon, 1995). However, due to the overwhelming demands of a school principal, many administrators are now relying on the assistance of an instructional coach to partner with teachers to increase professional learning.

Instructional coaching is the process of encouraging, listening, and partnering with teachers to help them incorporate research-based instructional strategies into their instruction (Knight, 2011). As a subset of professional development, instructional coaching is a way to implement professional development on a personal level with teachers. As a partner in teacher development, instructional coaches provide quality on-site training (Neufeld & Roper, 2003; Poglinco & Bach, 2004; Vanderburg & Stephens, 2010).

As part of the Alabama Reading Initiative (ARI), instructional coaches were placed into elementary schools across the state. In fact, 95% of ARI funding goes toward the coaches' salaries. The reason for employing these coaches was primarily to provide ongoing professional development to teachers and to "improve teacher practice so that all students learn and achieve at the highest levels" (ARI Appendix A-Coach Job Description). Instructional coaches in the state of Alabama are encouraged to become knowledgeable in best practice strategies and implement the following outcomes:

1. Utilize the coaching cycle with teachers
2. Practice relationship techniques
3. Lead professional conversations. (ARI Manual, p. 3)

In 2011, the National Assessment of Educational Progress (NAEP) report reflected positive results in the teacher development that is taking place through the ARI program. From 2003 to 2011, Alabama fourth graders demonstrated reading growth on the NAEP report that was higher than any state in the nation (Alabama School Connection, 2016).

Without follow-up training, teachers are expected to go back to their classroom and implement the new strategy or initiative with success. It cannot be assumed that a teacher who just completed training is prepared, or willing, to implement the concept successfully in their own classroom. Without follow-up support, teachers tend to utilize the teaching strategies they are most comfortable with because it is less time-consuming and less stressful than implementing a new teaching method (Swafford, 1998). Teachers may become overwhelmed with mandatory training programs throughout the academic year and often feel "buffeted by initiatives that ask them to change without adequate support" (Joyce & Showers, 2002, p. 96).

Instructional Supervision

Sergiovanni and Strarratt (1998) described instructional supervision as the change that occurs to improve life developmentally for teachers and student learning. Through the instructional supervision model, teachers work in a continuous cycle of professional growth through ongoing conversations and goal planning with principals and other colleagues. While the art of instructional supervision has evolved over the past few decades, the foundation remains rooted in improving classroom instruction to further student learning (DiPaola & Hoy, 2008).

Part of the process of instructional supervision includes teacher growth and development with the assistance of a building administrator and other teachers who can provide advice and encouragement (Glatthorn, 1984, 1990; Glickman, 1990). DiPaola and Hoy (2008) supported the concept of principals being involved in the instructional process through interactions with teachers, which can directly affect student achievement because the principal is able to target which instructional weaknesses need to be addressed. Sullivan and Glanz (2000) warned that instructional supervision is often taken over by an evaluative process, which goes against the purpose of supporting teachers through a reflective course of action.

Instructional coaches differ in their role in the supervision model from school principals and central office administrators because they offer continued support for the teacher without a formal evaluation process. Their method of training for teachers is grounded in learning theory, which "suggests that individuals learn best when provided with opportunities to discuss and reflect with others, to practice application of innovative ideas and receive feedback from an expert, and to observe modeling" (Marsh, McCombs, & Martorell, 2010, p. 876). Schools that utilize instructional coaches are known for having stronger collaboration among faculty compared to schools that do not have coaches. In addition, teachers in schools with instructional coaches typically are more aware of how to incorporate their state curriculum standards into their classroom instruction compared with other schools (Marsh et al., 2010).

With the support of the building principal, the instructional coaching model has the potential to have a positive influence on the efficacy among the faculty. The following literature will examine how instructional coaching is threaded through the four sources of efficacy.

Instructional Coaching: Mastery Experience

When teachers experience success through student achievement and believe they have the ability to repeat the steps they took to reach the instructional goal, they are within the efficacy state of mastery experience. According to Donohoo (2017), mastery experience is the most powerful source of collective efficacy because when teachers "experience success (mastery) and attribute that success to causes within their control, collective efficacy increases and teams come to expect that effective performances can be repeated" (p. 8).

One example of mastery experience is when instructional coaches work with teachers on the process of data interpretation. Marsh et al. (2010) examined the relationship of instructional coaching to the improvement of teacher instruction in Florida middle schools. The outcomes of

increased student achievement were due to a variety of supervision techniques centered around data-driven decision-making. Over the last decade, educators have been inundated with a variety of data. Teachers and administrators have a plethora of data at their fingertips from state assessments, benchmark tests, and daily formative assessments. "Recent research suggests that although educators appreciate having access to various types of data, they do not always know how to use the information effectively" (Marsh et al., 2010, p. 872). The use of instructional coaches has become increasingly popular as a way for schools to support teachers in understanding how to correctly read and analyze data. Through their study, the researchers explained both the efforts that were made to support teachers and the effect that coaches had in relation to student achievement.

Data-driven decision-making involves the practice of principals, central office administrators, and teachers analyzing performance in a variety of areas and then choosing a method for moving forward. When the data indicate strong student performance, school officials may be convinced to continue implementing a certain instructional practice in order to repeat the success of student achievement. However, when the data reflect low student performance, teachers and administrators may decide to pursue a new instructional strategy in order to increase student achievement. It is important to note that the literature utilized for this study "offered evidence of increased test scores and improved student learning in schools that effectively implemented data-driven decision-making" (Marsh et al., 2010, p. 875). School administrators must be cautious of implementing a supervision method like data-driven decision-making without properly training their teachers how to use the data correctly. Instructional coaches, who are typically teacher leaders within the school, can provide the needed data training for teachers. Part of the training observed in their study consisted of instructional coaches guiding teachers to

interpret results from various assessments, develop and assess weekly tests, and demonstrate how the data are connected to their instructional practice. In order to keep the instructional coaches up-to-date on interpreting state and local assessments, Florida coaches were responsible for attending monthly training sessions to receive on-going professional development which assisted them in working alongside teachers (Marsh et al., 2010).

Marsh et al. (2010) designed their study for the state of Florida, in response to a lack of research connecting coaching programs with student performance. After implementation of the state's "Just Read, Florida!" initiative, reading coaches were placed in schools throughout the state. The number of coaches in Florida schools increased from 300 in 30 school districts to more than 2,200 in 72 districts (Marsh et al., 2010). Even though many of them are under the title of "reading coach," the state department suggested they work across content areas.

The underlying hypothesis for this mixed-methods study focused on the idea that "increasing the expertise and availability of coaches to work with teachers at a school site would allow teachers to gain new knowledge and skills or enhance existing knowledge and skills, which, in turn, would improve their instruction and ultimately improve student achievement and other outcomes" (Marsh et al., 2010, p. 879). The research sample consisted of eight Florida school districts (113 schools) with each school employing at least one instructional coach. The data, which were collected from these eight districts, were analyzed through a quantitative methodical process, while two districts were chosen for the purpose of further investigating and collecting qualitative information. The interview process contained information from 113 principals, 1,117 teachers, and 124 instructional coaches from the selected school districts as part of 64 separate interviews, 13 focus groups, and 28 instructional observations (Marsh et al., 2010, p. 882). The study found that 62% of the instructional coaches considered data-driven

decision-making to be a significant factor in their role at the school. Many of the coaches explained that a critical part of their job was helping interpret state assessment data for teachers. In fact, 50% of the coaches admitted to spending more than 6 hours every other week in training teachers how to perform data analysis. Findings also suggested that experienced instructional coaches (3 or more years) were "significantly more likely to spend 17 or more hours analyzing data than less experienced coaches (1-2 years)" (Marsh et al., 2010, p. 892). The researchers believed this result was, in part, due to experienced coaches understanding a variety of ways to utilize the data to modify instruction.

Other findings suggested that coaches in low-performing schools spent more time pouring over the data than coaches from high-performing schools. The researchers did not appear to be surprised by this finding due to the possibility that the low-performing schools would have pressure from the state department to increase student achievement scores. The results from the study also suggested that nearly half of the teachers agreed that the efforts made by the instructional coach in their school helped shape their instruction. However, when the researchers only looked at responses from the teachers who specifically had frequent interactions with their instructional coach, 75% admitted to observing a positive influence in their instruction due to the coach training them on how to interpret data and make instructional changes based on the results. In addition, "teachers who received more frequent data support from the coach were significantly more likely than their peers with less frequent data support to report various changes in their instruction" (Marsh et al., 2010, p. 896). These results demonstrate that instructional coaches had more influence on changing in-classroom student performance when they worked closely and more frequently with classroom teachers in examining data and discovering which strategies can be repeated to help them experience success again.

Instructional Coaching: Vicarious Experience

Donohoo (2017) describes vicarious experience as the process of teachers being able to participate in peer observations, read for professional growth, or observe other teachers with similar challenges experience success. In fact, vicarious experience is considered to be the second most powerful source of efficacy, and instructional coaches can help enhance this concept by reinforcing strategies discussed during various teacher trainings. The instructional coach can model the teaching strategy with the teacher. This interaction allows the teacher to see how the strategy should be implemented in the classroom rather than simply hearing about it from a professional development trainer at a workshop. Through their research, Tschannen-Moran and McMaster (2009) noted that teacher training on reading strategies is most effective as a variable in influencing collective efficacy when it was followed up with peer coaching. Sullivan and Glanz (2000) felt that this concept of peer coaching would "become the heart of professional development" (p. 221).

After the coaching has been completed, the teacher, in turn, should practice the new concept. Following this phase of the coaching cycle, the instructional coach can then provide beneficial feedback to refine the skills (Swafford, 1998). Table 4 displays the mean score in terms of how effective teachers felt in utilizing new instructional strategies following their time with their school instructional coach.

Table 4

Teachers' View on the Effectiveness of Watching Instructional Coaches Model a Lesson

Questions	Mean score on a scale from 1.00-7.00
Does watching coaches demonstrate lessons make it easier to implement the interventions?	6.51
Do teachers think watching a coach model practices increase their fidelity to instructional practices?	6.4
Do teachers think watching a coach model practices make them more confident about implementing them in a lesson?	6.13

Note. Knight (2005).

Instructional Coaching: Social Persuasion

The third source of efficacy, social persuasion, can often be demonstrated through the coaching cycle when instructional coaches encourage and support teachers to overcome various instructional challenges. Teachers need ongoing trust, support, and encouragement in order to effectively implement new strategies that they learn during teacher training. Based on the writings of Hoy and Tarter (1988), professional relationships that foster student performance have a cornerstone of trust. They suggested this trusting relationship is crucial for teamwork and effective communication. Other studies conducted by Joyce and Showers (1996) suggested that teachers who had an ongoing partnership with a peer educator and who planned and collaborated were more willing to practice and apply their new teaching strategy to a greater degree than their coworkers who worked in isolation.

A meta-analysis study demonstrated that instructional coaching was more effective than all other processes combined for implementing training (Swafford, 1998). One reason instructional partnerships are successful is attributed to the synergy that occurs between colleagues. The coach-teacher relationship is an ongoing endeavor in most schools (Anderson,

Feldman, & Minstrell, 2014). Throughout the partnership, the teacher is given the opportunity to discuss new ideas with their coach, ask questions, seek for better understanding, and take time to reflect on their own practice. The instructional partnership must be rooted in collaboration by allowing the teacher to reflect on his or her own teaching methods in a non-judgmental, highly supportive environment (Strother, 1989). Anderson et al.'s qualitative study in 2014 indicated that compassion was the characteristic teachers most often associated with a successful school instructional coach.

The relationships formed within a school organization are important because teachers have better access to resources from other teachers or to hear strategies from their coworkers. Coburn and Russell (2008) call this social interaction between teachers *social capital*. The Knowles Teaching Initiative investigated the interaction among fellows in a teaching program to examine how educators use social capital. Through the study, they discovered that the fellows were able to collaborate regarding teaching methods they observed, which helped them "develop a vision of collaboration that they are motivated to replicate in their own schools" (Kagle & Galosy, 2017). Over time, this social capital can help increase teacher knowledge so that all student learning can be positively influenced within a given school (Hargreaves & Fullan, 2012).

Instructional Coaching: Affective States

Instructional coaching of teachers as they implement a new strategy or instructional program is one way to improve the teaching practice in the classroom while at the same time changing the overall tone of the organization. Affective states is a source of efficacy that occurs when teachers feel an arousal towards their overall perception of their capability to influence student performance.

While instructional coaches are working alongside teachers, they have the potential to help influence the tone in the school. Knight (2011) suggested that effective coaches are credible educators who are trustworthy, have good listening skills, are able to maintain confidentiality, are reflective practitioners, have effective communication skills, exhibit traits of a learner, and are skilled in motivating others. It is reasonable to consider that while assisting teachers by modeling lessons and helping them interpret data, these instructional partners are also shaping the teacher's perception of his or her own teaching capability, which can change the climate within the organization.

Importance of Instructional Coaching

If teachers foresee that a new program is being put in place without adequate support by the school or district administrators, they may resist being a part of the implementation for the program. Instead, teachers want to feel supported through the implementation process. The Pathways to Success project in Kansas placed instructional coaches in various schools to offer additional support following teacher training on a specific topic. Of the 125 teachers in the program, 98 of them continued to implement the strategies that they learned from their on-site instructional coach (Knight, 2004). Successful coaching programs can be implemented in any school district when the instructional coach ensures the following factors are present:

1. Instructional Coach understands the complexity of working with adult learners
2. A coaching cycle is utilized
3. Instructional Coach is well versed in best practices
4. Data are gathered and analyzed
5. Communication strategies are put in place between the coach and the teacher
6. Instructional Coach is an effective school leader
7. Coaching partnership is supported by both the school and the district. (Knight, 2015, p. 24)

Swafford (1998) identified three ways instructional coaches support the practice of teachers: procedural (technical), reflective, affective (emotional). First, the teachers in the study stated that their coaches acted as a sounding board and provided necessary feedback. Second, the instructional coaches facilitated a dialogue with the teachers to discuss their lessons in retrospect (Swafford, 1998, pp. 55-56). Finally, the coaches provided encouragement to the teachers when they doubted themselves (Strother, 1989). The coaching dialogue is most effective when both partners value the opinions of the other person. This proper educational praxis occurs when both the teacher and the coach use active listening, which helps to establish a trusting relationship within the partnership.

Desimone, Smith, and Ueno (2006) examined the effectiveness teacher training has on increasing student performance. School leaders are in an essential position to support teachers through various professional development stages on programs and to analyze which training is needed for each teacher. Their study compared the "sustained content-focused professional development" (Desimone et al., 2006, p. 180) of mathematics teachers who are limited in their knowledge of mathematic content to teachers who have an extensive background in mathematics.

Increasingly, teachers are encouraged to teach with a strong focus on content standards. Through this reform, teachers are ultimately responsible for teaching the standards by going more in depth with the content where students are pushed to think analytically and develop critical thinking skills. This concept of teaching and learning requires rigorous instruction that should be supported through meaningful professional development. Desimone et al.'s research indicated that while teachers in the past used a teaching model that was centered around

memorization and regurgitation, modern teaching techniques require a deeper understanding of the content (Desimone et al., 2006).

The Desimone et al. (2006) study further suggests that teachers with a lack of content knowledge often hinder student performance. The teacher's lack of understanding of the content often leads to lower-level questioning of the students. The article mentioned that while a teacher could be trained to teach math "on the job," other teachers who have received a thorough background in training to develop true "teacher preparedness" would achieve higher student performance levels (Desimone et al., 2006, p. 181). Furthermore, their study discloses the idea that when school administrators are considering how to best provide teacher training that goes deep into the content, the following factors need to be considered: "(1) longer contact hours, (2) activities sustained over long periods of time, (3) participation by teachers from the same grade, school, or subject, (4) active learning opportunities, (5) coherence with other reform efforts, and (6) a focus on subject-matter content" (Desimone et al., 2006, p. 182). The research in this study supported the idea that the sustained, content-focused training by the instructional coaches had a significant effect on changing the way teachers teach, which positively changed student performance.

Linking Instructional Coaching and Collective Efficacy

Bandura (1989) suggested that a teacher does not influence a student unless the student is in attendance for the teacher's instruction. Thus, instructional coaches are not effective until teachers are attentive to their training or given the opportunity to observe the coach model a lesson in a classroom. The coach's plan or methods must be tailored to fit the individual teacher rather than taking a one-size-fits-all approach.

Social cognitive theory suggests people allow reciprocal interacting influences to serve as motivation and behavior change rather than being automatically controlled by their surrounding environment (Bandura, 1989). Therefore, teachers can utilize information from their personal experience of seeing the results before and after their interaction with an instructional coach. If they believe the coach had no influence on improving their instruction, they would be less likely to engage in the coaching process than if they had a positive experience.

According to Bandura (1989), as people age they tend to depend on those who are knowledgeable in a specific area that is of interest to them for cognitive growth. Perhaps then, instructional coaches within the school who model their knowledge of various learning strategies are looked upon as experts by their fellow colleagues. In addition, when teachers have the opportunity to observe an instructional coach utilizing an effective learning strategy with a group of students, the teacher will see the positive outcome that the strategy has in affecting student learning. Observing an instructional coach can be an asset to the overall professional growth of the faculty in terms of the direct link that the modeled behavior has on influencing student learning.

Bandura found that people are more likely to replicate an observed behavior if they see the value of its influence as opposed to seeing that it is unrewarding (Bandura, 1989). The observable link between the modeled behavior and the effect it has on student learning can motivate teachers to exhibit the same behavior if they believe that their instructional partner created a positive effect on student learning by utilizing that method.

Theoretical Rationale

If teachers perceive the instructional coaching program at their school to be effective, then they will also perceive the collective efficacy of the school to be effective. Instructional

coaching has the potential to improve the collective beliefs in the school in a variety of ways. First, the coaching cycle gives teachers dedicated time to work alongside an educator with expertise in best practice strategies for student learning. Second, instructional coaches can encourage teachers to include concepts they learned from trainings in their lessons by providing ongoing feedback through their implementation processes. Third, instructional coaches are able to model teaching methods for the classroom teacher to observe. Unlike attending a workshop, with instructional coach partnerships, teachers can ask questions, participate in professional discussions, and receive one-on-one support from their coach (Donohoo, 2017). This process helps teachers develop more confidence in themselves both individually and collectively as a faculty.

In testing the relationship between these two variables, we hope to better understand the influence one has on the other. Therefore, my hypothesis consists of the following:

H_1: As the perceived effectiveness of the instructional coaching program increases, collective efficacy will increase.

Summary

Chapter 2 has presented a summary of literature relevant to this research study. A summary of the literature was provided to make the case for a positive relationship between coaching and efficacy. In addition, a hypothesis testing that theory was presented.

CHAPTER 3:

METHODOLOGY

This chapter contains a description of the sample population and the process used for the data collection. Both conceptual and operational definitions will be explained as well as the statistical procedures utilized in testing the hypothesis.

H_1: As the perceived effectiveness of the instructional coaching program increases, collective efficacy will increase.

Sample

The sample for this study consisted of 59 elementary schools in Alabama. This sample was comprised of 80 certified teachers representing pre-kindergarten through sixth grade. Data for this quantitative study were collected from willing participants following approval of permission from the superintendent, school administrator, and teachers. In addition, participants in this study were selected based on school districts that were conveniently located to the researcher. In order to qualify for this research study, the participating teachers were required to have an instructional coach who works within their school.

Data Collection Procedures

Step one in this research process consisted of obtaining approval from the Institutional Review Board (IRB) (see Appendix J) as well as district superintendents and school principals in order for their teachers to participate in this study (see Appendixes A-E). The researcher volunteered to meet face-to-face or over the phone with the school administration and superintendent to go over the purpose of this study and described how the data were to be

collected. The researcher was available to answer any questions that the school administration needed clarified. When asking permission, the researcher presented an explanation of the questionnaire, the purpose it served, and the action steps that would be taken to protect their anonymity. The teachers were given a detailed letter to explain that their participation was strictly voluntary, and they could discontinue the process at any time if they did not feel comfortable. They were also informed that they were not required to respond to every question.

After receiving IRB and school district approval, the researcher or their designee arranged a time for distributing the surveys during school faculty meetings. During this time, the teachers were asked to complete the survey in one sitting but were not restrained to a time limit. The teachers were also given an information sheet explaining how the questionnaire results would be used. After the overview of the study, there was ample time provided for teachers to ask questions to the researcher or their designee. Any teacher who chose not to participate in the study was allowed to leave the faculty meeting. Once the surveys were completed, the teachers were asked to place the questionnaires in the envelope provided to them so their answers would not be visible to anyone in the room. The researcher maintained confidentiality and security of the envelopes until they were turned over to The University of Alabama for data entry. In other schools where holding a meeting was not a possibility, the researcher distributed the survey instruments to the school designee who then distributed and collected the instruments after completion.

Measures

The Instructional Coaching Evaluation Survey (Florida PS/RtI Project, 2013) and the Collective Efficacy Scale (Goddard & Hoy, 2003) measurement tools were utilized to collect data for this study. The independent variable for this study was the perceived effectiveness of the

instructional coaching program at a given school. The dependent variable for this study was the level of collective efficacy for the school.

Collective Efficacy

Conceptually, collective efficacy is defined as the belief or expectation that the faculty as a unit can execute the actions required to have positive effects on students (Goddard et al., 2000). Operationally, collective efficacy was measured using Goddard's (2002) Collective Efficacy (CE) Scale, which consists of a 12-item, Likert-type scale ranging from *strongly disagree* to *strongly agree* with a reliability of .96 (see Appendix I). Sample items include "Teachers in this school are able to get through to the most difficult students," "Teachers here are confident they will be able to motivate their students," and "Teachers in this school believe that every child can learn" (Goddard & Hoy, 2003). The 12-item instrument is a shortened version of Goddard et al.'s (2000) 21-item Collective Teacher Efficacy Scale. A correlation (r = .983) between the shortened CE Scale and the original CTES demonstrated the short version to be strongly related to the original CTES instrument. The scoring guide requires the following items of the CE-Scale to be reverse scored: 2, 4, 8, 9, 11, and 12 (Hoy, 2012). Higher CE scores indicate a greater presence of the property.

Instructional Coaching

The conceptual definition of instructional coaching refers to how the coach performs the role of a "site-based professional with responsibility for facilitating training for the staff and working collaboratively with the school leadership as well as collecting, analyzing, and disseminating the data necessary for summative and formative evaluation of instructional goals" (Florida PS/RtI Project, 2013, p.105-106). Operationally, instructional coaching was measured using the Coaching Evaluation Survey (CES). The CES tool consists of 23 items designed to

measure the perception teachers have of the current instructional coaching program at their school. The instrument uses a 5-point Likert-type scale: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree*, with a reliability ranging from .96 to .97 (Florida PS/RtI Project, 2013). The construct validity was supported in multiple studies (Florida PS/RtI Project, 2013).

Socioeconomic Status

In addition to the aforementioned variables, socioeconomic status (SES) and enrollment served as control variables for this study. For this study, free and reduced lunch (FRL) will serve as a proxy variable of SES. The levels of FRL for the schools that participated in this research were pulled from the Alabama State Department of Education website for the 2016-2017 school year. The FRL values for this study are interpreted as a form of measure representing the SES in the school (1-FRL). The greater the percentage of free and reduced lunch, the lower the level of SES.

Enrollment

In terms of enrollment, the research findings of Hoy and Miskel (2013) suggest that smaller schools were related to higher academic achievement. The degree of specialization and expertise in organizations as well as the ratio of supervisors to other employees are affected by changes in the size of organizations (Blau, 1973; Mintzberg, 1979). There are no hypotheses advanced in this study, but prudence suggests controlling for size because it influences organizational structure and function.

Statistics

Quantitative methodologies were applied throughout this research project. The independent variable for this study was the perceived effectiveness of the instructional coaching

program at a given school. The dependent variable for this study was the level of collective efficacy for the school. In addition, socioeconomic status and enrollment served as control variables for this research. Specifically, the schools were the unit of analysis for this study. All survey responses were entered in SPSS. Descriptive statistics and correlation analyses were used to determine relationships between the independent and dependent variables. Chapter 4 will disclose the results of the statistical analyses.

Summary

Chapter 3 has described the sample, data collection, measures, and statistics that apply to this study of the proposed relationship between the effectiveness of instructional coaching and school collective efficacy. An overview of the validity and reliability of the measures was also examined as well as an explanation of the statistical tests that were conducted.

CHAPTER 4:

RESULTS

The purpose of this study was to test the hypothesized relationship of instructional coaching and collective efficacy. This chapter contains a presentation of the statistical analyses that were performed in order to address the research question that was formulated in this study. This chapter begins with a discussion of the descriptive statistics of the variables of interest in the analysis. Statistical tests will be discussed, which allowed for the research question to be answered. Finally, a summary of the results of the statistical analyses is provided in relation to the research question.

Descriptive Statistics

Table 5 displays the descriptive statistics for the participants in the study. For this research, 1,587 educators in 116 schools were surveyed. Of this sample, 80 teacher respondents in 59 elementary schools participated in a survey regarding the instructional coaching program and the collective efficacy at their school. The researcher, being part of a larger study at hand, traded fewer respondents for a larger sample.

The mean value for SES was 49.22, indicating that about 50.8% of the students from which the participants were drawn received free or reduced lunch. The mean score of the Instructional Coaching Evaluation Survey (ICES) was somewhat high at 3.97 on a scale that ranged from 1 to 5. This score demonstrates that the teachers in these schools believe that the instructional coaching program in their school is effective. As the scores on this scale ranged

from 1 = *strongly disagree* to 5 = *strongly agree*, the mean score of 3.97 suggests a positive perception about the instructional coaching program at their school.

The mean score of the items that measured collective efficacy was also fairly high at 4.37, on a scale that ranged from 1 to 6. This score indicates that the teachers believe in the capability of their co-workers with regard to the degree of how they influence student learning. This scale ranged from 1 = *strongly disagree* to 6 = *strongly agree*; the mean score of 4.37 suggests a high level of efficaciousness in the schools that participated in the study.

Table 5

Descriptive Statistics for Instructional Coaching and Collective Efficacy

	N	Minimum	Maximum	Mean	SD
Coaching	80	1.25	5.00	3.97	.77
Collective Efficacy	106	2.00	5.40	4.37	.52
SES	116	.11	.96	.50	.19
Enrollment	116	136.0	1558.0	613.07	313.96

Reliability of Scales

The alpha reliability for the scaled variables in this study is displayed in Table 6. Instructional coaching was measured using the Instructional Coaching Evaluation Survey and collective efficacy was measured using the Collective Efficacy Scale. The table demonstrates that the Cronbach's alpha for the Instructional Coaching Evaluation Survey was .98 and .83 for the Collective Efficacy Scale. An alpha score above 0.7 indicates an acceptable level of reliability among items in a scale; therefore, both survey scales are considered highly reliable.

Table 6

Cronbach's Alpha Scores for Scaled Variables

Variable	Number of Respondents	Number of Items	Cronbach's Alpha
Instructional Coaching	180	32	.98
Collective Efficacy	211	12	.83

Correlation Analysis

The hypothesis formulated for this study was that there would be a positive correlation between the perception of a school's instructional coaching program and its level of collective efficacy. In order to test this hypothesis, a correlation analysis was conducted.

Table 7 shows the results of a correlation analysis for the variables of participation in the Instructional Coaching Evaluation Survey (ICES) and the Collective Efficacy Scale (CE-Scale). The table also demonstrates that ICES was positively and significantly correlated with CE, which confirms the hypothesis that there would be a positive correlation between the perception of instructional coaching and the collective efficacy of a faculty, (r = .31, p < .01). Therefore, each increment of instructional coaching predicted an increase of three tenths of a unit. The likelihood of getting this result by chance is 0.005. In this bivariate correlation, SES is correlated to both instructional coaching (r = .26) and collective efficacy (r = .14).

Table 7

Correlation of All Variables; N=80 or more

	Coaching Evaluation	Collective Efficacy	Enrollment	SES
Coaching Evaluation	--			
Collective Efficacy	.31**	--		
Enrollment	-.07	.02	--	
SES	.26**	.14	.50**	--

**Correlation is significant at the 0.01 level (2-tailed).

The intercorrelational table describes the presence of statistically significant correlations. These correlations suggest the usefulness of further analysis.

Regression Analysis

A regression analysis was run to make sure that neither SES nor enrollment account for change in the dependent variable at a level that is greater than the level of chance. Table 8 shows

the results of the linear regression analysis. The results of the regression analysis demonstrated a positive correlation between instructional coaching and collective efficacy ($\beta = .28$, $p < .01$). The results show that instructional coaching was the only independent variable that was a significant predictor of school collective efficacy. This regression analysis showed that neither SES nor enrollment account for a change in collective efficacy at the level greater than chance, which explains approximately 7.7% of the variance in collective efficacy (adjusted *R* square = .077).

Table 8

Collective Efficacy (CE) Regressed on Independent Variables

	B	S.E.	β	*t*	Sig.
Instructional Coaching	.18	.07	.28	2.56	.01**
Socioeconomic Status	.38	.33	.14	1.15	.25
Enrollment	.00	.000	-.09	-.75	.46

**=p<.01

$R^2 = .112$ Adjusted $R^2 = .077$

Unhypothesized Relationships

While instructional coaching was hypothesized to correlate with collective efficacy, there were a few findings that were not hypothesized. One finding suggests that smaller schools have a greater percentage of SES students ($r = -.50$, $p < .000$). This poses an interesting discussion regarding why this result goes against previous findings. It appears from this sample that small Alabama schools are extremely poor. In addition, the negative relationship between SES and CE indicates that as the number of free and reduced lunch percentages increase, collective efficacy in the school shows a decline ($r = -.14$, $p < .008$).

Summary

This chapter presented the findings of the statistical analyses that were performed in order to answer the research question that was formulated for this study. After controlling for SES and enrollment size, only instructional coaching had a significant effect on collective

efficacy. The central hypothesis predicting a relationship between coaching and efficacy was supported.

CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter contains a discussion of the findings of the study as well as the larger implications of the results. Both theoretical and practical implications will be presented as well as recommendations for further research.

Findings

The research question that was formulated for this study was as follows: Is there a relationship between the perceived effectiveness of a school's instructional coaching program and its collective efficacy? It was hypothesized that there would be a positive correlation between the perception of a school's instructional coaching program and the level of efficacy among the faculty. The results of the data analysis that were performed are listed as follows:

1. Instructional coaching is a significant predictor of collective efficacy ($\beta = .28$, $p < .01$) after controlling for FRL and enrollment size.

2. The measures for instructional coaching ($\alpha = .98$) and collective efficacy ($\alpha = .83$) were highly reliable.

3. In the bivariate correlation, SES was inversely related to enrollment size ($r = .50$, $p < .01$) and collective efficacy ($r = .26$, $p < .01$). However, in the regression analysis, SES no longer showed an effect toward collective efficacy once instructional coaching and SES were combined in the equation.

Theoretical Implications

The positive relationship between an instructional coaching program and collective efficacy was anticipated in previous research by Bandura (1986) and Goddard et al. (2004). Their findings suggest that of the four sources of efficacy (mastery experience, vicarious experience, social persuasion, and affective states), the efficacy source with the greatest contributing factor of influence to collective efficacy is mastery experience. This finding is due in part to the level of expertise that the school instructional coach has in leading teacher professional development. In addition, the teachers who participated in this survey may see their educational training from their resident instructional coach as being the significant contributor to the high level of efficaciousness among the faculty (Tschannen-Moran & Hoy, 2001). Perhaps the teachers feel that as they collaborate together in group training sessions, their level of collective efficacy increases (Yu et al., 2002; Ross et al., 2003).

Based on the findings of Yu et al. (2002), teachers are more likely to change their instructional practices when a school-wide consensus was established regarding goals and next steps. The variation in terms of whether a teacher was committed to change was related to the presence of four variables:

1. Personal goals: a desired outcome by an individual that requires a particular action.
2. Capacity beliefs: the level of self-efficacy a teacher has in terms of his or her capabilities as an educator.
3. Context beliefs: believing that the school leaders will provide resources and training for the teachers in order to reach the school's goals.
4. Emotional arousal: to create a desire for teachers to be in the mindset to act upon their individual and school goals. (Yu et al., 2002, p. 370)

Yu et al. (2002) found that when school leaders establish a vision that is "value laden," it produces a conducive environment for teachers to be committed to growth through collaboration with their team (p. 373). Furthermore, when instructional coaches serve as an expert to model strategies and support teachers in implementing the new methods, it can help foster a stronger level of teacher self-efficacy (Yu et al., 2002). While this article was dealing with individualized teacher efficacy, the current study builds upon Yu et al.'s findings by using collective efficacy as a variable to determine the correlation between instructional coaching and how it affects the perceived efficacy among the teachers.

Previous research by Ross et al. (2004) also contributed to this idea of a correlation between collective teacher efficacy and collaboration among the faculty. In their study, approximately 2,170 teachers from 141 schools were surveyed to determine whether prior student achievement or school processes had a greater influence on school collective efficacy. Their findings revealed that school processes were a more significant predictor of collective efficacy (Ross et al., 2004).

Based on the study at hand, the data analysis from the instruments showed that the perception of the instructional coaching program significantly affected collective efficacy. In this regard, the teachers who perceived their school to have a strong instructional coaching program also had a higher level of collective efficacy. In fact, each increment of coaching predicted an increase of three tenths of a unit (.3). The study demonstrates this is highly significant at the .005 level, which suggests that the likelihood of getting this result by chance is 5 out of 1,000 (see Table 7 in Chapter 4).

The results of this research indicated strong reliability and validity. The measures had strong alphas (collective efficacy = .83 and coaching = .98), which indicates reliability. In other

words, if the study was repeated, the results should be the same. Because the analysis of the data proved the hypothesis that instructional coaching is a predictor of collective efficacy, it adds credibility to the study itself; therefore, the study has validity.

Practical Implications

Beyond the actual findings of this study, it is important to note the larger implications of the findings in relation to instructional coaching programs. One of the implications of this study is the strong influence instructional coaches have on boosting collective efficacy. Through these findings, it is evident that when coaches create environments where teachers can have professional conversations with their peers and reflective practice, they form a stronger bond of trust and community. Vanderburg and Stephens (2010) suggested these practices build an ongoing, supportive environment in a school.

Another implication of the study for educational leaders is the consideration of implementing instructional coaches in secondary schools in Alabama instead of simply hiring them for elementary schools. If instructional coaches are showing such a significant influence toward faculty member's beliefs of efficacy, then secondary school principals will possibly want to hire an instructional coach for their school. This consideration is especially important in terms of past research done on how collective efficacy greatly influences student achievement (Hattie, 2016).

A third implication for educational leaders is the consideration of hiring an instructional coach who has many years of experience as an effective teacher. Hiring an instructional coach with more years of experience versus a coach with very little teaching experience may be more beneficial in increasing efficacy levels among the faculty (Goddard et al., 2004).

A fourth implication from this study is the influence good instructional coaching has on collective efficacy. As stated in the findings, even though SES was correlated to collective efficacy in the bivariate correlation, it was no longer having an effect once coaching and SES were included in the equation through the regression analysis. This strengthens the finding that while SES does have an influence, instructional coaching outweighs the effect of SES on collective efficacy.

It is customary for school districts to bring in a motivational speaker at the beginning of the year, presumably to inspire teachers to work more effectively. A fifth implication for educational leaders is the consideration of the influence this method of professional development has in improving quality teaching. While the message from the motivational speaker is utilized as an example of professional development, there does not appear to be any research that supports the practice. Indeed, the study at hand strongly suggests professional development in the form of instructional coaching is a wiser alternative.

Finally, a sixth implication of practice is to consider what professional development is needed from the faculty in terms of resolving problems of pedagogy. Defining these problems has been addressed in the pedagogical literature (Acheson & Gall, 1980; DiPaola & Hoy, 2014). At its core, instructional coaching is a uniquely personal experience between teacher and coach. No educational goal appears to be served by a broad and vague motivational speaker who does not illustrate particular problems of practice. Therefore, the practical implication here is to stop doing beginning-of-the-year speeches and instead use the financial resources to enhance the instructional coaching program.

School district leaders can support their instructional coaching programs by ensuring there is a direct correlation between the district instructional goals and the teaching strategies that

the instructional coaches are being asked to implement. In addition, district leaders need to ensure that building administrators are encouraged to work alongside their instructional coaches as a united voice to promote school instructional goals and to encourage intellectual stimulation among the faculty (Yu et al., 2002). While the principal serves in an evaluative role in the school, the instructional coach should serve in a supportive role for the teachers (Ippolito, 2010). If the principal works in collaboration with the instructional coach regarding the direction of the school in reaching various academic goals, the coach can be successful in building efficacy among the faculty.

In addition, the negative relationship between free and reduced lunch and collective efficacy (r = -.14, p < .008) demonstrates that as free and reduced lunch increases, collective efficacy of the school decreases. The collective efficacy research does not refute the effect of FRL but rather argues that collective efficacy can make a contribution that is independent of SES.

Recommendations for Future Research

While the findings of this study provided important information about the relationship between instructional coaching and collective efficacy, there are a few areas of interest that could make for interesting research in the future. One area for further research is to expand this same study to a larger sample of schools across the state of Alabama or even the United States to determine if the significant relationship exists in a similar way for both small and large districts.

The results from this study indicate that smaller schools in Alabama have a greater percentage of free and reduced lunch students. Therefore, additional research could be conducted to determine why there is a correlation between these two factors.

Another area of interest for further research could be to utilize the Instructional Coaching Evaluation Survey and Collective Efficacy Scale in Alabama secondary schools that have an instructional coaching program. After analyzing the results to determine if a correlation exists, it would be interesting to compare those results to this study to discover any differences between elementary and secondary data.

Furthermore, because this study suggests that instructional coaching is a predictor for collective efficacy, there is a need to discover which factors of the instructional coaching program drive the correlation. For example, perhaps the professional development training that instructional coaches provide for their teachers affects how coaching influences collective efficacy. Further research could be conducted to determine if a strong relationship exists between professional development and collective efficacy at Alabama elementary schools.

The findings of this study cannot be generalized beyond Alabama school districts. However, the methodology used in this study and the findings of this study can be used to inform additional research on issues of collective efficacy and instructional coaching programs and the various effects they have within a school. Understanding the importance of this study should not be about the Alabama instructional coaching model but rather about the broader issues of efficacy in relation to a school's instructional coaching program.

Summary

This chapter contained the findings of the study as well as a discussion of the larger implications of the findings of the study and recommendations for future research. While the focus of this study was on a sample of elementary schools located in north and central Alabama, there are many larger implications that invites additional research, both within Alabama and across the United States. The issue of collective efficacy and the effects of instructional

coaching programs have become important to education in recent years as school leaders and policymakers attempt to improve teacher collaboration and efficacy in order to ultimately improve student outcomes. This research demonstrates a significant relationship between instructional coaching and collective efficacy, but it has a relatively small effect size. This study adds to the literature on these issues and provides a starting point for additional areas of investigation.

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APPENDIX A:

SUPERINTENDENT LETTER

College of Education

Department of Educational Leadership, Policy, and Technology Studies

THE UNIVERSITY OF ALABAMA
EDUCATION

3/27/17

To the Superintendent of Instruction:

Researchers from The University of Alabama are conducting research on the causes and consequences of school culture and school climate and the impact on academic performance of students and other desirable school outcomes. A school or schools (or enter number here) from your system have been selected along with approximately 60 schools in North and Central Alabama. We are hoping you will grant us permission to contact the principal(s) of the school(s) and make arrangement for data collection. We also ask that you provide us with your approval and any other approvals required at the district level to conduct our research. You have our sincere assurance that these procedures will not be disruptive or in any way cause the district or school embarrassment.

Since the study focuses on schools as the unit of analysis the only individual data that will be collected will be gender, ethnicity, and years of teaching experience of the participants completing the surveys. In fact, there will be no schools named or identified by specific location. Our interest is in the broad relationships between perceptions and characteristics of schools and student performance.

As you can see from the attached materials, we will collect data from the school principal and teachers. It will be made clear that participation is voluntary and that the most stringent protections of participant anonymity will be observed. Participants will be asked to read and keep for their records an informed consent form but they will not be required to turn in a signed consent form in order to protect their anonymity. There will be no publicized reports by school or district. It will be made clear to all participants that this research is being conducted by researchers from The University of Alabama who have received appropriate permissions to conduct the research in your school(s). Should you so desire an individualized report of our findings can be made available to you after the data have been analyzed.

In a few days, a member of our research team will be calling you to encourage your cooperation with this project. We look forward to working with members of your school community to better understand the importance of school culture and climate, as well as

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their causes and consequences. Thank you in advance for your careful review and consideration of our request.
Sincerely,

Dr. Roxanne M. Mitchell
Associate Professor of Administration
rmmitchell@ua.edu

Dr. C. John Tarter
Professor of Educational Educational Administration
ctarter@ua.edu

Enclosures:
District Permission Form
IRB Approval Letter
Consent Forms
Sample of surveys to be administered
List of schools and principals sampled from your district

APPENDIX B:

LETTER TO PRINCIPALS

College of Education

Department of Educational Leadership, Policy, and Technology Studies

THE UNIVERSITY OF
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3/27/17

Dear Principal _____:

Researchers from The University of Alabama are conducting research on the causes and consequences of school culture and climate, especially as related to academic performance of children. Your school has been randomly selected from the ____ public schools in North and Central and Alabama. Your district has given us permission to approach you with our proposal to collect data in your school (see attached permission). You have our sincere assurance that these procedures will not be disruptive or in any way cause the school embarrassment. Ultimately, we are hoping for more than 60 schools to participate.

A brief description of the study, instruments, and approval of The University of Alabama Institutional Review Board are enclosed for your review. Since the study focuses on schools as the unit of analysis, the only individual data that will be collected is the gender, ethnicity, and years of teaching experience of teachers participating in the study. No individual data regarding your school will be analyzed or reported. In fact, there will be no schools named or identified by specific location. Our interest is in the broad relationships between perceptions and characteristics of schools and the effects on student performance.

As you can see we will collect data from the school principal and all teachers who are willing to participate in this project. It will be made clear that participation is voluntary and that the most stringent protections of participant anonymity will be observed. Participants will also be given an informed consent form to keep for their records but they will not be asked to sign a consent form in order to protect their anonymity. Their consent to participate will be given by their willingness to fill out the surveys. There will be no reports by school or district. It will be made clear to all participants that this research is being conducted by researchers from The University of Alabama who have received appropriate permissions to conduct the research in your school.

In a few days, a member of our research team will be calling you to encourage your cooperation with this project. We look forward to working with members of your school community to better understand the importance of school climate and school culture

[illegible]

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and its causes and consequences. Thank you in advance for your careful review and consideration of this request.

Sincerely,

Dr. Roxanne M. Mitchell
Associate Professor of Administration
rmmitchell@ua.edu

Dr. C. John Tarter
Professor of Educational Educational Administration
ctarter@ua.edu

Enclosures: District Permission Form
IRB Approval Letter
Sample surveys

APPENDIX C:

TEACHER INFORMED CONSENT LETTER

Teacher Informed Consent Form

You have been invited to take part in a research study to learn more about the effects of trust and efficacy on student academic performance and identification with school. This study will be conducted by Dr. Roxanne Mitchell – Assistant Professor – Department of Educational Leadership, Policy, and Technology Studies at The University of Alabama as a part of her continued research.

If you agree to participate in this study, you will be asked to do the following:

1. Complete a survey on various aspects of your schools climate and culture.

Participation in this study will involve approximately 15 minutes of your time to complete the questionnaire. There are no known risks associated with your participation in this research. Although you will receive no direct benefits, this research may help the investigator to understand the causes and consequences of school trustworthiness on student academic performance and identification with school.

Confidentiality of your research records will be strictly maintained. You will not be asked to record any identifying information on the survey forms. Surveys will be collected by the researcher or one of her colleagues at a staff meeting in the absence of the principal. Participation in this study is voluntary. You may refuse to participate simply by not completing the survey. If there is anything about this study or your participation that is unclear or that you do not understand, or if you have questions or wish to report a research related problem, you may contact Dr. Roxanne Mitchell at 205-348-0348 or rmmitchell@ua.edu or at The University of Alabama, P.O Box 870302, Tuscaloosa, Alabama, 35487.

If you have questions about your rights as a person taking part in a research study, or if you would like to make suggestions or file complaints and concerns, you may call Ms. Tanta Myles, the Research Compliance Officer of the University at (205)-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach Website at http://osp.ua.edu/site/PRCO_Welcome.html. You may email us at participantoutreach@bama.ua.edu.

Agreement to Participate

By completing the survey you are consenting to participate in this research study.

This is your copy of the consent document to keep for your own personal records.

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 5/1/17
EXPIRATION DATE: 4/30/2018

APPENDIX D:

PRINCIPAL INFORMED CONSENT LETTER

Principal Informed Consent Form

Dear Principal:

You have been invited to take part in a research study to learn more about the effects of trust and efficacy on student academic performance and identification with school. This study will be conducted by Dr. Roxanne Mitchell – Assistant Professor – Department of Educational Leadership, Policy, and Technology Studies at The University of Alabama as a part of her continued research.

If you agree to participate in this study, you will be asked to do the following:

1. Complete a survey on various aspects of your schools climate and culture.

Participation in this study will involve approximately 15 minutes of your time to complete the questionnaire. There are no known risks associated with your participation in this research. Although you will receive no direct benefits, this research may help the investigator to understand the causes and consequences of school trustworthiness on student academic performance and identification with school.

Confidentiality of your research records will be strictly maintained. You will not be asked to record any identifying information on the survey forms. Surveys will be collected by the researcher or one of her colleagues. You will place your survey in a sealed envelope. Participation in this study is voluntary. You may refuse to participate simply by not completing the survey. If there is anything about this study or your participation that is unclear or that you do not understand, or if you have questions or wish to report a research related problem, you may contact Dr. Roxanne Mitchell at 205-348-0348 or rmitchell@bamaed.ua.edu or at The University of Alabama, P.O Box 870302, Tuscaloosa, Alabama, 35487.

If you have questions about your rights as a person taking part in a research study, or if you would like to make suggestions or file complaints and concerns, you may call Ms. Tanta Myles, the Research Compliance Officer of the University at (205)-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach Website at http://osp.ua.edu/site/PRCO_Welcome.html. You may email us at participantoutreach@bama.ua.edu.

Agreement to Participate

By completing the survey you are consenting to participate in this research study.

This is your copy of the consent document to keep for your own personal records.

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 5/1/17
EXPIRATION DATE: 4/30/2018

APPENDIX E:

SCHOOL DISTRICT APPROVAL FORM

School District Approval Form

In keeping with the authority of my office and consistent with the policies of this school district, by my signature I hereby grant permission to researchers from The University of Alabama to conduct a study within the schools of this district, consistent with the human subject protections described in their approved proposal to The University of Alabama Institutional Review Board. The general nature and procedures of the research have been given and/or described to me and the researchers have volunteered to answer any questions I might have concerning the research.

Signature of District Representative Title Date

Print Name Print Title

PLEASE RETURN:

At this Fax Number: 205-348-2161

Or mail to:

Roxanne M. Mitchell, Associate Professor Educational Administration

The University of Alabama

P.O. Box 870302

Tuscaloosa, Alabama 35487

APPENDIX F:

TEACHER SURVEY SCRIPT

SCRIPT TO BE READ TO TEACHERS

The University of Alabama is conducting research on the causes and consequences of school climate and school culture especially as related to children's success in school. This important work can help improve public schools in Alabama. Your school has been selected as one of the schools in this study. Your school system and principal have given us permission to seek your cooperation and we genuinely need your help. Participation will take only a few moments of your time. Participation is on a voluntary basis. I will hand you a consent form with contact information of the researchers and university personnel to contact in case you have questions. You will not be required to sign the consent form as a way of protecting your confidentiality. No one at the school will be shown your responses. When you are finished I will place your survey in an envelope. Please do not put your name on the survey. Thank you, most sincerely, for your help. We know you share our belief that Alabama's schools should be the best they can be.

APPENDIX G:

INSTRUCTIONAL COACHING EVALUATION SURVEY

Coaching Evaluation Survey

Directions: *Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements about the performance of your school's Instructional Coach / PS/RtI Coach during the 2016-2017 school year. Please shade in the circle that best represents your response to each item. If you have not observed or do not have knowledge of a given behavior, please respond "Do Not Know" by shading in the circle labeled DK.*

① = **Strongly Disagree *(SD)***
② = **Disagree *(D)***
③ = **Neutral *(N)***
④ = **Agree *(A)***
⑤ = **Strongly Agree *(SA)***
◯ = **Do Not Know (*DK*)**

My school's PS/RtI coach…	SD	D	N	A	SA	DK
1. …is an effective listener.	①	②	③	④	⑤	◯
2. ...communicates clearly with others.	①	②	③	④	⑤	◯
3. …effectively engages team members and other faculty in reflecting upon their professional practices.	①	②	③	④	⑤	◯
4. …is skilled in interpreting student outcome data.	①	②	③	④	⑤	◯
5. …is skilled in facilitating consensus building among school-based personnel.	①	②	③	④	⑤	◯
6. …is skilled in working collaboratively with diverse groups (e.g. SBLT, classroom teachers, grade level teachers).	①	②	③	④	⑤	◯
7. …is skilled in building trust among members of the school-based RtI leadership team.	①	②	③	④	⑤	◯
8. …is skilled in facilitating productive work relationships with other individuals in the school setting.	①	②	③	④	⑤	◯

My school's PS/RtI coach…	SD	D	N	A	SA	DK
9. …when introducing a new skill or concept:						
a. clearly explains the need for the skill/concept.	①	②	③	④	⑤	○
b. clearly indicates the sub-skills that are required to use the new skill/concept.	①	②	③	④	⑤	○
c. clearly indicates the support that will be provided to the team to help implement the new skill/concept.	①	②	③	④	⑤	○
10. …is skilled in modeling steps in the problem-solving process:						
a. Problem Identification	①	②	③	④	⑤	○
b. Data Collection and Interpretation	①	②	③	④	⑤	○
c. Problem Analysis	①	②	③	④	⑤	○
d. Intervention Development	①	②	③	④	⑤	○
e. Intervention Support	①	②	③	④	⑤	○
f. Intervention Documentation	①	②	③	④	⑤	○
g. Response to Intervention Interpretation	①	②	③	④	⑤	○
h. Intervention Modification	①	②	③	④	⑤	○
11. …provides opportunities for the leadership team to practice steps in the problem-solving process.	①	②	③	④	⑤	○
12. …works effectively with the school-based team to implement problem solving.	①	②	③	④	⑤	○
13. …works with the school-based team to gradually increase the team's capacity to function independently in implementing the problem-solving process in our school.	①	②	③	④	⑤	○
14. …provides ***timely*** feedback to members of the team.	①	②	③	④	⑤	○
15. …provides ***useful*** feedback to members of the team.	①	②	③	④	⑤	○
16. …works effectively with school-based personnel in using the problem-solving process to identify needs at the ***school-wide*** level.	①	②	③	④	⑤	○

My school's PS/RtI coach…	SD	D	N	A	SA	DK
17. …works effectively with school-based personnel in using the problem-solving process to identify needs at the ***classroom*** level.	①	②	③	④	⑤	○
18. …is able to provide the technical assistance necessary (e.g., support related to skills taught) for our school to implement the PS/RtI model.	①	②	③	④	⑤	○
19. …responds to requests for technical assistance in a timely manner.	①	②	③	④	⑤	○
20. …works with the school-based team and faculty to monitor student progress (Tier I).	①	②	③	④	⑤	○
21. …works with the school-based team and faculty to assist in decision making.	①	②	③	④	⑤	○
22. …works effectively with the school-based administrator to facilitate the implementation of the PS/RtI model.	①	②	③	④	⑤	○

23. How satisfied are you with the overall assistance that your school's PS/RtI coach has provided your school in the implementation of PS/RtI?

① Very Dissatisfied ② Dissatisfied ③ Satisfied ④ Very Satisfied ⑤ Not Able to Provide a Rating

APPENDIX H:

INSTRUCTIONAL COACHING SURVEY PERMISSION FORM

Hyde, Judith <judihyde@usf.edu> 5/10/17

to me

Hi Ms. Schneider,

The Florida Problem Solving/Response to Intervention Project received your email dated 5/7/2017, requesting permission to reproduce the following:

- Coaching Evaluation Survey

Permission is granted by the copyright holder to print and use for educational purposes with the following conditions:

- An appropriate acknowledgment of the Florida Problem Solving/Response to Intervention Project (a collaborative project between the Department of Education and the University of South Florida) is included.
- The material is not used for commercial purposes.

Thank you for your interest in this resource. Please contact me if you need further assistance.

Sincerely,

Judi

Judi Hyde, MA
Communications Coordinator
Florida's Problem Solving/Response to Intervention Project
judihyde@usf.edu
813-974-7448 ● 813-974-7647 (fax) ● EDU 381A (office)

Florida's Problem Solving/ Response to Intervention Project
A Multi-Tiered System of Supports
floridarti.usf.edu

APPENDIX I:

COLLECTIVE EFFICACY SCALE

CE-Scale

Short Form

Directions: Please indicate your level of agreement with each of the following statements about your school from **strongly disagree** to **strongly agree**. Your answers are confidential.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. Teachers in the school are able to get through to the most difficult students.	①	②	③	④	⑤	⑥
2. Teachers here are confident they will be able to motivate their students.	①	②	③	④	⑤	⑥
3. If a child doesn't want to learn teachers here give up.	①	②	③	④	⑤	⑥
4. Teachers here don't have the skills needed to produce meaningful student learning.	①	②	③	④	⑤	⑥
5. Teachers in this school believe that every child can learn.	①	②	③	④	⑤	⑥
6. These students come to school ready to learn.	①	②	③	④	⑤	⑥
7. Home life provides so many advantages that students here are bound to learn.	①	②	③	④	⑤	⑥
8. Students here just aren't motivated to learn.	①	②	③	④	⑤	⑥
9. Teachers in this school do not have the skills to deal with student disciplinary problems.	①	②	③	④	⑤	⑥
10. The opportunities in this community help ensure that these students will learn.	①	②	③	④	⑤	⑥
11. Learning is more difficult at this school because students are worried about their safety.	①	②	③	④	⑤	⑥
12. Drug and alcohol abuse in the community make learning difficult for students here.	①	②	③	④	⑤	⑥

APPENDIX J:

IRB APPROVAL

THE UNIVERSITY OF ALABAMA | *Office of the Vice President for* Research & Economic Development
Office for Research Compliance

May 1, 2017

Roxanne Mitchell, Ed.D.
ELPTS
College of Education
Box 870302

Re: IRB#: 17-OR-157 "Rigatoni Study"

Dear Dr. Mitchell:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of written documentation of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on April 30, 2018. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent form to obtain consent from your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

[redacted]

Director & Research Compliance Officer

358 Rose Administration Building | Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066