

RELATIONSHIPS AMONG PEER OBSERVATION
AND COACHING, TEACHER REFLECTION,
AND STUDENT ACHIEVEMENT

by

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ABSTRACT

The purpose of this study was to examine the relationships between collaboration with an Instruction Partner and the level of teacher reflection and then determine whether patterns and/or relationships exist between teacher reflection and student achievement. The following research questions were addressed in this study: (1) How does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices? (2) What patterns exist between the teachers' level of reflection and student achievement? (3) How do teachers perceive that collaboration with an Instructional Partner influences their level of reflection, instructional practice, and student learning?

The Reflective, Ethical, and Moral Assessment Survey (REMAS, Arredondo Rucinski & Bauch, 2006) was used, with the addition of demographic data and six free response questions, along with student achievement data to investigate the proposed research questions. Data were analyzed using descriptive statistics, factor analysis, Pearson's Correlation, MANOVA, and coding. MANOVA data revealed that collaboration with an Instructional Partner ($p = .013$) positively influenced teachers' level of reflection on their instructional practices.

Findings from this study suggested implications for Pre-K – 12 educators. Genuine, not forced, collaboration and reflection are effective tools to strengthen instructional practices. When reflection feels forced and evaluated, it becomes an item to check off of a list rather than a meaningful practice; this rigidity has the potential to create resistance among teachers. Time is also an important factor to consider because teachers need the opportunity to modify lessons based on their collaborative and reflective experiences.

DEDICATION

This research project is lovingly dedicated to my family for their never-ending encouragement, support, and understanding: To my parents, Dennis and Sandy, and my husband, Philip, who have continuously supported my educational goals and spent countless hours caring for our little boys; to my precious little boys, Luke and Connor, who have waited patiently on mommy to finish working before playing with trains and reading books—you have never known what it is like for mommy not to be working on this degree; and to my sister, Andrea, who has been a wonderful role model and always provided support and encouragement through all of my endeavors.

LIST OF ABBREVIATIONS AND SYMBOLS

| | |
|-------|-----------------------------------------------------|
| ABPC | Alabama Best Practices Center |
| ACCRS | Alabama College Career Ready Standards |
| ACT | American College Testing |
| CPD | Continuing Professional Development |
| CTAAP | Francis P. Collea Teacher Achievement Award Program |
| IC | Instructional Coach |
| IRB | Institutional Review Board |
| IP | Instructional Partner |
| IPN | Instructional Partner Network |
| PD | Professional Development |
| PDP | Professional Development Pathways |
| REMAS | Reflective, Ethical, and Moral Assessment Survey |
| SES | Socioeconomic Status |
| SPSS | Statistical Package for the Social Science |

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CHAPTER I: INTRODUCTION

Since curriculum, technology, and education in general are expanding and changing daily, the push is for educators to continue developing their knowledge and expertise (Guskey, 2000). Many districts are now employing Instructional Coaches (ICs) or Partners (IPs) to help teachers stay up-to-date on the latest trends in education and to also take a renewed look at their current practices and make adjustments as needed (Knight, 2011). Many argue that the key is providing high-quality professional learning opportunities that promote collaboration among colleagues and thoughtful reflection on daily practices so that learning from each other becomes common practice. Professional learning opportunities that encourage reflection afford teachers the opportunity to consider how they could use their new knowledge and strategies in their daily instructional practices (Johnson & Altland, 2004).

High-quality professional development (PD) and thoughtful reflection are crucial to advancing education (Guskey, 2000), specifically educators' professional growth (Borko, 2004), with the ultimate goal being to positively impact student achievement (Arredondo Rucinski, 2005; Guskey, 2003a; Guskey, 2003b). PD is not a new concept; in fact, it "has been a part of education since the time of the early Greeks" (Guskey, 2000, p. 1). However, PD is often viewed negatively by teachers and seen as "something [teachers] must endure and get out of the way" (p. 15). Often the sessions are isolated all-day workshops where teachers have little influence on the concepts presented or guidance for implementing any new concepts (Guskey,

2000; Varela, 2012; Marsick & Watkins, 2001), so the PD may not focus on what the teachers really need (Colbert, Brown, Choi, & Thomas, 2008) and has been “criticized” because it is viewed as “disconnected” (Garet, Porter, Desimone, Birman, & Yoon, 2001, p. 927) rather than being an opportunity that mixes reflection with new strategies to transform teachers’ current practice. Research has shown that “we learn by constructing meaning” and using our prior knowledge to understand new concepts (Arredondo et al., 1995, p. 74). This type of learning looks different from traditional PD in which a presenter tells you what you need to know (Arredondo et al., 1995). Ultimately, changes made at the national, state, and district levels are meaningless if changes do not occur within the school and classroom (Hall, Loucks, Rutherford, & Newlove, 1975; Guskey, 2005); for change to occur within the school and classroom, supportive and collaborative learning opportunities are necessary.

Hattie (2009) found a significant effect of professional development on the knowledge teachers gain from participating in PD (effect size of $d = 0.90$) and whether teachers modify their instructional practices based on their new knowledge (effect size of $d = 0.60$); however, there was a smaller effect on teachers’ reactions to PD (effect size of $d = 0.42$) and even less on the influence teacher PD has on student learning (effect size of $d = 0.37$), although these are still significant. As Hattie’s findings show, professional development has a moderate to strong influence on both teacher and student learning. The effectiveness of professional development is twofold (1) learning new concepts and (2) applying those new concepts and strategies in daily instructional practices. Wade (1984) found that professional development may have a significant effect on teacher learning. However, it is difficult to tie professional development to actual effects on student learning, because (1) there are many factors that affect student learning, and (2) the teachers may learn from the professional development but not implement the newly

gained knowledge in their instructional practices. Reeves (2010) asserted that PD programs do not necessarily result in student achievement gains; rather it is the instructional practices and the teachers implementing them that have the greatest influence on student achievement.

Alabama has changed accountability measures for districts, schools, and individual teachers to include a goal for students to be college and career ready upon graduating from high school. Beginning with the 2013-2014 school year, standardized assessments were aligned with ACT (American College Testing); the ACT assessment is a college admissions and placement test that is also used to measure student progress and improve student performance (ACT, 2014b). All students in grades 3-8 are now assessed yearly using the ACT ASPIRE, and students in grade 11 are now assessed yearly using the ACT. State department officials argued that the new assessments provide a clearer picture of Alabama's students' college and career readiness because the level of difficulty of the ACT assessments is the same or comparable to those given to students across the nation.

The standardized assessments were introduced along with the Alabama College and Career Readiness Standards (ACCRS), which is a combination of objectives selected by the state of Alabama and the Common Core Standards. The goal of the ACCRS is for students to delve deeper into content. In order to successfully implement the ACCRS and push students to higher levels, educators need professional learning opportunities that help them understand the ACCRS and how to modify their instructional practices to implement strategies needed to teach the ACCRS—analyzing the standards and reflecting on current instructional practices to identify gaps in student learning and determine when changes are necessary.

This study examined the practices adopted in one Alabama district to ensure that educators were given high-quality professional learning opportunities to assist them in

understanding and adjusting to the new standards. This suburban district was selected because of its role in the Instructional Partner Network (IPN) that was developed by the Alabama Best Practices Center (ABPC) and based on Knight's (2011) partnership principles. There are a total of 11 schools in the district (seven elementary schools, two middle schools, and two high schools) with more than 600 certified employees and 9300 students. All 11 schools employ an IP who has been trained on coaching and partnership principles, and the IPs receive ongoing PD to help them develop their coaching skills.

Statement of the Problem

Professional development is the vehicle for refining and expanding educators' "conceptual and craft skills" (Guskey, 2000, p. 3). According to Zhao (2012), the more teachers participate in high-quality professional development, the more they engage in critical and/or practical reflection. Teachers engage in reflective practice more as a result of collaborating with their colleagues and reflecting together about the lessons (Thoonen, Slegers, Oort, Peetsma, & Geijsel, 2011; Miller & Marie-Crane Williams, 2013). Therefore, in order for the professional development to influence teacher learning, some have argued that teachers must have a voice in the PD design (Hansman, 2001; Merriam, 2001a; Marsick & Watkins, 2001; Colbert et al., 2008; Dunaway, Do-Hong, & Szad, 2010; Howe & Stubbs, 1996) and be actively engaged during the professional learning opportunities (Standards for Professional Learning, 2011; Hansman, 2001; Desimone, 2009; Garet et al., 2001; Guskey, 2000; Jeanpierre, Oberhauser, & Freeman, 2005; Luft, 2001; Stolk, Bulte, de Jong, & Pilot, 2009a; Varela, 2012; Darling-Hammond & McLaughlin, 2011; Clarke & Hollingsworth, 2002; Wade, 1984).

While coaching has changed over the last three decades (Showers & Joyce, 1996), the theory remains that teachers establish a collaborative partnership where they then learn from and

reflect with one another to improve their instructional practices (Standards for Professional Learning, 2011; National Board for Professional Teaching Standards, 2002; Hansman, 2001; Baumgartner, 2001; Kilgore, 2001; Merriam, 2001b; Schommer-Aikins, 2004; Wang, 2013). More districts are now employing, as a promising practice, Instructional Partners who work side-by-side with teachers to provide professional learning opportunities focusing on new strategies, reflective practice, and collaborative partnerships (Knight, 2011). There has been some research conducted on the impact Instructional Partners have on teacher reflection but more is needed. This study examined the effects of the relationships among participants in the Instructional Partner Network, on their reflections, and on student achievement.

Purpose of the Study

The purpose of this study was to examine the relationships between collaboration with an Instructional Partner and the level of teacher reflection and then determine whether patterns and/or relationships exist between teacher reflection and student achievement. Knight and others (e.g., Wang, 2013; Johnson & Altland, 2004) have argued that establishing a partnership in which individuals are empowered to think on their own is the best way to help teachers improve their practices. The partnership is developed through collaborative professional learning opportunities that promote dialogue and reflection (Schön, 1987; Arredondo Rucinski & Bauch, 2006; Wang, 2013; Johnson & Altland, 2004).

Unfortunately, some professional development has often turned teachers into passive learners (Varela, 2012). Professional learning opportunities for adults are more meaningful when participants have control over their own learning and when administrators support teachers in their learning process (Hansman, 2001; Merriam, 2001a; Marsick & Watkins, 2001; Stolk, Bulte, de Jong, & Pilot, 2009b; Torff & Sessions, 2008). Additionally, Garet et al. (2001)

suggested that when teachers share concerns, change can occur because the discussion becomes an opportunity to seek solutions to problems. These discussions can promote reflection, deeper content knowledge, and the exchange of best practices. Guskey and Sparks (1996) wrote that professional development that makes a direct impact on the knowledge and practices of teachers and administrators has a greater influence on student achievement.

Significance of the Study

The recent changes in Alabama rules moving schools toward accountability in the Alabama educational system—pertaining to the system, school, and individual teacher levels—and the revisions of the evaluation system turning it into a professional growth model, all emphasize the need for a renewed examination of educational professionals’ learning practices. Likewise, Fishman et al. (2003) argued that the push for college and career readiness requires students to learn how to “construct knowledge by solving real problems through asking and refining questions, designing and conducting investigations, gathering, analyzing, and interpreting information and data, drawing conclusions, and reporting findings” (p. 648). For many schools, this intense focus on college and career readiness requires changes in the entire organization. It is apparent that to some researchers, organizational change is possible through the implementation of various opportunities including professional learning, collaboration, reflection, and changes in teacher practice (Dunaway et al., 2010; Hoy & Miskel, 2008; Thoonen et al., 2011).

Klein and Riordan (2009) stated that educators need to engage in conversations about professional learning opportunities and instructional practices in order for administrators and/or coaches to support teachers as they grow and change their practices to ensure that students are mastering the material and meeting or exceeding the standards. According to others, these

collaborative conversations cannot occur unless a sense of trust—a partnership—has been established (Baumgartner, 2001; Johnson & Altland, 2004; Schommer-Aikins, 2004; Knight, 2011). To these researchers, a solid partnership is based on choice, voice, equality, empowerment, and respect (Knight, 2011; Schommer-Aikins, 2004; Wang, 2013).

The findings from this research study may assist administrators, coaches, and teachers interested in determining the benefits of developing partnerships and professional learning opportunities that facilitate teacher learning in addition to establishing an environment that will allow the coaching and partnership principles to flourish.

Research Questions

The following research questions were addressed in this study:

- (1) How does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices;
- (2) What patterns exist between the teachers' level of reflection and student achievement; and
- (3) How do teachers perceive that collaboration with an Instructional Partner influences their level of reflection, instructional practice, and student learning?

Research Methods

The primary purpose of this study was to examine the effects of the relationships among teacher collaboration, teacher reflection, and student achievement. This study used a mixed method approach that allowed the researcher to investigate the differences among groups surveyed by using survey data. The Reflective, Ethical, and Moral Assessment Survey (REMAS) was used to gather feedback from Pre-K-12 teachers in north Alabama (Arredondo Rucinski & Bauch, 2006). Demographic information on grade level taught and years of

experience was added to this survey as were six free response questions about teachers' perceptions of the influences on reflection and student learning.

The results are limited due to use of a convenience sample, which included Pre-K-12 teachers in Regional District 8 as defined by the Alabama Board of Education. This study may not be generalized beyond K-12 teachers in the participating north Alabama schools.

There are a total of 11 schools being asked to participate in the study with more than 600 certified employees and 9300 students: seven elementary schools, two middle schools, and two high schools (Madison City Schools, 2014). The seven elementary schools will be referred to as Schools A, B, C, D, E, F, and G; the two middle schools will be referred to as Schools H and I; the two high schools will be referred to as Schools J and K. School A is a K-6 elementary school with an approximate population of 700 students and 50 faculty members. School B is a K-6 elementary school with an approximate population of 720 students and 50 faculty members. School C is a K-6 elementary school with an approximate population of 645 students and 50 faculty members. School D is a K-6 elementary school with an approximate population of 560 students and 40 faculty members. School E is a Pre-K-6 elementary school with an approximate population of 795 students and 60 faculty members. School F is a Pre-K-6 elementary school with an approximate population of 750 students and 55 faculty members. School G is a K-6 elementary school with an approximate population of 400 students and 34 faculty members. School H is a 7-8 middle school with an approximate population of 750 students and 50 faculty members. School I is a 7-8 middle school with an approximate population of 800 students and 50 faculty members. School J is a 9-12 high school with an approximate population of 1850 students and 100 faculty members. School K is a 9-12 high school with an approximate population of 1450 students and 100 faculty members.

Theoretical Framework

Social constructivist theory provides the overarching theme for this research. The goal of the constructivist/sociocultural model is to provide the resources and skills teachers need to grow personally and professionally (Howe & Stubbs, 1996). A major tenet of constructivism is that knowledge is “constructed by the learner” (Howe & Stubbs, 1996, p. 169). This study was based on the notion that schools participating in the Instructional Partner Network will adopt more engaging and collaborative professional learning opportunities, through encouraging teachers to reflect more on their daily instructional practices. These teachers will then engage in more reflective conversations and learn from each other. By collaborating with peers and learning new techniques through these professional learning opportunities, teachers reflect on and modify their instructional practices to ensure their lessons are more engaging and better meeting their students’ needs. This theory hypothesizes that with Instructional Partners establishing a trusting, collaborative, and engaging environment, teachers will feel more comfortable reflecting on and modifying their practices and learning from their colleagues. This theory proposes that when teachers reflect on and modify their daily lessons to enhance them, then student learning will increase because teachers are focused on specific actions that better meet the students’ needs rather than using the same teaching behaviors year after year.

Some argue that in order for teachers to have positive, meaningful learning experiences, and for change to occur over time as a result of these learning experiences (Argyris, 1973; Guskey, 2000; Guskey, 1985; Guskey, 1994; Guskey & Sparks, 1996), all efforts within the school must be aligned (Arredondo Rucinski et al., 2009; Guskey, 2000; Hayes & Ellison, 1999; Hall, Loucks, Rutherford, & Newlove, 1975). These researchers have argued that schools are more successful when they have established a clear explanation of the school’s goals and the

strategies necessary to achieve those goals. According to Arredondo et al. (1995), “Organizations, like reflective practitioners, must continually examine what they believe and do, seek more information about those beliefs and actions, and then plan for future action” (p. 77).

Building a partnership is the foundation for thriving coaching and collaborative efforts in schools (Schön, 1987). The partnership approach may be the best way to help teachers transform their practice because teachers are treated as equals and empowered to reflect on and modify their practices in a way that will have the greatest impact on student learning (Schön, 1987; Wang, 2013; Johnson & Altland, 2004). Schools built on the partnership principles position everyone as a learner and foster the practices of seeing value in everyone, encouraging others to express their thoughts and opinions, encouraging listening to others, and embedding learning opportunities during the school day (Wang, 2013; Johnson & Altland, 2004). Such professional learning opportunities focus on topics that allow instructional partners to provide support to teachers, and to be delivered through instructional strategies that promote active learning and opportunity for reflection (Schön, 1987). Further, establishing an environment in which everyone is a learner—an environment of trust, respect, collaboration, and engagement—reduces frustration and discouragement because learning occurs side-by-side rather than through directives (Knight, 2011; Bolhuis & Voeten, 2001; Wang, 2013).

Limitations of the Study

The reader should consider the following limitations of this study:

- (1) Schools selected to participate in this study were chosen based on proximity to the researcher; therefore, a convenience sample, not a random sample, was used;
- (2) Schools selected to participate in this study were selected from one district in the state; and

- (3) Surveying teachers in elementary, middle, and high schools assisted in providing an adequate sample representative of northern Alabama; however, this sample does not represent the opinions of all teachers in the state.

Assumptions

The following assumptions were made in this study:

- (1) The Reflective, Ethical, and Moral Assessment Survey provided a reliable instrument to measure the teachers' perceptions of their reflective thought process;
- (2) The teachers who participated in this study taught in grades Pre-K-12 during the 2014-2015 school year in Alabama; and
- (3) Participating teacher responses to the survey were truthful, all-inclusive, and professional.

Definitions of Terms

ACT—The ACT assessment is a college admissions and placement test that is also used to measure student progress and improve student performance (ACT, 2014b).

ACT Aspire—The ACT Aspire is a longitudinal assessment used to measure elementary and middle school students' college and career readiness (ACT Aspire, 2014).

ACT Plan—The “ACT Plan helps 10th graders build a solid foundation for future academic and career success and provides information needed to address school district’s high priority issues” (ACT Plan, 2014).

Choice—When individuals “make their own choices and make decisions collaboratively” (Knight, 2011, p. 31).

Coaching--A collaborative partnership that involves goal-setting, reflective dialogue, and learning (Wang, 2013).

Collaboration-- “Groups [of teachers] within the same school, same grade, or department [...] [who] work together in a focused *environment* while dealing with issues of common interest” (Colbert et al., 2008, p. 138).

Culture of trust-- “A setting in which people are not afraid of breaking new ground, taking risks, and making errors” (Hoy, Gage, and Tarter, 2006, p. 237).

Dialogue-- Dialogue is “a means through which learning could occur through the interaction of ‘supportive’ and ‘challenging’ responses within the dialogue” (Arredondo & Rucinski, 1998; Arredondo Rucinski et al., 2009).

Implementation-- The “participants’ use of new knowledge and skills” (Guskey, 2000, p. 191).

Partnership--Administrators and/or coaches treat others as they would like to be treated and empower teachers by designing a relationship in which they are encouraged to think on their own rather than being told what to think (Knight, 2011; Wang, 2013; Johnson & Altland, 2004).

Professional development--The activities designed to enhance teachers’ knowledge, skills, attitudes, and instructional practices to raise student achievement (Guskey, 2000; Petrie & McGee, 2012).

Reflection--“The process through which teachers comprehend and learn from their teaching experiences and assign significance to their teaching practices” (Zhao, 2012, p. 57). Reflecting individually or in a group leads educators to consider their “routine and nonroutine actions” in addition to their personal beliefs and how they can improve lessons or solve problems (Arredondo Rucinski, 2005, p. 85).

Student Achievement is evidence of student learning analyzed through assessments measuring student performance against specific standards (GAO, 2009).

Voice—When individuals are “Free to say what they think, and their opinions [...] count” (Knight, 2011, p. 34).

Organization of the Study

Chapter I presents an introduction and overview of the study, a statement of the research problem, significance of the study, theoretical framework, proposed research methods, research questions, limitations, and definitions of key terms. Chapter II presents a review of literature relevant to reflective practices and high-quality professional development. Chapter III presents a detailed description of the research methods and data analysis. Chapter IV presents a summary of the research methods, the data collected, and an analysis of the data. Chapter V presents a summary the results of the study, conclusions drawn, and implications relating to future research of districts using Instructional Partners to implement collaborative professional learning opportunities to encourage reflective practice.

Summary

This chapter presents an overview of the connection between professional learning opportunities based on partnership principles and the level of teacher reflection. More districts are encouraging educators to utilize IPs to reflect on their current practices and learn the latest trends in education (Knight, 2011). High-quality professional learning opportunities that promote collaboration and thoughtful reflection provide teachers with the opportunity to examine how their new knowledge fits with their current instructional practices; in essence, these opportunities help educators grow professionally (Johnson & Altland, 2004; Guskey, 2000; Borko, 2004).

This study examined teachers' perceptions of their levels of reflection while participating in collaborative, thought-provoking professional learning opportunities that are based on the partnership principles. Teacher perceptions were measured by the REMAS (Arredondo Rucinski & Bauch, 2006). Student learning was measured by the ACT Aspire for students in elementary and middle school, the ACT Plan for students in grade 10, and the ACT for students in grades 11 and 12. The data were used to determine if there is a relationship between teacher collaboration and the level of teacher reflection. The study also examined if there is a possible connection between increased teacher reflection and student achievement. As measured by the REMAS and ACT assessments, the results of this study will be useful in determining if participation in the Instructional Partner Network has made an impact on teacher reflection, collaboration, and student achievement.

CHAPTER II:
LITERATURE REVIEW

Introduction

As previously described, this study is based on the theory that schools participating in the Instructional Partner Network (IPN) offer engaging and collaborative professional learning opportunities that encourage teachers to reflect on their daily instructional practices and thus help each other learn. The IPN environment is based on partnership principles in which educators are treated as equals and empowered to reflect on and modify their practices in a way that will have the greatest impact on student learning (Schön, 1987; Wang, 2013; Johnson & Altland, 2004; Dirkx, 2001; Merriam, 2001a; Merriam, 2001b; Baumgartner, 2001).

Research has shown the teacher to be a major contributing factor to student achievement (Hattie, 2009; Yost et al., 2009); however, teachers need to be given the resources and opportunities to learn so they can become better equipped with the skills known to produce effective instruction. Within the IPN framework, there are seven Standards for Professional Learning: learning communities, leadership, resources, data, learning designs, implementation, and outcomes (Standards for Professional Learning, 2011). The focus of these standards is “on educator learning that relates to successful student learning” (Standards for Professional Learning, 2011, p. 42-43). The Standards for Professional Learning (2011) described the guidelines for high-quality professional learning opportunities with the goal of using components

such as collaboration, reflection, data, and research to positively impact teacher and student learning.

Teachers need professional learning opportunities that afford them the opportunity to build a bank of instructional strategies to implement in the classroom, to collaborate with colleagues, and to reflect on their current practices and make necessary modifications (Schön, 1987; Merriam, 2008; Thoonen et al., 2011; Tripp & Rich, 2012; Donnelly & Fitzmaurice, 2011; Johnson & Altland, 2004; National Board for Professional Teaching Standards, 2002; Standards for Professional Learning, 2011). The Instructional Partner Network is a specific PD program being used to assist in the development of an environment in which teachers are likely to be more comfortable sharing ideas, learning from one another, reflecting on their practices, and modifying practices to achieve better student learning (Knight, 2011). Even though significant research has been conducted on professional development, coaching, and reflection, research is needed about the effectiveness of PD programs such as Instructional Partner Network, and about the impact this particular PD model has on the level of teacher reflection and on student learning. By reviewing the literature of professional development, reflection, and coaching the researcher will show a connection between the IPN and teacher reflection, which could impact student achievement. This chapter includes a description of the IPN partnership principles and a literature review of the characteristics of high-quality professional development, reflective practices, and the research on which this specific PD is built.

A Partnership Approach

Schön (1987) argued that the best way to help a teacher transform his/her instruction is by establishing a partnership between that teacher and a coach. In a partnership, coaches treat others as they would like to be treated and empower teachers by designing a relationship in

which they are encouraged to think on their own, rather than being told what to think (Wang, 2013; Johnson & Altland, 2004; Hansman, 2001; Marsick & Watkins, 2001; Merriam, 2001a). The goal is to create a culture of collaboration that allows teachers, coaches, and administrators to learn and develop (Arredondo et al., 1995).

The partnership principles are grounded in adult learning research. Two pillars of adult learning theory include Knowles' (1968) andragogy and Tough's (1967, 1971) self-directed learning (Merriam, 2001a). The concept of andragogy is built on assumptions about the adult learner that include the following: (1) adults are self-directed, independent learners; (2) adults have a vast array of personal experiences; and (3) adults are interested in applying their knowledge (Merriam, 2001a). The concept of self-directed learning is built on the following goals: (1) learning is self-directed; (2) learning is transformational so part of learning is critical reflection; and (3) learners become agents of change (Merriam, 2001a). Research has recently indicated that adult learning is not simply a cognitive process but one that also includes "the body, the emotions, and the spirit" (Merriam, 2008, p. 95).

Characteristics of a Partnership

There are several important factors in a partnership including choice, which is the opportunity for individuals to "make their own choices and make decisions collaboratively" and voice, which is the opportunity for individuals "to say what they think and [have] their opinions [...] count" (Knight, 2011, p. 31). Who we are and how we learn is shaped by the culture in which we live (Sandlin, Wright, & Clark, 2011), which is one reason that participant choice and voice are so important. In regards to professional learning opportunities, teachers need a choice in what they learn and how they learn it (Marsick & Watkins, 2001; Hansman, 2001; Merriam, 2001a). Coaches have the greatest impact when they offer choice with structure; for instance,

coaches provide an area of focus while respecting the autonomy of teachers by allowing them to focus on specific strategies and activities that they believe are a good fit for the context (Knight, 2011).

Arredondo Rucinski et al. (2009) discussed reflection in action as a means of developing teacher expertise therefore giving teachers a voice in changes made to their instructional practices. Questioning and listening are two important characteristics of coaching; therefore, coaches and/or administrators facilitating a professional learning opportunity may simply pose a question and allow the participants to share their experiences and opinions first (Wang, 2013). According to Arredondo Rucinski (2005), making reflection a structured process helps educators become lifelong learners since reflecting individually or in a group leads educators to consider their “routine and nonroutine actions” in addition to their personal beliefs and how they can improve lessons or solve problems (p. 85). Ultimately, partners become invested in the learning when they feel their ideas are valued and they feel a sense of belonging (Wang, 2013; Johnson & Altland, 2004).

Another partnership principle is dialogue. Dialogue is “a means through which learning could occur through the interaction of ‘supportive’ and ‘challenging’ responses within the dialogue” (Arredondo Rucinski & Bauch, 2006, p. 490; Arredondo & Rucinski, 1998; Arredondo Rucinski et al., 2009). Schön (1987) asserted that dialogue becomes more meaningful when it is embedded within the partners’ work; in this setting, ideas discussed can be immediately applied. A culture of trust must be established before dialogue can occur (Arredondo et al., 1995). When dialoguing, partners carefully listen to one another and focus on the conversation rather than developing an argument to refute what is being said (Arredondo & Rucinski, 1998; Arredondo Rucinski et al., 2009). Knight (2011) described dialogue as “the thinking approach to

communication” where participants share their ideas so freely that they no longer focus on which ideas belonged to which partner (p. 42). He referred to this “give-and-take” approach to learning as “*reciprocity*” (p. 44). According to him, the key is learning and understanding together rather than telling and resisting new ideas.

Coaching

Teachers often become so frustrated and discouraged that they lose the desire to learn; some argue that if teachers are not learning, neither are their students (Knight, 2011). One way to combat this discouragement is to help teachers transform their teaching through peer coaching (Bolhuis & Voeten, 2001). Coaching, whether it be individual, group, or peer, is a collaborative partnership that involves goal-setting, reflective dialogue, and learning (Wang, 2013). The meaning of peer coaching has been transformed over the years. Before 1980, peer coaching was sending teachers to training and relying on them to learn the material and implement it in the classroom (Showers & Joyce, 1996). From 1980-1987, the idea surfaced that simply making changes in the organization and training design would solve the implementation issues while much of the focus in the 1990s was whole faculty buy-in and collaboration (Showers & Joyce, 1996). Training was believed to be the most beneficial when it consisted of modeling, practice teaching, teaching in the classroom, and feedback (Showers & Joyce, 1996). The transformation in peer coaching that has occurred now has some districts employing instructional coaches or partners as individuals who work with teachers to incorporate the concepts and strategies discussed during professional learning into their daily instructional practices.

Characteristics of effective coaches. Effective coaches are believed to be empathetic, non-judgmental, positive, and believe they can grow through participating in the coaching process (Wang, 2013). Ultimately, coaches scaffold the learning and guide their partners’

reflections (Schön, 1987; Hansman, 2001). The language used by coaches, specifically in framing questions and restating messages, is crucial to the teacher's reflective process (Arredondo et al., 1995). Guiding reflection requires verbal and nonverbal communication to include skills such as "attention to sensory information, rapport building, pausing, paraphrasing, probing, and checking perceptions" (Arredondo & Rucinski, 1998, p. 309). Coaches who display these characteristics show faith in those with whom they dialogue by respecting them as knowledgeable, autonomous individuals who show empathy for others by considering how they would operate in a similar situation (Knight, 2011).

In order for collaboration and coaching to thrive, a level of trust must be established (Arredondo Rucinski & Fueyo, 1994; Johnson & Altland, 2004; Schommer-Aikins, 2004; Baumgartner, 2001). Hoy, Gage, and Tarter (2006) described a culture of trust "as a setting in which people are not afraid of breaking new ground, taking risks, and making errors" (p. 237). Embodying the characteristics of an effective coach is one of the first steps to establishing a trusting environment, one in which the coaching process will flourish (Wang, 2013). Coaches can build trust by establishing the partnership, expressing concerns that arise, being attentive to the teacher participating in the coaching process, being committed to the process, and being very transparent about the coaching process (Wang, 2013).

One of the most important pieces of a partnership is equality; in regards to professional development, teachers are more receptive when administrators and coaches learn with them rather than tell them what they need to know and do (Gill, 2006; Schommer-Aikins, 2004; Guskey, 2000; Merriam, 2001a; Merriam, 2001b; Baumgartner, 2001). When teachers are told what to think or goals are set for them, they resist and are unmotivated to change (Dunaway et al., 2010). When coaches embody equality, they see equal value in others, respect others, listen

to others, and make decisions together rather than on their own (Knight, 2011). According to Wang (2013), creating an equal balance of power in the coaching relationship establishes the coach and participating teacher as equals, which can be empowering for the teacher.

Arredondo and Fueyo (1994) conducted a study focused on peer observations and coaching in higher education. The focus was on their personal experiences observing and coaching one another. Through journaling, both participants reflected on the observation occurrences in addition to their emotions and reactions pre-and post-observation. They described the anxious feelings teachers often experience when having a colleague observe; one participant said, “Both of us are excited, anxious, and nervous. Even though trust levels are high between us, I’m concerned that she not see me teaching at less than my best. I think she feels the same” (p. 108). Both participants described the benefits of participating in peer observation and coaching. They commented that trust is crucial for the success of the partnership, and one participant specifically said, “Our experiences suggest that peer observation and coaching as a way of improving instruction sets up the layers of trust developed in the process” (p. 110). Arredondo and Fueyo (1994) described the importance of formal reflection. One participant said that the experience “has reawakened a desire to more formally reflect on my practices of teaching and learning. My reflective journal has become a powerful tool in my scholarship and in my teaching” (p. 110). Ultimately, the findings from this study support the benefits of being a reflective practitioner and building trusting relationships where feedback is openly given and received.

Atkison and Bolt (2010) conducted a study focused on peer observations in higher education. While different from the coaching/partnership process previously described, the findings from this study support the partnership principles—reflective practice, equality, choice,

and voice. Atkison and Bolt (2010) found their study to be a success because educators volunteered to participate, it was a “collaborative approach,” and participants were given feedback on their instructional practices (p. 16). They found that this process led to a greater sense of community and that participants made significant changes to their instructional practices to include actively engaging students and emphasizing dialogue among the students.

In a study of cognitive development among mentors and mentees, Arredondo and Rucinski (1998) found that the mentor/mentee relationship had a positive impact on both parties involved. Based on journal entries from mentors, entering into structured dialogue led to some apprehension with concerns such as being knowledgeable enough to help mentees and breaking old habits of leading the conversation rather than listening; however, after three or four sessions, most mentors reported that they felt very comfortable engaging in dialogue with their mentee, and they felt more productive with open-ended dialogue, rather than previous behaviors such as giving explicit directives (Arredondo & Rucinski, 1998). One mentor reflected on his own practices by noting that he needed to demonstrate a warm and caring approach to those with whom he worked (Arredondo & Rucinski, 1998). One mentee noted that participating in the open-ended dialogue taught in the study provided the opportunity to reflect on daily teaching practices, which is something that is often neglected according to this mentee (Arredondo & Rucinski, 1998).

Reflection

Dewey (1910) described reflective thought as a process through which individuals consider what they know and believe. Zhao (2012) further defined reflection in the context of education as “the process through which teachers comprehend and learn from their teaching experiences and assign significance to their teaching practices” (p. 57). Learning from personal

experience requires individuals to reflect on their actions (Arredondo Rucinski & Bauch, 2006). Reflection should be a natural, daily routine for all educators (Schön, 1987; Baumgartner, 2001; National Board for Professional Teaching Standards, 2002; Standards for Professional Learning, 2011; Kilgore, 2001; Yesilbursa, 2011; Malkki & Lindblom-Ylänne, 2012).

Characteristics of Reflective Practitioners

Characteristics or actions of reflective practitioners include the following: collaborating and dialoguing with colleagues about instructional practice (Tripp & Rich, 2012); examining problems (Burbank, Bates, & Ramirez, 2012); examining instructional practices and considering the reasons for using those techniques (Liakopoulou, 2012; Donnelly & Fitzmaurice, 2011); improving instructional practices (Ryan, 2012; Donnelly & Fitzmaurice, 2011); being open to change (Donnelly & Fitzmaurice, 2011; Holloway & Gouthro, 2011); growing as a learner (Ryan, 2012; Lin & Lucey, 2010; Holloway & Gouthro, 2011); building professional knowledge (Jones, 2010); developing intra-personal skills (Jones, 2010; Sharma, Phillion, & Malewski, 2011; Lin & Lucey, 2010; Enfield & Stasz, 2011); using evidence to support their claims (King & Kitchener, 2004); reconsidering their beliefs (Arredondo Rucinski, 2005; King & Kitchener, 2004); and taking ownership of actions and beliefs (Arredondo Rucinski, 2005; Sharma et al., 2011).

Levels of Reflection

Schön (1987) wrote that in reflection one *looks back, looks at, and looks ahead*. *Looking back* is thinking about what did and did not work in a lesson and then making adjustments for future uses of the lesson (Schön, 1987). *Looking at* is a teacher thinking about a lesson while delivering it and making adjustments immediately as needed (Schön, 1987). *Looking ahead* is

considering a concept that needs to be taught and planning a specific strategy or activity to ensure the success of the lesson (Schön, 1987).

According to Arredondo Rucinski (2005), there are four levels that individuals may progress through as they become mature reflective practitioners: “(1) emergent use of reflective practice, (2) competent use of reflective practice, (3) expert use of reflective practice, and (4) ethical and socially just use of reflective practice” (p. 84). In the first level, educators are reviewing their practices and accepting feedback from colleagues (Arredondo Rucinski, 2005). With the second level, educators become much more involved by inviting feedback and then interpreting and asking questions about the feedback they received from others (Arredondo Rucinski, 2005). With the third level of reflective practice, educators take responsibility for their own actions and accept criticism without becoming defensive or trying to rationalize their behaviors (Arredondo Rucinski, 2005). In the fourth level, educators ask challenging questions that lead them to consider whether their actions are moral or ethical and the impact their actions have on those around them (Arredondo Rucinski, 2005).

Liakopoulou (2012) described three “forms” of reflection, and argued that reflection should be categorized as forms rather than levels of reflection because no one form is higher than another and all three forms are necessary in order to thoroughly reflect on teaching practices. Her three forms are technocratic reflection (analyzing methods and practices to ensure that requirements are being met), interpretative reflection (altering methods and practices to meet the students’ needs), and critical reflection (evaluating methods and practices “based on moral criteria derived from the social and political reality”) (Liakopoulou, 2012, p. 44).

Benefits of Reflection

Several studies have been conducted demonstrating the benefits of reflection on teacher practice. In a study of four teachers, two who were at the highest level instructionally and two who were at the average level instructionally, Zhao (2012) found that the more teachers participated in high-quality professional development, the more they reflected on their instructional practices. Specifically, Zhao (2012) found that teachers who participated in high-quality professional development engaged in critical and/or practical reflection (the highest and next to highest levels of reflection, respectively). In these reflections, they generated knowledge and became critically self-aware; whereas those who participated in PD that was externally controlled engaged in the technical reflection (the lowest level of reflection) where they were more concerned with refining their existing practices rather than evaluating the results of their current practices (Zhao, 2012).

Arredondo Rucinski and Bauch (2006) developed and tested the REMAS, which is a reflective, ethical, and moral assessment instrument, to determine the dispositions and practices individuals use in the work environment. The REMAS included the following components of reflection and ethical and moral leadership: (1) reflective leaders plan, dialogue about the plans, welcome feedback from colleagues, and are not offended when others raise questions and/or concerns; (2) consider their own views and analyze the feedback of others; (3) take ownership of their actions; and (4) examine whether actions and decisions are ethical, the effects of the actions and decisions, the motivation for the actions and decisions, and the moral character displayed (Arredondo Rucinski, 2005; Arredondo Rucinski & Bauch, 2006, p. 491). Their findings indicated that the participants believed their decisions and actions were usually made after much

ethical and moral consideration, which led to the interpretation that participants have learned the reflection and ethical/moral concepts and implemented them in their instructional practices.

High-Quality Professional Development

Zhao (2012) found that high-quality professional development can increase the level of teacher reflection. Professional development is defined as the activities designed to enhance teachers' knowledge, skills, attitudes, and instructional practices to raise student achievement (Guskey, 2000; Petrie & McGee, 2012). The central focus of professional development is expanding the abilities of the organization as a whole through the individual teachers (Guskey & Peterson, 1996).

Effective PD that targets teachers' needs in an open, collaborative environment meets the goal of using PD to foster positive change and growth (Guskey, 2000; Starkey, Yates, Meyer, Hall, Taylor, Stevens, & Toia, 2009). A crucial component to high-quality PD is the design. Guskey (2000) described three steps to designing intentional professional development: (1) define the purpose and goal of the PD, (2) examine the goals to confirm they are meaningful, and (3) develop a plan for assessing the goals. According to Guskey (2000), establishing clearly defined goals results in (1) professional development that is more meaningful and (2) PD that relates to the school and the educators' daily practices. Foster (2004) identified similar principles of adult learning and suggested the importance of creating ongoing opportunities (1) for practice with and feedback on innovations, (2) to learn, inquire, and reflect, (3) to collaborate with colleagues outside of school, and (4) to interact with university researchers. Well-designed professional development has practical examples such as assessments of student work that teachers can examine or modify for their own classes (Starkey et. al, 2009).

Elements of High-Quality Professional Development

Guskey (2003a) analyzed 13 different lists of the characteristics of effective professional development from publications such as the Association for Supervision and Curriculum Development, Educational Testing Services, National Partnership for Excellence and Accountability in Teaching, and National Staff Development Council. He noted that many of the studies determined effectiveness through surveys of opinions rather than empirical evidence. From this analysis, Guskey concluded (1) there is disagreement on a way to measure the effectiveness of professional development and (2) previous attempts to outline the elements of effective PD were unsuccessful primarily because the criteria were not agreed upon. Closer evaluations of effective PD led researchers to an alternative method to “*begin from the end and work backward*” (p. 35), which encouraged leaders to examine professional development methods that increased student learning by synthesizing the results of several studies. Backward planning includes decisions made at five different levels with each level shaping decisions made at the next level: desired student learning outcome(s) (Level 5), effective instructional practices that will lead to these outcomes (Level 4), support needed to implement the practices (Level 3), knowledge and skills needed to implement the instructional practices (Level 2), and learning experiences needed to help participants acquire the identified skills (Level 1) (Munoz, Guskey, & Aberli, 2009). This backward design model encourages leaders to focus on two questions during the PD planning process: (1) what are the desired outcomes, specifically relating to student learning and (2) what type of evidence demonstrates that the outcomes were achieved (Guskey, 2012).

While researchers have not agreed on the elements of high quality professional development (e.g., Guskey, 2003a), certain factors have emerged as being vital: ongoing,

content-driven, engaging, and collaborative. Guskey and Sparks (1996) argued that the quality of professional development is impacted by various factors including the content, process variables, and context. The content characteristics are basically any new knowledge and/or skills introduced to teachers (Guskey & Sparks, 1996). The process variables are the types of activities and the delivery and follow-up of those activities (Guskey & Sparks, 1996). The context characteristics include all of the organizational components such as the faculty involved in the training, when and where the training occurs, why specific individuals and/or topics are included in the training, and even unspoken pressures placed upon the faculty due to high expectations (Guskey & Sparks, 1996). These three factors are crucial in evaluating the quality of the PD; without them, the effectiveness of the PD and increased student achievement may decrease (Guskey & Sparks, 1996).

High-quality professional development is more likely to change teacher practice (Desimone, 2009) by engaging teachers in learning activities focused on improving their practice (Thoonen et al., 2011). There are several key features of well-designed professional development programs: clear vision (Guskey, 2000); understanding of the organization and improvements needed (Guskey, 2000); ongoing (Varela, 2012; Darling-Hammond & McLaughlin, 2011; Garet et al., 2001; Petrie & McGee, 2012; Guskey, 1994; Guskey, 1997; Knight, 2011); relevant (Starkey et al., 2009; Varela, 2012; Johnson & Altland, 2004); focused (Guskey, 2000); embedded (Hansman, 2001; Baumgartner, 2001; Garet et al., 2001); engaging (Standards for Professional Learning, 2011; Hansman, 2001; Desimone, 1991; Garet et al., 2001; Guskey, 2000; Jeanpierre et al., 2005; Luft, 2001; Stolk et al., 2009a; Varela, 2012; Darling-Hammond & McLaughlin, 2011; Clarke & Hollingsworth, 2002; Wade, 1984); grouped for teachers who have a common goal (Desimone, 1991); vertical and horizontal articulation (Wade,

1984); collaborative (Standards for Professional Learning, 2011; National Board for Professional Teaching Standards, 2002; Hansman, 2001; Merriam, 2001b; Marsick & Watkins, 2001; Kilgore, 2001; Baumgartner, 2001; Colbert et. al., 2008, Darling-Hammond & McLaughlin, 2011; Guskey, 2003a); focused on content (Colbert et. al., 2008; Desimone, 1991; Garet et al., 2001); differentiated (Drago-Severson, 2011); and designed to meet the needs of the participants (Doherty, 2011; Marsick & Watkins, 2001). Ultimately, high-quality professional development is based upon a clear focus that centers on the learning and the learners, a strategic effort that focuses on changes within the individuals and organization, a district or school vision that guides small, incremental changes, and ongoing, embedded professional learning opportunities (Guskey, 1997).

Ongoing, embedded PD. Professional development should be an on-going process because all educators should be life-long learners (National Board for Professional Teaching Standards, 2002; Baumgartner, 2001; Varela, 2012; Darling-Hammond & McLaughlin, 2011; Garet et al., 2001; Petrie & McGee, 2012; Guskey, 1994; Guskey, 1997). Guskey (2000) described professional development as “an ongoing activity woven into the fabric of every educator’s professional life. It is embedded in the process of developing and evaluating curricula, instructional activities, and student assessment” (p. 38). In their national study of the effects PD has on teacher practice, Garet et al. (2001) found that the length of the PD had a positive effect on engaging, collaborative learning opportunities. They noted that professional development sessions extended over a period of time were more engaging and provided teachers and administrators with collaborative opportunities to plan instructional activities, observations, and analysis of student work.

On-going, embedded professional development does not have to be an organized series of meetings; it can occur daily through classroom instruction with peer observations and self reflections, while reviewing and discussing curriculum as a content group, after reading and reflecting upon professional literature, and while conversing with colleagues (Guskey, 2000; Kwakman, 2003; Thoonen et al., 2011). Reform intended PD such as study groups and coaching are becoming more widespread by embedding professional learning opportunities throughout the school day either during planning periods or in the classroom during the teacher's daily instruction; the goal of reform PD is to make the learning meaningful and ongoing (Garet et al., 2001).

Collaboration. Several researchers have found that collaboration is important in order for professional growth to occur (Jeanpierre et al., 2005; Stolk et al., 2009a; Guskey, 1985; de Vries, van de Grift, & Jansen, 2013; Wells & Feun, 2007; Munthe, 2003); therefore, teachers need collaborative opportunities to share outcomes and seek solutions (Standards for Professional Learning, 2011; National Board for Professional Teaching Standards, 2002; Marsick & Watkins, 2001; Merriam, 2001b; Kiglore, 2001; Baumgartner, 2001; Hansman, 2001; Guskey, 2007; Drago-Severson, 2011). Collaboration “should include groups within the same school, same grade, or department so that teachers can work together in a focused environment while dealing with issues of common interest” (Colbert et al., 2008, p. 138). High-quality professional development is interactive with presenters modeling the strategies (Jeanpierre et al., 2005) to actively engage the participants and demonstrating how to implement the protocols in the classroom.

In an effort to make professional development useful for teachers, Howe and Stubbs (1996) developed the constructivist/sociocultural model of professional development, which

blends constructivist and sociocultural theory with Bell and Gilbert's (1994) ideas of professional, personal, and social development. This model has four goals that include teachers (1) increasing their content knowledge, (2) implementing this knowledge into their instructional practices, (3) increasing their level of confidence, and (4) collaborating more with colleagues (Howe & Stubbs, 1996).

The goal of the constructivist/sociocultural model is to provide the resources and skills teachers need to grow personally and professionally (Howe & Stubbs, 1996). A major tenet of constructivism is that knowledge is "constructed by the learner" (Howe & Stubbs, 1996, p. 169). According to Howe and Stubbs (1996), "Sociocultural theory focuses on social interaction among and between people as a primary source of knowledge that cannot be gained in isolation from other people" (p. 171). The constructivist/sociocultural model blends these two theories to suggest that "teachers construct new knowledge through social interactions in a context that encourages creativity and the free exchange of ideas" (Howe & Stubbs, 1996, p. 171). Under this model, professional learning evolves into a collaborative approach rather than the traditional "sit-and-get" method. The professional learning opportunities are facilitated in such a way that the participants play a role in the development of the curriculum and strategies which they implement in their instruction; the participants later reflect upon and share their ideas through continuous collaboration and dialogue with their colleagues.

There are several PD models that encourage active learning. Lieberman and Wilkins (2006) discussed the Professional Development Pathways (PDP) Model that promotes PD offerings that are individualized, collaborative, grade-level specific, and content driven, and it solicits teacher input in designing the PD. The four steps in the PDP Model include (1) assessing the needs of the school; (2) determining the pathway(s) needed whether it be individual,

collaborative, grade-level, or content; (3) reflecting on whether the professional development impacts student learning; and (4) reviewing the school or district improvement plan to determine how to modify future PD offerings to fit the needs of the district, school, and/or teacher.

Additionally, Guskey, Munoz, and Aberli (2009) described the Ramp-Up PD program that was designed to help close the gap for students who were at least two years behind grade level. The teachers participated in on-going PD where they developed strategies to implement in their classes. Participants were actively involved in the professional learning through discussions of successes, problems, and potential solutions in addition to developing activities to embed in their daily instruction. Ultimately, Guskey et al. (2009) found that the teachers were “exceptionally satisfied” with the three-day institute and continued learning opportunities because they were “collaborative” and “practical” (p. 36).

Further research supports designing professional development to actively engage participants. Colbert et al. (2008) studied the Francis P. Collea Teacher Achievement Award Program (CTAAP) that focuses specifically on teacher involvement and PD implementation. Overall, they found the CTAAP model to be very beneficial because it resulted in a greater sense of empowerment, confidence, value, and professionalism for those involved. Fifty-six percent of the participants said they were highly engaged in teamwork while 40% of the participants were moderately engaged in teamwork. Additionally, 40% of the CTAAP participants made major changes while 52% of the participants made moderate changes to their instructional practices. The teachers not only implemented new ideas in their instruction, but some also altered their style of teaching. According to Colbert et al., 27% of the participants made major adjustments to their styles of teaching while 46% of the participants made moderate adjustments. All CTAAP participants indicated that after participating in engaging PD they changed their instruction to be

more interactive, and 58% of participants indicated that they changed their instruction to be more student-centered. Consequently, Colbert et al. (2008) found that collaboration among colleagues and reflection on practices increased which led to greater implementation of concepts learned through the professional development.

As George and Lubben (2002) argued, professional learning opportunities that actively involve participants in developing their curriculum leads to empowerment and growth:

[T]he use of everyday contexts for materials development in itself causes teachers to reflect on desired teaching outcomes and, thus, helps them to take responsibility for their practice. This increased responsibility went hand-in-hand with a growing self-confidence, as illustrated by the remark that the materials development experience ‘brought out a degree of creativity I thought I lacked.’ (p. 668)

Professional development serves as the path to growth (Guskey, 2000). According to Dunaway, et al. (2010), professional growth increases when trust and open communication exist in the organization. Howe and Stubbs (1996) described the process of empowerment as an individual gaining the power to take control over his/her own growth, not an implication that someone has power over others. The Standards for Professional Learning (2011), specifically the Leadership standard, encourage “skillful leaders who develop capacity, advocate, and create support systems for professional learning” (p. 42).

Sparks’ (2004) two-tiered professional development plan encouraged collaboration and reflection to support professional growth. The first tier, which Sparks (2004) described as the most beneficial to teachers and students, promotes collaboration, reflection, and teacher voice. Colbert et al. (2008) found that tier one—creating a professional learning community—led to replacing traditional PD such as workshops with more collaborative activities such as mentoring, observing, and coaching. The PD promoted in tier one resulted in teacher collaboration, which led to increased content knowledge and dialogue about student achievement. Tier two, on the

other hand, was more prescriptive PD, that lacked teacher input; it did not encourage reflection or teacher voice and relied on “experts” for new knowledge (Sparks, 2004, p. 305). Sparks contended that while schools need a mix of tier one and two, tier two PD does not necessarily lead to instruction that students need to help them learn to collaborate and solve problems. The focus for school professional development according to Sparks, should be to “establish and maintain a school culture that stimulates teachers’ intellectual capacity and professional judgment and that enables sustained and respectful collegial interaction” (p. 306).

Teachers engage in reflective practice more as a result of collaborating with their colleagues (Thoonen et al., 2011; Miller & Marie-Crane Williams, 2013). As Colbert et al. (2008) argued, teacher collaboration and reflection during professional learning opportunities lead to increased implementation of the concepts learned through PD. In a study of teacher participation in CPD (Continuing Professional Development), de Vries et al. (2013) found that reflection (0.73) is the most important component of PD followed by collaboration (0.69) and updating knowledge and skills (0.48). An important component of professional development is to include time for reflection—an opportunity for teachers to think about their teaching practices and the content they are learning in professional development (Stolk et al., 2009a). As reflective practitioners, teachers become learning, growing, and contributing members of their school (Arredondo Rucinski, 2005). Martin et al. (2010) found a positive relationship between teacher reflection and student achievement and suggested that it is likely that teachers who are reflective may be more willing to modify their instruction to meet the needs of their students. Collaboration among teachers and administrators allows schools to enact change, accomplish goals, and reduce or eliminate barriers (Guskey, 2000).

Implementation. Implementation is the “participants’ use of new knowledge and skills” (Guskey, 2000, p. 191). Klein and Riordan (2009) conducted a study focused on implementation of PD and conceptualized six levels of implementation: no implementation/rejection, token implementation, mistaken implementation, direct implementation, adaptation level i: tinkering, and adaptation level ii: crafting and jiggering. Level one, *no implementation/rejection*, is not implementing skills, strategies, or concepts learned through PD because of a feeling that the learning does not fit with what is happening in the classroom at that point or with their students’ achievement levels. Level two, *token implementation*, is the teacher talking as if he/she understands the concepts learned through PD but does not show any evidence of implementing the ideas in his/her instruction. Level three, *mistaken implementation*, involves the blending of old and new practices in such a way that the methods are less effective than traditional practices and ultimately leads to a distortion of the techniques. Level four, *direct implementation*, occurs when teachers directly transfer a new technique from the PD to their instruction. Level five, *Adaption Level I: tinkering*, is when teachers modify techniques learned in PD and then implement those new ideas in their instruction. Level six, *Adaption Level II: crafting and jiggering*, occurs when teachers make their own modifications to PD concepts to meet their students’ needs.

From their study, Klein and Riordan (2009) identified specific factors that significantly influenced how teachers implemented the concepts, skills, and strategies they learned through participation in professional development: *engagement, content area beliefs and knowledge, assessment, and differentiation*. Engaging teachers in the professional development led to more excitement about the PD, which resulted in a greater degree of implementation of the concepts learned. In regards to *content area beliefs and knowledge*, Klein and Riordan (2009) “found that

teachers' beliefs about their content area seemed to have direct implications for how much they implemented" (p. 75). If teachers felt the information did not fit with their content, then they were unlikely to implement it. For purposes of *assessment*, teachers were less likely to implement information that did not support the state assessments. Finally, Klein and Riordan (2009) found that teachers were more likely to implement ideas learned through PD if the sessions were differentiated to meet the needs of each learner—that includes finding new ways to challenge experienced teachers. Ultimately, according to Klein and Riordan (2009), the implementation process "is not as clear as 'implemented' or 'not implemented' but that implementation happens in a variety of ways and that these ways are not linear" (p. 78).

The Role of Leadership

Administrators have an indirect effect on student learning through interactions with teachers in professional learning, supervision, and observation and by shaping school and district policies in areas such as curriculum, instruction, and assessment (Guskey & Sparks, 1996). The role of supervision is to improve instruction (Glanz, 1995; Hazi & Arredondo Rucinski, 2009). The learning of both students and adults is affected by their "feelings of acceptance, ability, safety, comfort, task clarity, and importance"; therefore, for learning to occur, it is important for school and district leaders to establish a supportive learning environment (Arredondo et al., 1995, p. 74). According to Arredondo Rucinski and Bauch (2006), "The achievement gap in the USA will continue to widen unless school administrators take on the new roles of engagement in reflective thinking, ethical and moral behavior, and commitment to social justice actions" (p. 488).

Much thought and planning accompanies applying new ideas because, according to Garet et al. (2001), implementation of new instructional practices may be impacted by numerous pieces

including curriculum, textbooks, required assessments, student characteristics, student mastery of previous content, and student expectations. According to Borko (2004), “meaningful learning is a slow and uncertain process for teachers” (p. 6). Successful leaders treat change as a process that consists of support and follow-up (Guskey, 1985). Teachers often leave professional development feeling that they cannot apply the knowledge they gained in the session to anything in their classroom (Lieberman & Wilkins, 2006). The implementation of new techniques is usually accompanied by unexpected problems; administrators’ support of and appreciation for teachers’ implementation efforts makes a tremendous impact on the teachers’ comfort level in incorporating new techniques in their lessons (Guskey, 2000). According to Guskey, PD leaders and/or school-level administrators alleviate participants’ anxiety when they assess the concerns of participants and incorporate more professional development, peer observations, or coaching into the schools’ daily practices.

Administrators can support teacher growth by understanding the processes through which teachers must travel in order to develop professionally (Clarke & Hollingsworth, 2002). The Interconnected Model of Professional Growth is another method for administrators to assist teachers in implementing new concepts. Clarke and Hollingsworth found that as educators grow in one area their process of reflection enacts change or growth in another area. This model has four domains: External (which includes aspects “outside the teacher’s personal world”); personal (which involves the teacher’s “knowledge, beliefs and attitudes”); practice (which is the teacher’s “professional experimentation”); and consequence (which involves the “consequences” for the teacher’s professional actions) (p. 951). Upon analyzing Hollingsworth’s (1999) EMIC study, they noted that the six teachers involved in the study made changes to their instructional practices (Clarke & Hollingsworth, 2002). One specific change in practice they noted was the

teachers' consistent implementation of teaching strategies learned through this PD. Teachers were encouraged to reflect and enact—reflect on what they had learned and then make changes to their current practices—because the ultimate goal of professional learning is growth.

Reflection is also a key role of administrators. According to Arredondo et al. (1995), when administrators model the act of reflecting, they have the ability to impact the school's culture. As described by Stolk et al. (2011), reflecting on the PD design process leads administrators to carefully consider the purpose of the components included in their professional development. Even though evaluation is a significant part of the PD design process, researchers (e.g., Fishman et al., 2003; Guskey & Sparks, 1991) argued that most evaluations represent feelings and changes teachers believe they have made in their instruction rather than measuring effectiveness through areas such as student achievement. According to Doppelt et al. (2009), the PD's full impact on student achievement is often unknown. Likewise, it is difficult to measure the direct or indirect effects of PD on student achievement since there are several factors that affect student achievement. Ultimately, evaluating professional development based on the changes teachers make in their daily practices and how these changes affect students will reveal whether the organization is accomplishing the desired goals (Sparks, 1996; Hall & Loucks, 1977).

Summary

Chapter II has presented a summary of the literature that is relevant to this research study. The literature characterizes and explains the principles of an effective partnership, characteristics of successful coaches, elements of reflective practice, and features of high-quality professional development that are grounded in the partnership principles. Partnership, coaching, reflection and professional development have been defined. The review of literature closes with a

discussion of the role of leadership in establishing an environment in which reflection and collaboration are successful.

Impact Schools, founded on the partnership principles, are devoted to enhancing professional learning (Knight, 2011). A partnership empowers teachers to reflect on and modify their practices to have the greatest impact on student learning (Wang, 2013; Johnson & Altland, 2004) and establishes everyone as equals where learning and growing occurs side-by-side (Merriam, 2001a; Merriam, 2001b; Baumgartner, 2001; Dirks, 2001; Bolhuis & Voeten, 2001; Wang, 2013). Teachers enjoy their practice less when they reflect less on their practice (Knight, 2011). In a study conducted among elementary school teachers, Thoonen et al. (2011) found that engaging in reflection has a greater impact on instructional practices than reading professional literature to stay updated on the latest trends in education. Reflective practice leads individuals to converse with themselves and invite feedback from colleagues (Arredondo Rucinski, 2005). Ultimately, reflective practice can reform teachers and whole schools by altering their thoughts on knowledge and learning (Arredondo Rucinski, 2005).

Well-designed professional development targets the teachers' subject matter knowledge and instructional practices by differentiating the sessions to concentrate on content and actively involving the participants (Borko, 2004). Martin et al. (2010) noted that PD for third grade teachers that focused on fostering a positive environment and PD for fifth grade teachers that focused on inquiry-based learning resulted in increased student achievement. In these two instances, the PD was designed specifically to meet the needs of the participants. Addressing teacher PD needs as a group based on pedagogical content areas is much easier than addressing the needs of each teacher; the struggle for administrators attempting to design professional

development directed at individual needs is that every teacher needs something different (Lieberman & Wilkins, 2006).

Ultimately, tightly focused, collaborative professional learning opportunities that are decided upon by the faculty influence practice because the PD has a greater rate of implementation in the teachers' daily instruction since the teachers feel they are valued members in the process and that the PD targets their needs. When teachers are not included in the process, they feel a sense of "disconnect" between the activities and "what they do in the classroom" (Colbert et al., 2008, p. 148).

CHAPTER III:
METHODOLOGY

Introduction

The study of the relationship between collaboration with an Instructional Partner and the level of teacher reflection is important for practitioners, especially if a possible connection between teacher reflection and student achievement can be documented. Research studies have been conducted on professional learning opportunities, reflection, and student achievement. However, this study is significant for practitioners in Alabama since the relatively new Instructional Partner Network program is being implemented in several districts.

A review of the literature shows the extensive research that has been conducted on effective professional learning opportunities and the impact these experiences have on educators. The intent of this study was to add to the existing body of research on professional learning opportunities that led to reflective practice and student learning. This research was designed to identify and measure the relationship between collaboration with an Instructional Partner and the level of teacher reflection, then to determine if there are any connections between teacher reflection and student achievement, and to describe teacher perceptions of the impact their collaboration with an Instructional Partner and level of reflection had on student learning.

The Instructional Partner Network was piloted by the Alabama Best Practices Center (ABPC) during the 2011-2012 school year. Alabama districts and schools employing Instructional Partners have been invited to participate in the IPN. IPs and their administrators

attend retreats during which they learn coaching principles and how to be effective coaches. IPs participate in ongoing professional learning opportunities to continuously refine their practices.

Purpose

The purpose of this study was to examine the influence of collaboration with an Instructional Partner on the level of teacher reflection regarding their daily instructional practices and identify whether there was a connection between the level of teacher reflection and student achievement. The REMAS was used to gather data about teacher perceptions of their reflective behaviors and about teacher perceptions of their collaboration with an IP. The questionnaire was administered to Pre-K-12 grade teachers in 10 elementary, middle, and high schools in one suburban Alabama school district. Student achievement was measured through the ACT Aspire in reading and mathematics for students in elementary and middle school, through the ACT Plan in reading and mathematics for students in grade 10, and through the ACT in reading and mathematics for students in grades 11 and 12. Chapter III provides the rationale and describes the research design, data collection procedures, and measures for this mixed methods study.

Research Questions

The primary research questions guiding this study include the following:

- (1) How does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices;
- (2) What patterns exist between the teachers' level of reflection and student achievement; and
- (3) How do teachers perceive that collaboration with an Instructional Partner influences their level of reflection, instructional practice, and student learning?

Research Design

The research design was a non-experimental mixed method measuring the relationship between collaboration with an Instructional Partner and the level of teacher reflection. The teacher was the unit of analysis for this research study. Participants included Pre-K-12 teachers from 10 public elementary, middle, and high schools in one suburban district in northern Alabama. The goal was for all available teachers in each school to take the survey to ensure that various perspectives on teacher reflection were obtained. The *independent variable* for this study was the collaboration that exists among teachers and the Instructional Partner. The *dependent variables* for this study was the level of teacher reflection as measured through the REMAS and student achievement as measured through the ACT Aspire, ACT Plan, and the ACT. The *control variables* considered in this study included the following: socioeconomic status of schools (SES), grade level(s) taught, content/subject(s) taught, highest level of education, and total years of teaching experience. The Alabama State Department of Education website was used to determine the socioeconomic status of the schools participating in this study. The survey was accessed using *Qualtrics*. Survey responses were analyzed using the *Statistical Package for the Social Science* (SPSS). The data was subjected to descriptive statistics and Pearson's correlation coefficient to determine relationships between the independent and dependent variables.

Data Sample

The sample consisted of approximately 460 Pre-K-12 certified faculty members employed in six elementary schools, two middle schools, and two high schools in one suburban district in northern Alabama. Data for this mixed method study was collected from participating schoolteachers following superintendent, principal, and teacher permission.

A total of 10 schools participated in the study: six elementary schools, two middle schools, and two high schools. The district employs more than 600 certified employees and 9,300 students with an average of 20.53% of students qualifying for free or reduced meals. The six elementary schools will be referred to as Schools A, B, C, D, F, and G; the two middle schools will be referred to as Schools H and I; the two high schools will be referred to as Schools J and K.

School A is a K-6 elementary school with an approximate population of 50 faculty members and 700 students with 21.90% qualifying for free or reduced meals. School B is a K-6 elementary school with an approximate population of 50 faculty members and 720 students with 25.45% qualifying for free or reduced meals. School C is a K-6 elementary school with an approximate population of 50 faculty members and 645 students with 26.32% qualifying for free or reduced meals. School D is a K-6 elementary school with an approximate population of 40 faculty members and 560 students with 25.37% qualifying for free or reduced meals. School F is a Pre-K-6 elementary school with an approximate population of 55 faculty members and 750 students with 22.64% qualifying for free or reduced meals. School G is a K-6 elementary school with an approximate population of 34 faculty members and 400 students with 22.80% qualifying for free or reduced meals. School H is a 7-8 middle school with an approximate population of 50 faculty members and 750 students with 20.61% qualifying for free or reduced meals. School I is a 7-8 middle school with an approximate population of 50 faculty members and 800 students with 18.84% qualifying for free or reduced meals. School J is a 9-12 high school with an approximate population of 100 faculty members and 1850 students with 17.06% qualifying for free or reduced meals. School K is a 9-12 high school with an approximate population of 100 faculty members and 1450 students with 18.30% qualifying for free or reduced meals.

Data Collection Procedures

The first step in the research process was to obtain approval from the IRB, district superintendent, and school principals in order for the schools to participate in this study. The researcher offered to meet with the principals and superintendent to explain the purpose of the study, data collection procedures, and to answer any specific questions the school leaders may have had. The researcher presented a short explanation of the survey, its purpose, and steps taken to protect participant confidentiality. Teachers were given an informed consent letter explaining that (1) participation was voluntary and that they could opt-out of or discontinue the survey process if necessary and (2) they were not required to respond to questions that made them feel uncomfortable. After receiving IRB and school system approval, surveys were distributed via email. Teachers were asked to complete the survey within one week of receiving the survey link. Teachers received a written explanation about the survey indicating how the results were to be used. Participants were asked to share demographic information, such as the grade and/or subject they taught and their years of experience, but they remained anonymous. One questionnaire was used to collect the data to answer the identified research questions and coded through the Alabama State Department school identification codes to identify individual schools participating in this study. Teachers were asked to complete the Reflective, Ethical, and Moral Assessment Survey (Arredondo Rucinski & Bauch, 2006) to assess their perceived use of reflective, ethical, and moral dispositions which may be a result of participating in engaging and collaborative professional learning opportunities. Teachers were also asked to respond to six free response questions about their perceptions of the effects of the district's participation in the IPN on teacher reflection and student learning.

Student achievement data was collected on students in elementary, middle, and high school in the subject areas of reading and mathematics. The Alabama state accountability assessments given during the 2013-2014 school year include the ACT Aspire, ACT Plan, and the ACT. All students in grades 3-8 participated in the state ACT Aspire assessment and all students in grade 11 participated in the state ACT assessment during the spring semester of the 2013-2014 school year. Secondary ACT assessments are grade-level specific: students in grade 10 participate in the ACT Plan and students in grade 11 participate in the ACT plus Writing assessment. Student achievement results will be reported by grade level for the entire district and individually for all participating schools.

Variables and Instrumentation

One questionnaire was used to collect the quantitative and qualitative data for this study: the Reflective, Ethical, and Moral Assessment Survey (Arredondo Rucinski & Bauch, 2006). The *independent variable* for this study was the collaboration that exists among teachers and the Instructional Partner. The *dependent variables* for this study was the level of teacher reflection as measured through the REMAS and student achievement as measured through the ACT Aspire, ACT Plan, and the ACT. The *control variables* considered in this study included the following: socioeconomic status of schools (SES), grade level(s) taught, content/subject(s) taught, highest level of education, and total years of teaching experience. Table 1 shows the research questions, variables stemming from each research questions, the data used to measure each variable, and the method of analyzing the data.

Table 1

Summary of Research Questions, Variables, Measures, and Analysis

| Research Questions | Variables | Measure | Analysis |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| How does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices? | 1. Collaboration 2. Reflection | 1. Free Response Survey Questions (35-40) 2. Total Score on the REMAS | 1. Coding 2. Factor Analysis, MANOVA, Descriptive Statistics and Pearson's Correlation |
| Is there a pattern between the teachers' level of reflection and student achievement? | 1. Reflection 2. Student Achievement | 1. Total Score on the REMAS 2. ACT Aspire, ACT Plan, ACT | 1. Descriptive Statistics and Pearson's Correlation 2. Descriptive Statistics |
| How do teachers perceive that collaboration with an Instructional Partner influences their instructional practice and student learning? | 1. Collaboration 2. Student Achievement | 1. Free Response Survey Questions (35-40) 2. ACT Aspire, ACT Plan, ACT | 1. Coding 2. Descriptive Statistics |

Collaboration. Constitutively, *collaboration* is defined as “groups [of teachers] within the same school, same grade, or department [...] [who] work together in a focused *environment* while dealing with issues of common interest” (Colbert et al., 2008, p. 138). Operationally, *collaboration* will be measured through the six free response questions on the survey distributed to teachers. The free response questions include the following: (35) what types of professional learning have you participated in with your Instructional Partner and/or colleagues, (36) does reflection empower you as a teacher, (37) has collaboration among the faculty increased as a result of school or district professional learning opportunities, (38) do you feel increased teacher reflection positively influences student achievement, (39) have you become a more reflective teacher after collaborating with your Instructional Partner and/or colleagues, and (40) what

specific changes have you noticed (either in your instructional practices or student learning) as a result of collaborating with the Instructional Partner at your school? These six free response questions were analyzed through coding. According to Creswell (2007), this process begins with open coding in which data is identified by “its major categories of information” (p. 64). The final step in the process was selective coding in which the researcher developed hypotheses or “a visual picture” based on the teachers’ responses to the six free response questions (Creswell, 2007, p. 65).

Reflection. *Reflection* is constitutively defined as “the process through which teachers comprehend and learn from their teaching experiences and assign significance to their teaching practices” (Zhao, 2012, p. 57). Operationally, the level of teacher reflection was measured by the Reflective, Ethical, and Moral Assessment Survey (REMAS, Arredondo Rucinski & Bauch, 2006).

The REMAS is a 34-item, six-point Likert-type scale with a response set that ranges from 1 = not at all to 6 = often. This measure has four dimensions (factors): ethical/moral (ETHMORDM) based on 11 items, reflective (REFLDMS) based on 10 items, defensive behaviors (DEFENBEH) based on 5 items, and ethical priority (ETHPRIOR) based on 3 items. Sample items include *how frequently do you* (1) examine decisions from an ethical moral perspective, (2) view workplace decisions and actions as having moral and ethical dimensions, (3) ask questions about your own perspectives, (4) review actions in conversations, (5) invite feedback from others, (6) become defensive when questioned by others, and (7) deny responsibility for decisions you make. According to Arredondo Rucinski and Bauch (2006), the internal consistency was moderately strong for the following: (1) the measure overall with Cronbach’s $\alpha = 0.72$, (2) the DEFENBEH with Cronbach’s $\alpha = 0.71$, and (3) the ETHPRIOR

with Cronbach's $\alpha = 0.72$. The internal consistency was very strong for ETHMORDM with Cronbach's $\alpha = 0.91$ and REFLDMS with Cronbach's $\alpha = 0.89$ (Arredondo Rucinski & Bauch, 2006).

Student achievement. Constitutively, *student achievement* is defined as the evidence of student learning analyzed through assessments measuring student performance against specific standards (GAO, 2009). Operationally, *student achievement* was measured through the ACT Aspire, ACT Plan, and the ACT.

The ACT Aspire is a longitudinal assessment system that uses “summative assessments that measure how much students have learned over time, as well as aligned classroom-based assessments that help educators better understand students’ learning needs in individual classes throughout the school year” (ACT Aspire, 2014). According to ACT (2014a), the ASPIRE has the ability to assist teachers and administrators in identifying gaps in learning at earlier ages. Students taking the ACT Aspire are tested in English, math, reading, and science (ACT Aspire, 2014). Additionally, all students tested are required to demonstrate writing skills (ACT Aspire, 2014).

“ACT’s College and Career Readiness System provides a longitudinal approach to educational and career planning through assessment, curriculum support, and student evaluation” (ACT, 2014a). The “ACT Plan helps 10th graders build a solid foundation for future academic and career success and provides information needed to address school district’s high priority issues” (ACT Plan, 2014). The ACT tests students in the areas of English, math, reading, science, and an optional writing assessment. For the test administration being used for this study, students are required to complete the writing assessment.

Data Analysis

Quantitative and qualitative methodologies were applied in this research study. The *independent variable* for this study was the collaboration that exists among teachers and the Instructional Partner. The *dependent variables* for this study were the level of teacher reflection as measured through the REMAS and student achievement as measured through the ACT Aspire, ACT Plan, and the ACT. Teachers were also asked six free response questions about their perceptions of the effects their collaboration with an IP had on student learning and their own level of reflection. The teachers were the unit of analysis for this study. The survey was accessed using *Qualtrics*. Survey responses were entered by the researcher into and analyzed using the *Statistical Package for the Social Science* (SPSS). Descriptive statistics and correlation analysis were used to determine relationships between the independent and dependent variables. The results of these statistical analyses will be presented in Chapter IV.

Summary

Chapter III has described the research design, measure, and variables that apply to this study of the proposed relationship between teacher collaboration with an Instructional Partner and the level of teacher reflection. This study uses Arredondo Rucinski and Bauch's (2006) REMAS to assess the teachers' perceived use of reflective, ethical, and moral dispositions that may be a result of participating in engaging and collaborative professional learning opportunities.

CHAPTER IV:

RESULTS

Introduction

The purpose of this research was designed to identify and measure the relationship between collaboration with an Instructional Partner and the level of teacher reflection, then to determine if there were any connections between teacher reflection and student achievement, and finally to describe teacher perceptions of the impact their collaboration with an Instructional Partner and level of reflection had on student learning. The following research questions were used to guide the study:

- (1) How does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices;
- (2) What patterns exist between the teachers' level of reflection and student achievement; and
- (3) How do teachers perceive that collaboration with an Instructional Partner influences their level of reflection, instructional practice, and student learning?

The REMAS questionnaire was used, with the addition of demographic data and six free response questions, along with student achievement data to investigate the proposed research questions. In order to identify relationships between collaboration and reflection for research question 1, factor analysis, MANOVA, descriptive statistics and Pearson's correlation coefficients were used to analyze REMAS responses and coding was used to analyze the open-

ended question responses. For research question 2, descriptive statistics and Pearson's correlation coefficients were used to analyze the REMAS responses and descriptive statistics was used to analyze student achievement data in order to identify patterns between reflection and student achievement. For research question 3, coding was used to analyze open-ended question responses, and descriptive statistics was used to analyze student achievement data in order to examine teachers' perceptions of the influence collaboration had on their instructional practice and student learning. Factor analysis was used (1) as "a method of data reduction" and (2) because it was useful when investigating "concepts that [were] not easily measured" (Institute for Digital Research and Education, 2015a; Garrett-Mayer, 2006; Rahn, 2013). Principal Axis Factoring using the oblimin type of oblique rotation was also conducted in order to reduce the cross-loading of the variables. MANOVA was used (1) to test for significant differences between the variances and (2) because there were "multiple dependent variables that [could not] be combined" (Institute for Digital Research and Education, 2015b). Descriptive statistics was used to organize (chart) and analyze (draw conclusions from) the data questions (Peck et al., 2010). Pearson's correlation coefficients were used to show if there was an association between variables (Peck et al., 2010). Coding was used because it allowed the researcher to group segments based on common characteristics; codes use "keywords, phrases, mnemonics, or numbers" to identify commonalities in the text (Glaser & Laudel, 2013). According to Glaser and Laudel (2013), "the core idea of coding is that the texts containing the raw data are *indexed*."

Chapter IV presents the findings in two sections. The first section describes the teacher demographic and descriptive data for gender, age, teaching experience, level of education, grade level(s) taught, and subject(s) taught. The second section describes the major findings for each research question. This chapter concludes with a summary of the findings.

Demographic and Descriptive Data

The targeted population of the study consisted of 460 Pre-K – 12th grade certified teachers from 10 elementary, middle, and high schools in one suburban district in Alabama. Of the 460 elementary and secondary certified teachers eligible to complete the survey, 196 completed the survey for a return rate of 40%. Table 2 presents the summary of participant demographic data.

Of the 196 participants, gender specific data indicated that there were more female respondents, 139, than male respondents, 47; 10 participants did not provide a response (see Table 2). Females accounted for 71% and males accounted for 24% of the total respondents with 5% providing no response for gender. The respondents' age ranged from 21 years to more than 58 years old with 7% of respondents ranging in age of 21 to 27, 17% of respondents ranging in age of 28 to 35, 26% of respondents ranging in age of 36 to 43, 29% of respondents ranging in age of 44 to 51, 10% of respondents ranging in age of 52 to 58, 5% of respondents over 58 years of age, and 6% of participants not marking the age range. Teacher experience data indicated that of the 196 respondents, 2% were in their first year of teaching, 11% had 1 to 5 years experience, 16% had 6 to 10 years experience, 27% had 11 to 15 years experience, 18% had 16 to 20 years experience, 9% had 21 to 25 years experience, 11% had more than 25 years experience, and 6% did not respond to this question. Highest level of education data indicated that of the 196 respondents, 34% held a Bachelor's degree, 53% held a Master's degree, 9% held a Specialists degree, less than 1% held a Doctorate degree, and 3% did not respond to this question.

Table 2

Summary of Participant Demographic Data

| Participants | | Total | |
|------------------------|-----------------------|----------------|------|
| | | <i>n</i> = 196 | % |
| Gender | Male | 47 | 24.0 |
| | Female | 139 | 70.9 |
| | No response | 10 | 5.1 |
| Age | < 21 | 0 | 0 |
| | 21 - 27 | 14 | 7.1 |
| | 28 - 35 | 34 | 17.3 |
| | 36 - 43 | 51 | 26.0 |
| | 44 - 51 | 56 | 28.6 |
| | 52 - 58 | 20 | 10.2 |
| | > 58 | 10 | 5.1 |
| | No response | 11 | 5.6 |
| Experience | < 1 | 4 | 2.0 |
| | 1 - 5 | 22 | 11.2 |
| | 6 - 10 | 31 | 15.8 |
| | 11 - 15 | 52 | 26.5 |
| | 16 - 20 | 36 | 18.4 |
| | 21 - 25 | 18 | 9.2 |
| | > 25 | 22 | 11.2 |
| | No response | 11 | 5.6 |
| Education | Bachelor's | 66 | 33.7 |
| | Master's | 103 | 52.6 |
| | Specialists | 17 | 8.7 |
| | Doctorate | 1 | .5 |
| | No response | 9 | 4.6 |
| Grade Level(s) Taught* | Pre-K | 13 | 6.6 |
| | Kindergarten | 26 | 13.3 |
| | 1st | 24 | 12.2 |
| | 2nd | 28 | 14.3 |
| | 3rd | 24 | 12.2 |
| | 4th | 31 | 15.8 |
| | 5th | 30 | 15.3 |
| | 6th | 26 | 13.3 |
| | 7th | 41 | 20.9 |
| | 8th | 44 | 22.4 |
| | 9th | 94 | 48.0 |
| | 10th | 98 | 50.0 |
| | 11th | 105 | 53.6 |
| Subjects Taught* | 12th | 96 | 49.0 |
| | Reading | 62 | 31.6 |
| | Social Sciences | 57 | 29.1 |
| | English/Language Arts | 82 | 41.8 |
| | Mathematics | 72 | 36.7 |
| | Science | 69 | 35.2 |
| | Fine Arts | 12 | 6.1 |
| | Career Tech | 24 | 12.2 |
| | Health | 13 | 6.6 |
| | Special Services | 24 | 12.2 |
| | World Languages | 9 | 4.6 |
| | Physical Education | 8 | 4.1 |
| | Driver's Education | 6 | 3.1 |

* Those surveyed were asked to check all that apply.

The demographic questions asking respondents to indicate grade level(s) and content taught asked those surveyed to check all that applied. Therefore, percentages for grade level(s) and subject(s) taught were not mutually exclusive. For example, respondents were potentially counted in both elementary and high school categories if at some point in their career they had taught at both levels. Data of grade level(s) taught indicated that 202 out of 196 respondents had taught or were currently teaching at the elementary school level, 85 out of 196 had taught or were currently teaching at the middle school level, and 393 out of 196 had taught or were currently teaching at the high school level. Content area data indicated that 342 out of 196 respondents had taught or were currently teaching core academic classes at the elementary and/or secondary level(s) and 168 out of 196 respondents had taught or were currently teaching elective classes at the elementary and/or secondary level(s).

Major Findings

REMAS Validity and Reliability

The questionnaire used for this research was the Reflective, Ethical, and Moral Assessment Survey (REMAS, Arredondo Rucinski & Bauch, 2006). The REMAS is a 34 item six-point Likert-type scale with a response set that ranges from 1 to 6. A pilot study and test calculations were conducted on the internal consistency of the REMAS when it was first developed in 2004. Some wording changes were made to the REMAS, and then data were collected a second time. This analysis revealed that the REMAS is valid and reliable:

Cronbach's α coefficients indicated moderately strong internal consistency for the overall scale (Cronbach's $\alpha = 0.72$) and very strong for the ETHMORDM (Cronbach's $\alpha = 0.91$) and the REFLDMS (Cronbach's $\alpha = 0.89$); the DEFENBEH Cronbach's α was 0.71 and the ETHPRIOR Cronbach's α was 0.72. (Arredondo Rucinski & Bauch, 2006, p. 501)

Research Question One

The first research question of this study examined the relationship between teacher collaboration and the level of reflection on instructional practices. The researcher investigated the following question: how does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices?

Table 3 breaks down the responses to the REMAS questionnaire by the number of respondents, range, mean, standard deviation, and factor loading to show the number of respondents who answered each question (N), the ratings on the 1 – 6 scale that were selected by one or more respondents (range), the average rating selected for each question (mean), the spread of the ratings (standard deviation), and the correlation between the questions and the dimensions (factor loading).

Table 3 shows that not all 196 respondents answered the questions in the REFLDMS section of the survey. As shown in Table 3, the mean was pulled toward the higher numbers for the REFLDMS questions, which means that the respondents were inclined to report reflective behaviors. Table 3 also shows that all rating levels (1 – 6) were marked by at least one respondent, which means that the reflective behaviors of the respondents ranged from “not at all” to “often.” The spread of the range was further supported by the standard deviation as it demonstrated that while the mean was pulled toward the higher numbers, not all respondents indicated that they actively reflected on their instructional practices. The factor loading values of .7 or higher demonstrated that not only did teachers' scores show they were highly reflective, but also showed that the questions in the REFLDMS section were strong indicators of reflective behaviors.

Again, Table 3 shows that not all 196 respondents answered the questions in the DEFENBEH section of the survey. As shown in Table 3, the mean was pulled toward the lower numbers for the DEFENBEH questions, which means that the respondents were not inclined to report that they exhibited defensive behaviors. Table 3 shows that not all of the rating levels (1 – 6) were selected, specifically rating 6 “often,” which means that responses did not range from “not at all” to “often” in all areas of the DEFENBEH dimension. The smaller spread of the range was further supported by the standard deviation as it demonstrated that the mean was pulled toward the lower numbers. Again, the factor loading values were strong with scores close to .7, which indicated that teachers’ scores did not lean toward defensive behaviors and that the questions in the DEFENBEH section were strong indicators of defensive behaviors.

Table 3 shows that not all 196 respondents answered the questions in the ETHMORDM section of the survey. As shown in Table 3, the mean was pulled toward the higher numbers for the ETHMORDM questions, which means that the respondents were more inclined to exhibit ethical and moral behaviors. Table 3 shows that all of the rating levels (1 – 6) were selected, which means that the ethical priority of the respondents ranged from “not at all” to “often.” The spread of the range was further supported by the standard deviation as it demonstrated that while the mean was pulled toward the higher numbers, not all respondents indicated that they always exhibited ethical and moral behaviors. The factor loading values were lower but still strong, ranging from .612 to over .8, which demonstrated that teachers leaned toward ethical/moral decisions and that the questions in the ETHMORDM section were strong indicators of ethical and moral decision-making.

Table 3 shows that not all 196 respondents answered the questions in the ETHPRIOR section of the survey. As shown in Table 3, the mean was in the center for the ETHPRIOR

questions, which means that the respondents were more neutral about how they prioritized some ethical behaviors. Table 3 shows that all of the rating levels (1 – 6) were selected, which means that the ethical and moral behaviors of the respondents ranged from “not at all” to “often.” The spread of the range was further supported by the standard deviation as it demonstrated that while the mean was in the center, responses ranged from “not at all” to “often.” The factor loading values were fair with most of the values ranging from .5 to .7 but one dipping to .2. The discrepancy in values could possibly indicate that while the questions were strong indicators of ethical priority, some teachers had not had the experiences to accompany the situations posed in the questions because the situations were more administrative in nature.

Table 3

REMAS Question Categorization and Descriptive Statistics

| Factor Name | Question asked in the survey | N | Maximum | Mean | Std. Deviation | Factor Loading |
|------------------------|--------------------------------------------------------------------------------------------------|-------------|---------|-------|----------------|----------------|
| REFLDMS | Review actions in conversations? | 187 | 6 | 4.72 | 1.231 | .751 |
| | Ask questions about assumptions and underlying actions? | 187 | 6 | 4.38 | 1.209 | .778 |
| | Invite feedback about actions? | 187 | 6 | 4.53 | 1.170 | .704 |
| | Respond to feedback from others with clarifying questions or paraphrased statements? | 186 | 6 | 4.35 | 1.173 | .829 |
| | Ask questions about perspectives of others? | 187 | 6 | 4.55 | 1.192 | .838 |
| | Ask questions about your own perspective? | 186 | 6 | 4.49 | 1.231 | .804 |
| | Construct meaning in conversations? | 187 | 6 | 4.63 | 1.102 | .791 |
| | Interpret and check interpretations of others? | 185 | 6 | 4.45 | 1.123 | .883 |
| | Plan actions? | 186 | 6 | 4.87 | 1.112 | .665 |
| | Describe plans and check plans with others? | 185 | 6 | 4.54 | 1.255 | .662 |
| | $\bar{x} =$ | 186 | | 4.544 | 1.1798 | |
| DEFENBEH (Reversed) | Become defensive when questioned by others? | 187 | 5 | 2.57 | 1.191 | .659 |
| | Deny responsibility for decisions or actions you take? | 186 | 6 | 1.70 | 1.122 | .651 |
| | Intentionally screen out criticisms, e.g., Use expressions like, "I don't remember saying that"? | 185 | 5 | 1.76 | 1.011 | .855 |
| | Rationalize behaviors, e.g., "I only did that because"? | 187 | 6 | 2.33 | 1.106 | .628 |
| | Blame others, e.g., "I could not do that because policy/past practice/ others/ forbid it"? | 186 | 6 | 2.03 | 1.083 | .626 |
| | | $\bar{x} =$ | 186 | | 2.078 | 1.1026 |

Table 3 continued...

| Factor Name | Question asked in the survey | N | Maximum | Mean | Std. Deviation | Factor Loading |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----|---------|-------|----------------|----------------|
| ETHMORDM* | View workplace decisions and actions as having moral and ethical dimensions? | 186 | 6 | 4.59 | 1.442 | .748 |
| | Ask the question: "Is this a moral action?" | 184 | 6 | 4.38 | 1.528 | .923 |
| | Ask: "Is this an ethical decision?" | 186 | 6 | 4.40 | 1.547 | .936 |
| | Ask: "What is likely to be the result of this action on fellow employees?" | 187 | 6 | 4.19 | 1.412 | .761 |
| | Ask: "What is the likely result on future practice?" | 187 | 6 | 4.29 | 1.304 | .658 |
| | Ask: "What is the likely result on policy?" | 186 | 6 | 3.75 | 1.453 | .572 |
| | Ask: "What is the likely result on clients or customers?" | 184 | 6 | 4.34 | 1.495 | .637 |
| ETHMORDM | Ask: "What is the likely result on society in general?" | 184 | 6 | 3.79 | 1.480 | .542 |
| | Ask: "What is the likely effect on marginalized or disadvantaged groups?" | 185 | 6 | 3.95 | 1.484 | .475 |
| | Examine decisions from an ethical or moral perspective? | 182 | 6 | 4.73 | 1.266 | .847 |
| | Ask: "Is this decision right or wrong?" | 184 | 6 | 5.03 | 1.256 | .779 |
| | Exhibit moral or ethical motivation in the workplace (i.e., prioritize moral and ethical values relative to other values)? | 184 | 6 | 4.85 | 1.265 | .805 |
| | Exhibit moral or ethical character in the workplace (i.e. demonstrate sensitivity, courage, persistence, and implementation behaviors)? | 185 | 6 | 5.10 | 1.109 | .612 |
| | $\bar{x} =$ | 184 | | 4.414 | 1.3877 | |

Table 3 continued...

| Factor Name | Question asked in the survey | N | Maximum | Mean | Std. Deviation | Factor Loading |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------|------|----------------|----------------|
| ETHPRIOR | Rate the needs of employees first and above future practice, policy, clients or customers, society in general, or persons from disadvantaged groups? | 184 | 6 | 3.53 | 1.330 | .206 |
| | Rate practice first and above the needs of employees, policy, clients/customers, society in general, or persons from disadvantaged groups? | 182 | 6 | 3.30 | 1.235 | .731 |
| | Rate policy first and above the needs of employees, future practice, clients/customers, society in general, or persons from disadvantaged groups? | 183 | 6 | 3.10 | 1.303 | .669 |
| | Rate clients/customers first and above the needs of employees, future practice, or persons from disadvantaged groups? | 180 | 6 | 3.93 | 1.414 | .523 |
| | Rate the needs of society in general first, and above the needs of employees, future practice, policy, clients/customers, or persons from disadvantaged groups? | 180 | 6 | 3.12 | 1.276 | .650 |
| | Rate the needs of persons from disadvantaged groups first and above those of employees, future practice, policy, clients/customers, or society in general? | 178 | 6 | 3.52 | 1.236 | .704 |
| | $\bar{x} =$ | | 181 | | 3.417 | 1.299 |

The internal consistency among variables was determined by factor analysis. Table 4 displays the total possible number of factors, which was 34. However, only four factors were identified in the study and were therefore closely examined. The total percent of variance for each factor was identified at 6.743, 7.808, 11.373, and 36.950. The four dimensions accounted for the majority of the variances at 62.874. As shown in Appendix E, the scree plot started to flatten around factor number 7, indicating that each factor accounted for a smaller amount of the total variance (Rahn, 2013). Future research may indicate more factors for the REMAS.

Table 4

Factor Analysis

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings ^a |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|------------------------------------------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total |
| 1 | 12.563 | 36.950 | 36.950 | 12.201 | 35.885 | 35.885 | 10.471 |
| 2 | 3.867 | 11.373 | 48.323 | 3.440 | 10.118 | 46.003 | 9.357 |
| 3 | 2.655 | 7.808 | 56.131 | 2.207 | 6.492 | 52.495 | 2.857 |
| 4 | 2.293 | 6.743 | 62.874 | 1.847 | 5.431 | 57.926 | 4.668 |
| 5 | 1.447 | 4.257 | 67.131 | | | | |
| 6 | 1.146 | 3.369 | 70.500 | | | | |
| 7 | .969 | 2.849 | 73.349 | | | | |
| 8 | .851 | 2.503 | 75.852 | | | | |
| 9 | .824 | 2.423 | 78.275 | | | | |
| 10 | .682 | 2.007 | 80.282 | | | | |
| 11 | .647 | 1.903 | 82.185 | | | | |
| 12 | .544 | 1.600 | 83.785 | | | | |
| 13 | .516 | 1.518 | 85.303 | | | | |
| 14 | .506 | 1.487 | 86.790 | | | | |
| 15 | .475 | 1.397 | 88.187 | | | | |
| 16 | .408 | 1.201 | 89.388 | | | | |
| 17 | .362 | 1.064 | 90.452 | | | | |
| 18 | .352 | 1.035 | 91.488 | | | | |
| 19 | .318 | .936 | 92.424 | | | | |
| 20 | .308 | .907 | 93.331 | | | | |
| 21 | .272 | .801 | 94.132 | | | | |
| 22 | .258 | .759 | 94.891 | | | | |
| 23 | .238 | .701 | 95.592 | | | | |
| 24 | .214 | .629 | 96.221 | | | | |
| 25 | .209 | .616 | 96.837 | | | | |
| 26 | .185 | .543 | 97.380 | | | | |
| 27 | .158 | .465 | 97.844 | | | | |
| 28 | .155 | .455 | 98.299 | | | | |
| 29 | .144 | .423 | 98.722 | | | | |
| 30 | .124 | .366 | 99.087 | | | | |
| 31 | .111 | .328 | 99.415 | | | | |
| 32 | .091 | .267 | 99.682 | | | | |
| 33 | .070 | .206 | 99.887 | | | | |
| 34 | .038 | .113 | 100.000 | | | | |

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pearson's correlations were conducted to analyze the validity between the REFLDMS, DEFENBEH, ETHMORDM, and ETHPRIOR dimensions of the REMAS. As shown in Table 5, all factors were significant with the exception of the DEFENBEH dimension. The strongest correlation was found between the REFLDMS and ETHMORDM factors ($r = .584$). Multivariate normality failed as demonstrated by Wilks' Λ with a p -value of .142 which is greater than α (.05) (see Appendix F for complete table). Homogeneity of variances was assessed by Levene's Equality of Error Variances Test; the f distribution test statistic number was 4.058 with a p -value of .007 which is less than α (.05).

Table 5

Inter-Correlations between the Four Subscales: REFLDMS, DEFENBEH, ETHMORDM, and ETHPRIOR

| Factors | REFLDMS | DEFENBEH | ETHMORDM | ETHPRIOR |
|----------|---------|----------|----------|----------|
| REFLDMS | 1 | | | |
| DEFENBEH | .165* | 1 | | |
| ETHMORDM | .584** | .074 | 1 | |
| ETHPRIOR | .200** | -.079 | .456** | 1 |

*. Correlation is significant at the 0.05 level (2-tailed).

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

In order to test for significant differences between the means, MANOVA was used (see Appendix G for complete table). The DEFENBEH dimension was reverse scored in order for comparison of the means in the MANOVA test. The MANOVA was used to compare the participants' responses regarding the influence collaboration had on their teaching practices. As shown in Table 5, the values were not significant across all four dimensions. However, the REFLDMS factor was significant at $F(1,139) = 5.68$, $p = .013$ which is less than α (.05). Therefore, the researcher concluded that collaboration with an IP or other colleague(s) positively influenced teachers' level of reflection on their teaching practices. As shown in the MANOVA

table (see Appendix G), REFLDMS and ETHMORDM means were higher with values of 4.636 and 4.489, respectively, indicating that participants scored questions higher on the 1 to 6 Likert scale. DEFENBEH and ETHPRIOR means were lower with values of 3.874 and 3.520, respectively, indicating that participants scored questions more in the average range on the 1 to 6 Likert scale.

At the end of the survey, participants had the opportunity to respond to a total of six open-ended questions. The open-ended questions provided the opportunity for participants to share their full perspective of the topics being discussed (Patton, 1990). As shown in Table 6, the researcher identified themes from the responses provided by participants for the following questions:

- (1) Does reflection empower you as a teacher? Please explain;
- (2) Do you feel collaboration among the faculty has increased as a result of school or district professional learning opportunities? Please explain; and
- (3) Do you feel you have become a more reflective teacher after collaborating with your Instructional Partner and/or colleagues? Please explain.

Table 6 displays a sample of the participants' feedback for each theme. The following themes were identified based on participants' responses to the previously mentioned open-ended questions: (1) reflection is empowering, (2) reflection is not always a priority, (3) collaboration has increased as a result of professional learning opportunities, (4) collaboration with an IP or colleague increases the teachers' level of reflection.

When teachers had the opportunity to share their thoughts on the influence collaboration with an IP had on them as reflective practitioners, the majority said collaboration with IPs had a positive impact on their instructional practices. Over half of the respondents (67%) indicated

that reflection empowered them as educators specifically with modifying instruction, improving instructional practices, growing as a professional, and learning from others' perspectives.

Respondent 3 said,

Absolutely! Reflection allows and even forces me to assess what was beneficial for my students during a particular unit and ways that I can enhance my practice so that the next time I teach that unit, I can better help my students achieve the goals I have set for them.

Respondent 27 said,

Absolutely. In reflection I often find the silver lining to mistakes I've made in planning. Individual reflection allows me to process through what I did well and what I can do better next time, and it allows me to organize my thoughts before approaching a collaborative meeting or conversation.

One respondent noted that learning from students was also an important part of the reflective process. Respondent 48 said,

Reflection, if thoughtful and intentional, is a powerful part of the teaching process. This practice enables us to collect feedback from others (including students), analyze that information, and make appropriate changes in our lessons to improve the level of learning.

A few respondents (9%) shared some struggles with reflection. Having enough time to reflect and/or to act on the reflection was noted as an issue by six respondents. Respondent 44 said, "I will reflect on what I do in the classroom and if it was effective for the students. I don't always have enough time to do anything with that reflection." Respondent 183 said, "Sometimes it does and sometimes it does not. Most of the time, I am so busy there really is not time for true reflection." Other respondents (less than 1%) indicated that the purpose for reflection was important. Respondent 46 said, "Only when it is self reflection [is reflection empowering]. If it is forced reflection, then there is a problem. Or if it is reflection just for show, i.e. twitter, instagram, yelp. It's not going to be effective."

Over 70% of respondents indicated that they were more reflective after collaborating with their IP and colleagues. Respondents indicated that they benefited in the areas of solving problems, growing as reflective practitioners, and learning more strategies as a result of collaborating with IPs and other colleagues. Respondent 15 said,

Yes. I am not teaching alone. I can have discussions with other teachers who know my students and have been in my classroom. They know my practices and can offer validation for what is working and ideas for solving problems.

Respondent 16 said, “Yes. I learned how to reflect as a result of interactions with instructional partners. My understanding of what true reflection is has grown tremendously.” Respondent 29 said, “Collaboration with someone who is totally immersed in education strategies can not only enhance the classroom but the individual teacher. The beginning teachers are so lucky to have someone to guide them through the process.” Learning new teaching strategies was only one of the benefits reported by respondents. Knowing that it was ok to make mistakes and seeing through another’s perspective were two other advantages shared by participants. Respondent 102 said,

Yes. I love to have input from others. It is always helpful to have the opinion of more than one person. Teachers cannot survive isolated in their classrooms. By allowing dialogue to occur with IPs and colleagues, we are allowing ourselves to be open to criticism, we realize it’s ok to make mistakes, and we realize we’re not alone. I’m more reflective after collaboration because I have more viewpoints that I can mull over.

Again, there were a few respondents (18%) who shared that they were not more reflective as a result of collaborating with an IP or other colleagues. Some respondents shared that they had always reflected on their practices and had not been influenced negatively or positively by the fact collaboration and reflection were widely discussed and promoted throughout the schools. Respondent 46 said, “No, I feel all good teachers have always self reflected.” Respondent 49

said, “Not necessarily, I feel that I’ve been collaborating all along; it’s just that now there is more emphasis placed on recognizing when one does it.”

Table 6

Free Response Survey Question Themes and Responses

| Themes | Responses |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reflection is empowering | <p>Absolutely! Reflection allows and even forces me to asses what was beneficial for my students during a particular unit and ways that I can enhance my practice so that the next time I teach that unit I can better help my students achieve the goals I have set for them. [R3]</p> <p>Yes, it enables me to see things from others perspectives and I learn from those experiences. [R4]</p> <p>Reflection does empower you as a teacher, parent, employee, husband, wife, etc. Refletion allows a safe analysis for the individual to assess his success and failiures and what to change or continue in the future. [R5]</p> <p>Reflection allows clarity after the dust settles. Time is critical between experience and reflection. When those two factors are timed well, empowerment can take place. [R7]</p> <p>Yes. If I did not reflect on my own practice, I would never improve. Taking time to reflect pushes me to be a better teacher. It also keeps me from becoming complacent in my practice. [R10]</p> <p>Absolutely. "We learn by doing and reflecting on what we do," throughout our lives, not just when we are students in the classroom. As teachers, we are constantly adjusting and adapting to the needs of our students, and reflection keeps us from becoming stagnant. [R15]</p> <p>Yes. True reflection causes me to examine my current practices, evaluate what is working and what is not working and generates change. [R16]</p> <p>Absolutely. In reflection I often find the silver lining to mistakes I've made in planning. Individual reflection allows me to process through what I did well and what I can do better next time, and it allows me to organize my thoughts before approaching a collaborative meeting or conversation. [R27]</p> <p>Reflection does empower me as a teacher because it is the way that I can improve and take ownership in my practice. [R28]</p> <p>I feel that reflection gives me the opportunity to improve as a teacher. Being in the classroom over 20 years has definitely given me various oportunities to see educational trends but having an Instructional Coach has most definitely been the best thing to come in Education!! [R29]</p> <p>Reflection, if thoughtful and intentional, is a powerful part of the teaching process. This practice enables us to collect feedback from others (including students), analyze that information, and make appropriate changes in our lessons to improve the level of learning. [R48]</p> <p>Absolutely. I reflect continuously throughout the day as I am teaching. If something doesn't work in one clas, then I immediately try something different in the next class. Reflection is crucial to my success in the classroom and is crucial to my students' success as well. If I know that "something" isn't working, yet I do not make any attempts/effort toward changing, then I am performing a disservice to my students. [R93]</p> <p>Yes. Reflection allows me time to rethink and continue planning lessons that engage all students at their individual level of understanding. [R94]</p> <p>Absolutely! Reflection is crucial to continued growth as a professional. Time for reflection must be preserved. [R95]</p> |

| Themes | Responses |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Absolutely. I look back each day at the lessons I use and reflect on how well I achieved the goals I set. Did I set appropriate and challenging goals? Were my students engaged? Were they able to reflect themselves on what they learned in class? Were they able to build stronger reading, writing, speaking, and thinking skills? Did I take into consideration the individual needs of my students during the day? Did I ask my students about their day? [R114]</p> <p>I believe wholeheartedly that reflection empowers me as a teacher because I continue to see bigger and better ways of teaching my students. My growth as a teacher must be evaluated consistently in order for me to keep trying new activities, reaching for new heights, and pushing my students to obtain their goals. [R125]</p> <p>Absolutely! I wish there was more time for reflection amidst so many other things that are required. One simple example is changing the way certain information is presented from one class to the next based on misunderstanding and questions with the first group. I think if I spent more time writing down my reflective thoughts on a daily basis, it would make me a much more effective teacher. [R196]</p> <p>IT does, but it can be destructive, if you are to harsh on yourself. [R31]</p> <p>Only when it is self reflection. If it is forced reflection then there is a problem. Or if it is reflection just for show, i.e. twitter, instagram, yelp. It's not going to be effective. [R46]</p> <p>Feels like being retaught how to do a job we already know how to do. [R57]</p> <p>I think it compels me to act or not act upon my new learning. Not so sure it "empowers" me. [R73]</p> <p>No. At least not of the type used in the past. Particularly the critiques of our reflections. If it is not self-initiated and meaningful to the teacher then it probably wouldn't initiate any change in practice. [R128]</p> |
| <p>Reflection is not always a priority</p> | <p>Without reflection, one cannot make constructive changes. We move at a very fast pace now. Actually, slowing down to reflect can be a difficult process because we are so pressed for time. I think educators want to reflect, but we find ourselves pressed to multitask so much now that sometimes reflection suffers IF we aren't careful to remember how important it is. If we keep it in the look, we are really empowered to make best-practice choices in every new venture. [R30]</p> <p>I will reflect on what I do in the classroom and if it was effective for the students. I don't always have enough time to do anything with that reflection. [R44]</p> <p>Sometimes. Most times, don't have a lot of time to reflect. [R104]</p> <p>Sometimes it does and sometimes it does not. Most of the time, I am so busy there really is not time for true reflection. [R183]</p> |

| Themes | Responses |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Collaboration has increased as a result of professional learning opportunities | <p>I do believe so. The professional development opportunities provided at my school foster collaboration because time is set aside for teachers to exchange ideas with one another and that helps to encourage collaboration. [R3]</p> <p>Yes. Due to our professional learning opportunities, I am able to collaborate with educators across the district. It also gives me the opportunity to meet with teachers outside of my area and my hallway. [R10]</p> <p>Definitely, not only do individual teachers collaborate regularly, but so do groups of teachers and even teachers across schools. [R12]</p> <p>Yes. I feel that district professional learning opportunities have allowed teacher leaders to emerge, which in turn allows those teachers to collaborate and exchange ideas. Also, this allows other faculty members chance to grow based on their interests. Allowing this to happen district wide has opened the doors for cross-curricular and grade level collaboration. [R45]</p> <p>Absolutely! As our school and district professional learning opportunities have evolved from "sit-and-get" to dialogue, collaboration, and engagement, the collaboration throughout the school and district has increased. Teachers understand more what that is supposed to look like and see the benefits from collaboration. [R16]</p> <p>Yes. We are given not only the invitation, but the time and resources, to collaborate. [R15]</p> <p>Our school expects and fosters a collaborative attitude. The leadership is varied and fairly equally distributed, making plenty of room for individual and team growth. [R27]</p> <p>I feel like collaboration has increased and we are striving to collaborate more. We are also striving to create more professional learning opportunities. [R22]</p> <p>Collaboration has steadily increased within the past three years, and I attribute that increase to the awareness generated by professional development sessions and testimonials of collaborative pairs.</p> <p>yes, it creates an open atmosphere in which people are not hindered or afraid to share their opinion. [R48]</p> <p>Yes. We have more choice and voice . We are being allowed to teach and truly supported in efforts to adjust instruction for students [R78]</p> <p>Yes. The push for collaboration (both horizontal and vertical) within our department and across other departments makes it easier to approach other teachers and gain additional perspectives. [R93]</p> <p>Collaboration has increased due to professional learning opportunities. When teachers attend professional learning opportunities, the necessary "pause" results in networking and sharing of resources. [R95]</p> <p>Yes, collaboration does not naturally happen, so the ongoing PD sessions (while time consuming) are of great benefit. Without our IP and PD, there would be little to no collaboration (i.e. who has the time?). [R112]</p> <p>Somewhat. I believe that collaboration needs to focus on commonalities between teachers such as common content or common student population. I also believe that more can be done to empower teachers to design and create their own collaborative groups. [R5]</p> <p>Yes, in some cases. Feel like we still need more collaboration within our own specialty area. [R13]</p> <p>Unfortunately, I don't. There are some groups who naturally collaborate. Most of the people who are willing to collaborate will often find a way. Those who do not, won't. I believe that professional development could be improved simply by creating classes and showing how teachers in the general fields you teach in are incorporating best practices. I think that most teachers need a clearer definition of what the district wants when it says to incorporate best practices. [R47]</p> <p>I haven't seen much collaboration going on yet. [R18]</p> <p>No not unless it's a scheduled meeting. All of our time is taken with other duties or club time.</p> <p>No my grade has always collaborated regardless of the PD we have received. [R20]</p> <p>Not really. We collaborate at the meetings, but I don't see much collaboration outside of the meetings or collaboration that took place because of the meeting.</p> |

| Themes | Responses |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Collaborating with an IP or colleague increases teachers' level of reflection | <p>Yes, we can't help but reflect on our educational practices based on the guided directional questions and notions posed by our instructional partner. its natural, almost impossible NOT to be reflective during PD [R12]</p> <p>I was already a reflective teacher, but I feel that my colleagues and IP push me to dig deeper. [R10]</p> <p>Yes. I am not teaching alone. I can have discussions with other teachers who know my students and have been in my classroom. They know my practices and can offer validation for what is working and ideas for solving problems. [R15]</p> <p>Yes. I learned how to reflect as a result of interactions with instructional partners. My understanding of what true reflection is has grown tremendously. [R16]</p> <p>Yes. Reflecting and talking to my IP has resulted in meaningful conversations and feedback [R21]</p> <p>Collaboration with someone who is totally immersed in education strategies can only enhance not only the classroom but the individual teacher. The beginning teachers are so lucky to have someone to guide them through the process. [R29]</p> <p>Yes. When I reflect with other instructional partners, I always learn something new. Sometimes just being able to talk through something with another educator opens the doors for conversation, which leads to growth. [R45]</p> <p>Yes, and I think I have also developed a more reflective teaching style (ie , asking the students to consistently reflect). [R33]</p> <p>Yes, she helps me to examine my practices through the lens of Madison City Schools goals and objectives as a whole district as well as how to best serve my individual students [R34]</p> <p>Yes, she pushes me to think about how I teach in my whole practice. It's holistic rather than just Instructional. [R35]</p> <p>Yes, having a partner to bounce ideas off of without fear of evaluation is necessity. [R36]</p> <p>I have always reflected on my practice and decisions; however, after collaborating, I believe my reflection is driven in a specific direction... it gives me specific questions to ask myself in reflection. [R50]</p> <p>Yes. I am only a 2nd year teacher, and I feel that I gain more perspective after collaborating with my IP and colleagues because they can help "bring to light" student motives/behaviors that I hadn't previously considered. [R93]</p> <p>Yes. I love to have input from others. It is always helpful to have the opinion of more than one person. Teachers cannot survive isolated in their classrooms. By allowing dialogue to occur with IPs and colleagues, we are allowing ourselves to be open to criticism, we realize it's ok to make mistakes, and we realize we're not alone. I'm more reflective after collaboration because I have more viewpoints that I can mull over. [R102]</p> <p>I have always been a reflective teacher, but with each collaboration I reflect more on my choices and teaching practices. [R105]</p> <p>Yes, because I would have not done this otherwise (you get so busy in your classroom trying to cover everything that you do not think about cognitive processes). I find myself thinking thoughts about my teaching practices and the learning of my students that I would not have had before now. [R112]</p> <p>Yes. Our instructional partner brings questions to the table that provide opportunities for reflection about topics I might not have considered. That provides me with real growth opportunity. [R155]</p> <p>Not really. I'm not doing anything I didn't really do before. I do try to make my lessons intentional but that is about the only real change I've made. [R43]</p> <p>No, I have always incorporated reflection into my lesson plans. [R2]</p> <p>No. I have always approached my work in this manner. [R14]</p> <p>No. I think it enforces my thought that I am doing things right. [R31]</p> <p>not really...I have always reflected on my teaching. [R39]</p> |

Research Question Two

The second research question for this study examined the patterns between reflection and student achievement. The researcher investigated the following question: “What patterns exist between the teachers’ level of reflection and student achievement?”

Table 7 shows the percent of students who were proficient in reading on the state standardized assessments: Aspire for grades 3 through 8, Plan for grade 10, and ACT for grades 11 and 12. As shown in Table 8, more than half of students in grades 3 through 12 met the benchmark on the reading section of the Aspire, Plan, and ACT. When comparing the results nationally, the national percentile ranks on the Aspire were as follows: 81st percentile for 3rd grade, 82nd percentile for 4th grade, 82nd percentile for 5th grade, and 82nd percentile for 6th grade. Thus elementary students in the district surveyed scored very well on the reading section of the Aspire as compared to their same age peers who also took the test. Students in 7th and 8th grade also scored very well on the reading section of the Aspire as compared to their same age peers who took the test: 81st percentile for 7th grade and 79th percentile for 8th grade. On the reading section of the Plan, 56% of students in the district surveyed were at or above benchmark locally as compared to 40% of students nationally who performed at or above benchmark. On the reading portion of the ACT, 55% of 11th graders performed at or above benchmark as compared to 28% who met or exceeded the benchmark nationally and 67% of 12th graders performed at or above benchmark as compared to 44% of 12th graders nationally who met or exceeded the benchmark.

Table 7

Percent of Students Proficient in Reading on Standardized Assessments by School and Grade Level

| | ASPIRE | | | | PLAN | | ACT | | |
|----------|--------|-----|-----------------|-----|------|-----|------|------|------|
| | 3rd | 4th | 5 th | 6th | 7th | 8th | 10th | 11th | 12th |
| School A | 67 | 70 | 56 | 80 | | | | | |
| School B | 67 | 69 | 66 | 79 | | | | | |
| School C | 65 | 74 | 87 | 79 | | | | | |
| School D | 54 | 74 | 65 | 82 | | | | | |
| School E | 66 | 77 | 81 | 77 | | | | | |
| School F | 59 | 62 | 79 | 79 | | | | | |
| School G | | | | | 58 | 66 | | | |
| School H | | | | | 68 | 78 | | | |
| School I | | | | | | | 56 | 57 | 67 |
| School J | | | | | | | 56 | 53 | 67 |

Table 8

Percent of Students Proficient in Reading on Standardized Assessments

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----|---------|---------|---------|----------------|
| Schools | 10 | 1 | 10 | 5.50 | 3.028 |
| % Proficient | 34 | 53.00 | 87.00 | 68.8235 | 9.36619 |
| Valid N (listwise) | 10 | | | | |

Table 9

Percent of Students Proficient in Mathematics on Standardized Assessments by School and Grade Level

| | ASPIRE | | | | PLAN | | ACT | | |
|----------|--------|-----|-----|-----|------|-----|------|------|------|
| | 3rd | 4th | 5th | 6th | 7th | 8th | 10th | 11th | 12th |
| School A | 84 | 87 | 71 | 74 | | | | | |
| School B | 76 | 75 | 77 | 76 | | | | | |
| School C | 77 | 70 | 74 | 80 | | | | | |
| School D | 67 | 84 | 67 | 70 | | | | | |
| School E | 80 | 80 | 68 | 86 | | | | | |
| School F | 83 | 57 | 75 | 81 | | | | | |
| School G | | | | | 68 | 67 | | | |
| School H | | | | | 67 | 69 | | | |
| School I | | | | | | | 52 | 54 | 62 |
| School J | | | | | | | 47 | 51 | 39 |

Table 9 shows the percent of students in the district surveyed who were proficient in mathematics on the state standardized assessments: Aspire for grades 3 through 8, Plan for grade 10, and ACT for grades 11 and 12. As shown in Table 10, half or more of students in grades 3 through 12 in the district surveyed met or exceeded the benchmark on the mathematics section of the Aspire, Plan, and ACT. However, areas of improvement were identified in two grade levels at one participating school where below 50% of the students demonstrated proficiency on the mathematics portions of the Plan and ACT. When comparing the results nationally, the national percentile ranks on the Aspire were as follows: 80th percentile for 3rd grade, 85th percentile for 4th grade, 83rd percentile for 5th grade, and 85th percentile for 6th grade. Thus elementary students in the participating district scored very well on the mathematics section of the Aspire as compared to their same age peers who also took the test. Students in 7th and 8th grade in the participating

district also scored very well on the mathematics section of the Aspire as compared to their same age peers who took the test: 84th percentile for 7th grade and 84th percentile for 8th grade. On the mathematics section of the Plan, 52% of students in the participating district scored at or above benchmark locally as compared to 36% of students nationally who performed at or above benchmark. On the mathematics portion of the ACT, 52% of 11th graders in the participating district performed at or above benchmark as compared to 20% who met or exceeded the benchmark nationally and 51% of 12th graders in the participating district performed at or above benchmark as compared to 43% of 12th graders nationally who met or exceeded the benchmark.

Table 10

Percent of Students Proficient in Mathematics on Standardized Assessments

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----|---------|---------|---------|----------------|
| Schools | 10 | 1 | 10 | 5.50 | 3.028 |
| % Proficient | 34 | 39.00 | 87.00 | 70.4412 | 11.65460 |
| Valid N (listwise) | 10 | | | | |

As shown in Table 11, half or more of students in the participating district were proficient in both reading and mathematics on the Aspire, Plan, and ACT. Tables 12 and 13 showed that there was not a significant correlation between teacher reflective behaviors and district student achievement in reading or mathematics, which indicated that there was not a substantial connection between increased reflection and increased student achievement. A limitation for this part of the study was that the unit of analysis was the teacher, but the unit of analysis for student achievement was the school. Additionally, the school reflection score was not a random score.

Table 11

District Percent of Students Proficient in Reading and Mathematics on Standardized Assessments

| Grade Level | % Proficient in Reading | % Proficient in Math |
|-------------|-------------------------|----------------------|
| 3* | 63 | 78 |
| 4* | 72 | 76 |
| 5* | 73 | 71 |
| 6* | 78 | 79 |
| 7* | 63 | 68 |
| 8* | 72 | 68 |
| 10** | 56 | 50 |
| 11*** | 55 | 52 |
| 12*** | 67 | 51 |

Note. *Students who took the ACT ASPIRE. **Students who took the ACT PLAN. ***Students who took the ACT.

Table 12

Association Between Teacher Reflective Behaviors and Student Achievement in Reading

| | Total REMAS Score REFLDMS | % Proficient Reading |
|---------------------|---------------------------|----------------------|
| Pearson Correlation | 1 | .300 |
| Sig. (2-tailed) | | .433 |
| N | 187 | 9 |

Table 13

Association Between Teacher Reflective Behaviors and Student Achievement in Mathematics

| | Total REMAS Score REFLDMS | % Proficient Math |
|---------------------|---------------------------|-------------------|
| Pearson Correlation | 1 | -.272 |
| Sig. (2-tailed) | | .479 |
| N | 187 | 9 |

Research Question Three

The third research question for this study examined the teachers' perception of the impact collaboration had on their instructional practices and student achievement. The researcher investigated the following question: how do teachers perceive that collaboration with an Instructional Partner influences their instructional practice and student learning?

Table 14

Respondents' Perception of Whether Reflection Influences Instructional Practices and/or Student Achievement

| | Yes | | No | |
|-------------------------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent |
| Instructional Practices | 138 | 70 | 36 | 18 |
| Student Achievement | 189 | 96 | 7 | 4 |

Table 14 shows the respondents' perception of whether collaboration influenced their instructional practices and/or student achievement. In the open-ended questions, 138 (70%) respondents indicated that they believed collaboration with an Instructional Partner and other colleagues positively influenced their instructional practices, whereas 36 (18%) respondents believed collaboration did not positively impact instructional practices (see Table 14).

Additionally, 189 (96%) respondents indicated that they believed collaboration with an Instructional Partner and other colleagues positively influenced student achievement, whereas 7 (4%) respondents believed collaboration did not positively influence student achievement (see Table 14). Table 15 shows that 50% or more of students demonstrated proficiency on the Aspire, Plan, and ACT. Together Tables 14 and 15 show that there was an association between the teachers' perception of the influence of collaboration on instructional practices and student

achievement provided that the teachers who held these perceptions embraced collaboration and implemented the practices gleaned from the collaborative opportunities.

Table 15

District Percent of Students Proficient in Reading and Math on Standardized Assessments

| Grade Level | % Proficient in Reading | % Proficient in Math |
|-------------|-------------------------|----------------------|
| 3* | 63 | 78 |
| 4* | 72 | 76 |
| 5* | 73 | 71 |
| 6* | 78 | 79 |
| 7* | 63 | 68 |
| 8* | 72 | 68 |
| 10** | 56 | 50 |
| 11*** | 55 | 52 |
| 12*** | 67 | 51 |

Note. *Students who took the ACT Aspire. **Students who took the ACT Plan. ***Students who took the ACT.

At the end of the survey, participants had the opportunity to respond to six open-ended questions. As stated previously, the open-ended questions provided the opportunity for participants to share their full perspective of the topics being discussed (Patton, 1990). As shown in Table 16, the researcher identified themes from the responses provided by participants to the following open-ended survey questions:

- (1) Do you feel increased teacher reflection positively influences student achievement? Please explain;
- (2) What specific changes have you noticed (either in your instructional practices or student learning) as a result of collaborating with the Instructional Partner and/or colleagues at your school; and

- (3) What specific changes have you noticed (either in your instructional practices or student learning) as a result of increased reflection on your instructional practices?

Table 16 displays a sample of the participants' feedback for each theme. The following themes were identified based on participants' responses to the previously mentioned open-ended questions: (1) increased reflection influenced student achievement, (2) collaboration led to changes in practice: deeper and refined purpose, (3) collaboration led to changes in practice: new strategies and resources, (4) collaboration led to changes in practice: deeper questioning, (5) collaboration led to changes in practice: reflection, (6) changes resulting from reflection: new strategies, (7) changes resulting from reflection: student engagement, (8) changes resulting from reflection: purpose, and (9) changes resulting from reflection: ownership.

Table 16

Free Response Survey Question Themes and Responses

| Themes | Responses |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Increased reflection influences student achievement | Yes I do. When teachers assess their practice and what worked best for students, it helps to increase student achievement. Reflecting on maybe why a certain lesson didn't work enables the teacher to improve so that he/she can be more effective for students the next time the unit is taught which will help the students to be more successful. [R3] |
| | Of course. With clarity of mind and practice, comes better instruction. Every time. When clarity of practice is combined with empathetic understanding (in practice, not just informally), then student achievement is guaranteed to climb. [R7] |
| | Yes, it gives you valuable feedback to help you re-teach, guide for new lessons, and incorporate student interests. [R13] |
| | Again, absolutely. Reflection allows us to assess what is working and what needs work in the classroom. As we alter our behaviors as teachers, it significantly affects our students. [R15] |
| | Yes. Teachers who reflect on their practice make changes to their instruction based on student data and needs. When data is used to drive instruction, students are more likely to achieve and succeed in their classes. [R16] |
| | I feel that increased teacher reflection definitely influences student achievement in a positive way. I am constantly reflecting on ways I can make my lessons or decisions better to best fit the needs of my students at the time. I want my students to succeed, and I will try everything I know and ask questions in order to achieve that goals of student success. [R26] |
| | Yes. Teacher reflection and sharing allows us to learn through other's successes and failures. Without reflecting on what we've done, we have nothing substantial to fuel future decisions and planning. [R27] |
| Yes, because we need to be thinking about how our students are learning. If we do not stop and reflect, then we will never know how we are doing. In a recent PD session, we learned that if you are not reflecting on your effectiveness as a teacher, it is like bowling with a blindfold on. [R112] | |

| Themes | Responses |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Increased reflection influences student achievement (continued) | <p data-bbox="399 256 1470 289">Yes, when teachers do not reflect on practices, instruction cannot mold to meet student needs. [R28]</p> <p data-bbox="399 321 1913 386">Cause and Effect: When teachers reflect, students will be positively influenced and achievement should rise. This reflection allows teachers to decide changes that need to be made or the continuation of things that are working. [R32]</p> <p data-bbox="399 418 1774 451">Yes. We can teach our students to reflect also and this will boost achievement if they understand it's ok to make a mistake. [R37]</p> <p data-bbox="399 483 1890 581">Yes. You don't know what you don't know. If you keep continuing with practice that is not yielding results, what's the purpose? Until you actively reflect, you aren't able to grow and change. Without growth and change, you stay stagnant as an educator. Students are constantly evolving and growing. In order for them to succeed, teachers must also stay fluid. [R45]</p> <p data-bbox="399 613 1858 711">Yes. If we reflect on what we have done in the classroom and how it was received by the students, we will adapt/grow from it which will benefit the students as we may have to tweak a lesson or go back over something. Without reflection, we are just surging ahead and not looking at what is in our wake. [R102]</p> <p data-bbox="399 743 1375 776">Yes, it motivates me to research further ways to help my students academic growth. [R106]</p> <p data-bbox="399 808 1879 873">Yes. Reflecting on past or current practices can and will make a positive difference on student achievement. It's important for teachers to figure out what is working and what isn't and make necessary changes. Reflection allows these things to happen. [R163]</p> <p data-bbox="399 906 1879 1003">Yes, I believe that anytime a person is given the ability to reflect on their practice there is always a positive outcome. Teacher reflection offers the chance to make changes within the classorom when needed so that more students can experience success, therefore, influencing student achievement. [R176]</p> <p data-bbox="399 1036 1837 1101">Only if the teacher takes it seriously. If a teacher is told to do a reflection, the chances are slim that it will positively influence student achievement. Teacher have to want to do a reflection in order for it to increase achievement. [R66]</p> <p data-bbox="399 1133 1816 1166">I don't know. Theoretically it should but I have not seen any improvement in student achievement in my classroom as a result. [R97]</p> <p data-bbox="399 1198 1228 1230">Depends on the student. Some students are not influenced by anything. [R70]</p> <p data-bbox="399 1263 1312 1295">Not necessarily. Teachers sometimes choose not to use things reflected upon. [R109]</p> <p data-bbox="399 1328 1438 1360">No, personal reflection does not always extend outside of the teacher, but it certainly can. [R117]</p> <p data-bbox="399 1393 1913 1425">No - how can that influence student achievement - you can write mounds of info, but is it happening in the classroom or just on paper [R145]</p> |

| Themes | Responses |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Collaboration leads to changes in practice: Deeper and refined purpose | <p>Learning targets- the increase in awareness of what students are supposed to be learning has helped the students because they know what the expectations are for each unit. Learning targets are concepts that have been discussed with instructional partners during professional development sessions. [R3]</p> <p>Everyone seems to have a more focus, unified goal as a school to promote success with a specific demographic. [R38]</p> <p>Sharing of ideas, discussions about students, small group planning, being on the same page when it comes to standards, etc. [R40]</p> <p>I have been able to revamp my instruction and how it is presented... not necessarily changed the entire presentation, but instead include the "bigger picture" for students to consider. [R50]</p> <p>One of the most helpful changes I made was in making sure class/homework assignments matched the specific lesson objectives. A couple of years ago I spent a few hours meeting with other teachers of the same subject to tweak many of our usual classroom/homework assignments. In a math class, it's more about the quality of the problems than the quantity. By eliminating the time-consuming, tedious, non-critical-thinking questions, we spend a little less time going over homework, which gives us a few more minutes in class for more meaningful activities. [R51]</p> <p>I am becoming more intentional about what I do in the classroom and how to present information. [R86]</p> <p>The specific changes I've noticed as a result of collaborating is that I'm more intuitive to what my students need and say, whether that communication is verbal or non-verbal. This, in turn, allows me to shift my lessons as needed. [R55]</p> <p>Collaboration has empowered me to look at my content area in a broader sense. How can what I teach in language arts connect with other content areas? How can I help my students think critically about ways ideas connect? [R114]</p> <p>Greater classroom direction and focus in regards to setting and meeting learning and behavioral objectives and goals. [R122]</p> <p>More focus on the target of the lesson or my goals for the students in stead of just passing along information to them [R196]</p> |

| Themes | Responses |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Collaboration leads to changes in practice: New strategies and resources | <p>My practices have moved from "sage on the stage" to "guide on the side". Students are doing the work in the classroom. They are talking and writing about the content. They investigate to attain information. They are learning how to work as a team to accomplish a goal. [R16]</p> <p>use new resources and technology from sites and books she has referenced [R13]</p> <p>I am a more daring teacher. I create more innovative strategies and push myself and my students to push beyond what we think are our boundaries. [R15]</p> <p>more technology; more engagement [R19]</p> <p>I have integrated more technology and I have differentiated more. [R22]</p> <p>With collaboration with the instructional partner, I am able to use new techniques and strategies that maybe I haven't thought of before, thus, increasing my learning and allowing more opportunities for students learning. [R32]</p> <p>I love to bounce ideas and "steal" ideas from other instructional partners. Time together allows us to share how we are implementing practices in our schools. This allows me to grow and change, while staying consistent with our district goals. [R45]</p> <p>I've notice that more teachers have a tendency to search through technology applications to enhance their modalities of teaching. [R49]</p> <p>Use of new technology and a greater variety of strategies for / Meeting the needs of my children. [R65]</p> <p>I can connect learning in various disciplines which then allows me to help make connections with students. [R73]</p> <p>More effective practices in the classroom are taking place. [R165]</p> <p>Collaboration within my department has helped in providing intervention strategies to increase student learning, provide students the opportunity to explore interests and assist students in planning for post-secondary opportunities. [R176]</p> <p>New technology practices, new assessment methods [R181]</p> <p>The sharing of ideas is by far the greatest gift of collaboration. I know teachers (including myself) that might spend hours researching innovative ways to teach a skill, yet we could spend 5 minutes to walk across the hallway and ask another teacher. Sometimes we do not use our own resources (each other) as often as we should. Sharing ideas with other teachers both here and at professional development has completely altered my instruction and curriculum. My lesson plans today are immensely different from my first few years of teaching. I am a completely different (and better) teacher because of collaboration and professional learning. And I only hope that in 10 years, I will be different and better than I am today. [R191]</p> <p>Open to trying new strategies/ideas in classroom. [R1]</p> |

| Themes | Responses |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Collaboration leads to changes in practice: Deeper questioning | <p>Most teachers seem to be able to write meaningful essential questions. Hopefully this helps learners focus on the main point of each lesson. [R64]</p> <p>I am much more creative and reflective. The habit of always asking those check up questions "how is it going?" And "how can I do it better?" Becomes habit. The norm becomes thinking outside the box change for the purpose if improvement. Risk is encouraged and failure isn't always a bad thing! [R99]</p> <p>More detailed questioning. [R9]</p> |
| Collaboration leads to changes in practice: Reflection | <p>Just reflecting on what I am doing in my classroom. Discussion helps me think it through and think about what I want to do differently. [R119]</p> <p>I go back to the drawing board immediately if I notice that something that I'd planned or tried wasn't or didn't go as initially planned. I am more apt to ask for ideas to help address an area of concern or an area that I'm not so sure about. The students seem to flourish more when I do this. [R142]</p> <p>I'm always asking myself why I am doing something. What is it's purpose. [R164]</p> <p>I'm looking even deeper and asking more questions of myself and my students. [R11]</p> <p>None. My school has had a new instructional partner each year for the past three years. Due to a lack of consistency, collaboration has been significantly limited. [R94]</p> <p>I don't think there have been a huge amount of changes. [R113]</p> |

| Themes | Responses |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changes resulting from reflection: New strategies | <p>freedom to try new instructional practices and teaching strategies so that we are not just making kids remember and regurgitate information, but retain the big ideas, teach one another, create projects that are relevant to them and their current lives, and to share our findings on a global level. [R12]</p> <p>Open to trying new strategies/ideas in classroom. [R1]</p> <p>Small group instruction on my part, has improved. I reflect on what does and doesn't work each week in small group instruction. I feel that my small group instruction is more effective than it has been in the past. [R119]</p> <p>I don't think I've increased the amount of reflection (just the required writing about reflections), so that's a hard question to answer. Reflection for me has always been a part of teaching. I'm continuously evaluating what works/doesn't work in my lessons and then tweaking the future lessons. [R51]</p> <p>None District mandates of timed tests, mandatory pacing guides, AR, Math Facts in a Flash, Success Maker, standard checks, and benchmark tests have left little time for true reflection on instructional practice. It feels as if all I do is assess with very little true instruction. Students are learning, but we could be doing so much more. [R94]</p> |
| Changes resulting from reflection: Student engagement | <p>I have noticed that my students work better in groups now that they have project based assignments based on their level of understanding. [R22]</p> <p>Increased student engagement [R4]</p> <p>I have noticed that my lessons are becoming more engaging, and I am feeling more confident in my teaching. As a first year teacher, reflection is what gets me through each day, striving to be even better and more prepared the next day and so on. [R26]</p> <p>I have discovered that my lessons are more student-centered. This is something I think about as I reflect on my practice. [R47]</p> <p>The specific changes I've noticed as a result of increased reflection is an increase in student engagement and attentiveness. The students recognize that I'm trying to make the lessons more student-centered and they respect that. They also respect the fact that their ideas and opinions are actually taken and used to direct the lesson. [R55]</p> <p>More student involvement and all students having high expectations set by me [R69]</p> <p>I am including more hands-on and explanation in my lessons. My students are more engaged and involved in the lesson on a daily basis. [R86]</p> |

| Themes | Responses |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changes resulting from reflection: Purpose | <p>I am more intentional. I always made excuses because I was not organized, or I was so busy. After reflection, I realize that I create my own circumstances, and my students will learn not just the content of my class, but my behaviors as well. [R15]</p> <p>With increased reflection, teachers are able to really take a look at their teaching and make changes accordingly. [R32]</p> <p>Students know what the "end game" is for not only each lesson, but also the unit. [R50]</p> <p>I'm more contemplative when planning a lesson. I ask more questions of myself about the purpose of an assignment or a lesson. And it's not just reflection of how I feel about it, but of how the students will receive it, and how it will work out later down the line. [R102]</p> <p>I think I am better at seeing my students as people first - not just robots to cram information & pass exams. I am a much better teacher now that I am more aware of students' individual needs. Part of this came from paying more attention also to formative assessment. Part of it came from getting to know my students better. [R157]</p> <p>Reflection provides an opportunity for me to "recharge" and reassess my practices and and interaction with students. I have found that if I am able to build positive rapport with student, it increases the likelihood for them to feel an sense of encouragement and positively impact their learning experience. [R176]</p> |
| Changes resulting from reflection: Ownership | <p>My students feel like they have ownership in their learning. It's not just me standing in front of them telling them what to do, but it is about them probing, researching, finding their own way of learning and relating the information to others as well as themselves. [R29]</p> <p>The BEST things that I do are those where I can encourage kids to reflect themselves. And, it is hard to do this with quality. It requires time to develop it well. [R30]</p> <p>Not only am I more deliberate during the planning stages, I have also noticed my students being more deliberate in their own learning. [R48]</p> <p>A number of my students have taken ownership of their own learning, because of my reflective practices. [R195]</p> |

When teachers had the opportunity to share how collaboration with their IP influenced their instructional practice and student achievement, the majority indicated that IPs had a positive impact on their practice and student achievement. The majority of respondents indicated that reflection had a positive impact on student learning. Respondents specifically noted that reflection led them to modify lessons. Respondent 3 said,

When teachers assess their practice and what worked best for students, it helps to increase student achievement. Reflecting on maybe why a certain lesson didn't work enables the teacher to improve so that he/she can be more effective for students the next time the unit is taught which will help the students to be more successful.

Respondent 27 said, "Yes. Teacher reflection and sharing allows us to learn through other's successes and failures. Without reflecting on what we've done, we have nothing substantial to fuel future decisions and planning." Reflection focused on modifying instructional practices can encourage the use of data to drive instruction to ensure instruction is differentiated to meet students' needs. Respondent 16 said, "Yes. Teachers who reflect on their practice make changes to their instruction based on student data and needs. When data is [sic] used to drive instruction, students are more likely to achieve and succeed in their classes."

Respondents indicated that collaborating with IPs had impacted them in several ways including an increase in morale, confidence, pride, ownership, questioning techniques, use of technology, and closer relationships. For some, collaboration with an IP had led to a deeper focus on the purpose of lessons. Respondent 3 said, "Learning targets – the increase in awareness of what students are supposed to be learning has helped the students because they know what the expectations are for each unit." Respondent 50 indicated that with a clear focus for each lesson, "students know what the 'end game' is for not only each lesson, but also the unit." Respondents also indicated that knowledge and understanding of instructional strategies had increased as a result of collaborating with IPs. Respondent 32 said, "With collaboration

with the instructional partner, I am able to use new techniques and strategies that maybe I haven't thought of before, thus, increasing my learning and allowing more opportunities for student learning.” Respondent 119 said, “Small group instruction on my part has improved. I reflect on what does and doesn't work each week in small group instruction. I feel that my small group instruction is more effective than it has been in the past.”

An increased awareness of instructional strategies provided an opportunity for more engaging instruction. Respondent 16 said,

My practices have moved from “sage on the stage” to “guide on the side.” Students are doing the work in the classroom. They are talking and writing about the content. They investigate to attain information. They are learning how to work as a team to accomplish a goal.

Respondents noted that positioning students in control of their own learning had given students a higher degree of ownership in their learning. Respondent 29 said,

My students feel like they have ownership in their learning. It's not just me standing in front of them telling them what to do, but it is about them probing, researching, finding their own way of learning and relating the information to others as well as themselves.

According to some respondents, being more intentional with instruction had positively influenced relationships with students. Respondent 157 said,

I think I am better at seeing my students as people first – not just robots to cram information and pass exams. I am a much better teacher now that I am more aware of students' individual needs. Part of this came from paying more attention also to formative assessment. Part of it came from getting to know my students better.

Respondent 176 said,

Reflection provides an opportunity for me to “recharge” and reassess my practices and interaction with students. I have found that if I am able to build positive rapport with students, it increases the likelihood for them to feel a sense of encouragement and positively impacts their learning experience.

Approximately 4% of respondents indicated that reflection did not positively impact student achievement with the only reason listed being that it depended on the teacher and

whether or not he/she actually made changes to his/her practice. Respondent 117 said, “No, personal reflection does not always extend outside of the teacher, but it certainly can.”

Summary

This chapter presented the findings of the study, including demographic data, survey results, and a report of the findings. The study examined the influence of collaboration with an Instructional Partner on teacher reflection. The study also analyzed whether a connection between the level of teacher reflection and student achievement could be identified. The findings indicated that collaboration with an IP or other colleague(s) positively influenced teachers’ level of reflection on their teaching practices. The findings also suggested that there was an association between the teachers’ perception of the influence of collaboration on instructional practices and student achievement provided that the teachers who held these perceptions embraced collaboration and implemented the practices gleaned from the collaborative opportunities.

CHAPTER V:
DISCUSSION AND CONCLUSION

Introduction

As previously described, this study is based on the theory that schools participating in the Instructional Partner Network offer engaging and collaborative professional learning opportunities that encourage teachers to reflect on their instructional practices. This environment is built on the partnership principles where educators are treated as equals and empowered to reflect on and modify their practices in a way that will have the greatest impact on student learning (Schön, 1987; Wang, 2013; Johnson & Altland, 2004; Dirkx, 2001; Merriam, 2001a; Merriam, 2001b; Baumgartner, 2001). Schön (1987) argued that the best way to help a teacher transform his/her instruction is by establishing a partnership between the teacher and a coach. The goal is to create a culture of collaboration where teachers, coaches, and administrators grow professionally (Arredondo et al., 1995).

The partnership approach may be the best way to help teachers transform their practice because teachers are treated as equals and empowered to reflect on and modify their practices in a way that will have the greatest impact on student learning (Schön, 1987; Wang, 2013; Johnson & Altland, 2004). Schools built on the partnership principles position everyone as a learner and encourage open expression of thoughts and opinions (Wang, 2013; Johnson & Altland, 2004). In order for collaboration and coaching to thrive, a level of trust must be established (Arredondo & Fueyo, 1994; Johnson & Altland, 2004; Schommer-Aikins, 2004; Baumgartner, 2001). Trust is

built by establishing the partnership, expressing concerns, being attentive and committed to the coaching process, and being very transparent about the process (Wang, 2013).

According to Dewey (1910), reflective thought is described as a process through which individuals consider what they know and believe. Reflection should be a daily occurrence for all educators (Schön, 1987; Baumgartner, 2001; National Board for Professional Teaching Standards, 2002; Standards for Professional Learning, 2011; Kilgore, 2001; Yesilbursa, 2011; Malkki & Lindblom-Ylänne, 2012). Ultimately, reflective practice can positively influence teachers and whole schools by altering thoughts on knowledge and learning (Arredondo Rucinski, 2005).

Purpose of the Study

The intent of this study was to add to the existing body of research on professional learning opportunities that led to reflective practice and student learning. This research was designed to identify and measure the relationship between collaboration with an Instructional Partner and the level of teacher reflection, then to determine if there were any connections between teacher reflection and student achievement, and to describe teacher perceptions of the impact their collaboration with an Instructional Partner and level of reflection had on student learning. The following research questions were addressed in this study:

- (1) How does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices;
- (2) What patterns exist between the teachers' level of reflection and student achievement; and
- (3) How do teachers perceive that collaboration with an Instructional Partner influences their level of reflection, instructional practice, and student learning?

Summary of the Methods

The research design was a non-experimental mixed method measuring the relationship between collaboration with an Instructional Partner and the level of teacher reflection. The teacher was the unit of analysis for this research study. The sample consisted of approximately 460 Pre-K-12 certified teachers employed in six elementary schools, two middle schools, and two high schools in one suburban district in northern Alabama. A total of 196 Pre-K-12 grade teachers participated in the study. Data for this mixed method study were collected from participating schoolteachers following superintendent, principal, and teacher permission. Teachers were asked to complete the Reflective, Ethical, and Moral Assessment Survey (Arredondo Rucinski & Bauch, 2006) to assess their perceived use of reflective, ethical, and moral dispositions which may have been a result of participating in engaging and collaborative professional learning opportunities. Teachers were also asked to respond to six open-ended questions about their perceptions of the effects of the district's participation in the IPN on teacher reflection and student learning. Teachers accessed the online survey using *Qualtrics*.

Summary of the Findings

The first research question was written to examine the relationship between collaboration with an Instructional Partner and the level of teacher reflection: how does collaboration with an Instructional Partner influence the teachers' level of reflection on their teaching practices? This study indicated that the respondents were inclined to exhibit reflective behaviors according to their responses to the REFLDMS section of the questionnaire. However, even though the mean was pulled toward the higher numbers, not all respondents indicated that they actively reflected on their instructional practices, which was expected. Responses also indicated that respondents were not inclined to exhibit defensive behaviors according to their answers on the DEFENBEH.

Even though some respondents selected ratings higher on the scale, the smaller spread of the range supported by the standard deviation demonstrated that the mean was pulled toward the lower numbers, indicating that more teachers were not inclined to exhibit defensive behaviors. Again, for the ETHMORDM section of the questionnaire, respondents were more inclined to report that they exhibited ethical and moral behaviors. As with the reflective dimension of the questionnaire, the spread of the range supported by the standard deviation demonstrated that while the mean was pulled toward the higher numbers, not all respondents indicated that they always exhibited ethical and moral behaviors. Finally, the mean was in the center for the ETHPRIOR questions, which means that the respondents were more neutral about how they prioritized some ethical behaviors. For all four dimensions, the factor loading values supported the MANOVA test because most of the scores were at .7 or higher confirming that the variables identified were more independent than not.

Open-ended responses were similar to the REMAS responses from the REFLDMS section of the questionnaire, which indicated that teachers were inclined to exhibit reflective behaviors. Sixty-seven percent of respondents indicated in the open-ended questions that reflection empowered them as educators specifically with modifying instruction, improving instructional practices, growing as a professional, and learning from others' perspectives. Learning from personal experience requires individuals to reflect on their actions (Arredondo Rucinski & Bauch, 2006). Reflection should be a natural, daily routine for all educators (Schön, 1987; Baumgartner, 2001; National Board for Professional Teaching Standards, 2002; Standards for Professional Learning, 2011; Kilgore, 2001; Yesilbursa, 2011; Malkki & Lindblom-Ylänne, 2012). More than 70% of respondents indicated that they were more reflective after collaborating with their IP and colleagues benefiting in the areas of solving problems, growing as

reflective practitioners, and learning more strategies. The goal is to create a culture of collaboration that allows teachers, coaches, and administrators to learn and develop (Arredondo et al., 1995). A partnership empowers teachers to reflect on and modify their practices to have the greatest impact on student learning (Wang, 2013; Johnson & Altland, 2004) and establishes everyone as equals where learning and growing occurs side-by-side (Merriam, 2001a; Merriam, 2001b; Baumgartner, 2001; Dirkx, 2001; Bolhuis & Voeten, 2001; Wang, 2013). Ultimately, IPs scaffold the learning and guide their colleagues' reflections (Schön, 1987; Hansman, 2001). The language used by IPs, specifically in framing questions and restating messages, is crucial to the teacher's reflective process (Arredondo et al., 1995).

Approximately 9% of respondents shared struggles with reflection in the open-ended section because of a lack of time to reflect while 18% of respondents shared that they were not more reflective as a result of collaborating with an IP or other colleagues because they naturally reflected regularly on their practices. Teachers enjoy their practice less when they reflect less on their practice (Knight, 2011). According to Arredondo Rucinski (2005), making reflection a structured process helps educators become lifelong learners since reflecting individually or in a group leads educators to consider their "routine and nonroutine actions" in addition to their personal beliefs and how they can improve lessons or solve problems (p. 85). Reflective practice leads individuals to converse with themselves and invite feedback from colleagues (Arredondo Rucinski, 2005). Ultimately, reflective practice can reform teachers and whole schools by altering their thoughts on knowledge and learning (Arredondo Rucinski, 2005).

The second research question was used to identify patterns between teacher reflection and student achievement: what patterns exist between the teachers' level of reflection and student

achievement? The results measuring the influence of teacher reflective behaviors on student achievement in reading and mathematics did not show a significant relationship.

The third research question was used to examine teacher perceptions of the impact their collaboration with an Instructional Partner and level of reflection had on student learning: how do teachers perceive that collaboration with an Instructional Partner influences their instructional practice and student learning? This study indicated that there was a relationship between the teachers' perception of the influence of collaboration on instructional practices and student achievement provided that the teachers who held these perceptions embraced collaboration and implemented the Instructional Partner practices.

In the open-ended questions, 70% of respondents indicated that they believed collaboration with an Instructional Partner and other colleagues positively influenced their instructional practices, whereas only 18% of respondents believed collaboration did not positively impact instructional practices. Respondents specifically noted that reflection led them to modify lessons and encouraged the use of data to plan instruction to ensure it was differentiated to meet students' needs. Respondents indicated that collaboration increased morale, confidence, pride, ownership, questioning techniques, use of technology, closer relationships, a deeper focus on the purpose of lessons, knowledge and understanding of more instructional strategies, and awareness of more instructional strategies, which they perceived led to more engaging instruction. Consequently, teachers need professional learning opportunities that afford them the opportunity to build a bank of instructional strategies to implement in the classroom, to collaborate with colleagues, and to reflect on their current practices and make necessary modifications (Schön, 1987; Merriam, 2008; Thoonen et al., 2011; Tripp & Rich, 2012; Donnelly & Fitzmaurice, 2011; Johnson & Altland, 2004; National Board for Professional

Teaching Standards, 2002; Standards for Professional Learning, 2011; Kilgore, 2001; Baumgartner, 2001).

Research has shown the teacher to be a major contributing factor to student achievement (Hattie, 2009; Yost et al., 2009). This study indicated that 96% of respondents believed increased reflection positively influenced student achievement, while 4% of respondents believed increased reflection did not positively influence student achievement. The 4% said that this was because there was no guarantee that teachers changed their practices. Respondents noted that positioning students in control of their own learning resulted in students having a higher degree of ownership in their learning. Likewise, respondents indicated that being more intentional with instruction had positively influenced relationships with students and that students took more of an interest in their learning when they knew their teachers cared.

Implications

After analyzing the data from the study, the researcher identified implications for practitioners regarding collaboration and reflection. Genuine, not forced, collaboration and reflection are effective tools to strengthen instructional practices. A sense of trust must be established in order for teachers to feel comfortable dialoguing with colleagues and IPs (Arredondo et al., 1995). Providing time for teachers to modify their instructional practices helps ensure that collaboration and reflection truly influence their daily practice and in turn student achievement.

On the basis of this study, the researcher believes that with the move to the Alabama College and Career Ready Standards (ACCRS), teachers need to collaborate with colleagues and reflect on their practice to ensure that their instruction is aligned with the new standards and pushing students deeper in the content. In order to successfully implement these standards and

move students to higher levels, collaborative use of opportunities position teachers to analyze the standards and reflect on their current instructional practices. This allows them to identify gaps in student learning and to determine when changes are necessary, to help ensure that the level of instruction matches the rigor required of the ACCRS. As indicated in the survey, teachers needed time for the results of the collaboration and reflection to translate into changes in their practice.

The researcher further saw that when reflection felt forced and evaluated, it became an item to check off of a list rather than a meaningful practice. This rigidity also created resistance among teachers. When teachers are told what to think or goals are set for them, they resist and are unmotivated to change (Dunaway et al., 2010). When coaches embody equality, they see equal value in others, respect others, listen to others, and make decisions together rather than on their own (Knight, 2011). According to Wang (2013), creating an equal balance of power in the coaching relationship establishes the coach and participating teacher as equals, which can be empowering for the teacher. With more districts encouraging educators to utilize IPs to reflect on their current practices and learn the latest trends in education (Knight, 2011), it seems crucial that a partnership be established so healthy collaboration and reflection occur. According to Schön (1987), one of the best ways to help teachers transform their instruction is by establishing partnerships between the teacher and coaches. As indicated in the study, teachers viewed collaboration and reflection negatively when it was forced or when it had the feeling that administrators were “grading” their reflections. Giving participants control over their own learning and having administrators support teachers in their learning process makes adult professional learning opportunities more meaningful (Hansman, 2001; Merriam, 2001a; Marsick & Watkins, 2001; Stolk, Bulte, de Jong, & Pilot, 2009b; Torff & Sessions, 2008). Since

administrators have an indirect effect on student learning through interactions with teachers in professional learning (Guskey & Sparks, 1996), the researcher believes it is crucial for administrators to establish an environment in which reflection and collaboration are not rigid and stifled. In order to support teacher growth, the researcher believes it is crucial that administrators understand the processes through which teachers progress in order to develop professionally (Clarke & Hollingsworth, 2002). Teachers see the value in reflection when administrators model the act of reflecting (Arredondo et al., 1995). Partnerships structured like the IPN environment are based on the principle in which all educators are treated as equals and empowered to reflect on and modify their instructional practices in a way that has the greatest impact on student learning (Schön, 1987; Wang, 2013; Johnson & Altland, 2004; Dirks, 2001; Merriam, 2001a; Merriam, 2001b; Baumgartner, 2001).

The researcher concluded that collaboration and reflection among educators based on the partnership principles led to positive changes in instructional practices. The findings from this study suggested that there was an association between the teachers' perceptions of the influence of collaboration on instructional practices and student achievement provided that the teachers who held these perceptions embraced collaboration and implemented the practices gleaned from the collaborative opportunities. The researcher concluded that when educators implemented practices that resulted from reflection and collaborative discussions, student achievement increased because teachers were using data to plan their instruction and were changing instructional practices to meet the students' needs. The findings from this study indicated that there was a mild positive correlation ($r = .300$) between teacher reflective behaviors and district student achievement in reading, which suggested that student achievement was higher in reading when teachers exhibited more reflective behaviors.

Limitations of the Research

The design of this mixed method study included limitations, which may have affected the outcomes. As described in Chapter I, this study was limited to the number of schools and teachers asked to participate. Schools selected to participate in this study were selected from one district and chosen based on proximity to the researcher; therefore, a convenience sample, not a random sample, was used. This was also a cluster sample because the schools surveyed were within one school district. Surveying teachers in elementary, middle, and high schools assisted in providing an adequate sample representative of northern Alabama; however, this sample does not represent the opinions of all teachers in the state. Another limitation of this study was non-response bias. A total of 11 schools were asked to participate in this study, and one school (School E) respectfully declined to participate because the teachers had recently taken surveys for another doctoral student working on his/her dissertation. Additionally, 60% of the teachers from participating schools who were asked to complete the survey declined to participate. A final limitation was that the unit of analysis for the study was the teacher; however, the unit of analysis for student achievement was the school.

The following assumptions were clear in this research despite the previously mentioned limitations. The Reflective, Ethical, and Moral Assessment Survey provided a reliable instrument to measure the teachers' perceptions of their reflective thought processes. Additionally, the teachers who participated in this study taught in grades Pre-K-12 during the 2014-2015 school year in Alabama. Finally, it was assumed that participating teacher responses to the survey were truthful, all-inclusive, and professional. The study results were limited by the extent to which this assumption was true.

Recommendations for Future Research

Additional research on the influence of reflection and collaboration would be beneficial for coaches, Instructional Partners, and those helping to develop and mentor coaches and IPs. Additional research questions could broaden the understanding of the associations between teacher reflection and collaboration on instructional practices and student achievement.

One area for future research may be to conduct a comparison study in schools with and without Instructional Partners. A study such as this could provide a deeper understanding of whether IPs influence the level and effect of reflection and collaboration on instructional practices and student achievement. As some teachers in this study indicated in their open-ended responses, they collaborated and reflected because those are best practices in which strong teachers engage, not because they had an IP in the building.

Another area for future research might be to replicate this study in other states or within other geographic areas in the state of Alabama to determine if the results from the study within this one suburban North Alabama district apply to other districts within Alabama or districts in other states.

A final recommendation for future research is to add another qualitative dimension with interviews or focus groups. This dimension would allow the researcher to probe when participants are vague and to follow up when responses are incomplete. Regarding the qualitative data, a recommendation for future research is to ask respondents to mark the content and grade level they are currently teaching in order to draw conclusions about reflective and collaborative tendencies among teachers of specific grade levels and subjects.

Summary

This final chapter presented a summary of the study's results, its purpose, its methodology, its findings, its implications, its limitations, and its recommendations for future research. Overall, this study indicated that most respondents were inclined to exhibit reflective behaviors according to their responses to the REFLDMS section of the questionnaire. This study also indicated that there was a relationship between the teachers' perception of the influence of collaboration on instructional practices and student achievement provided that the teachers who held these perceptions embraced collaboration and implemented the practices gleaned from the collaborative opportunities. While this study presented findings that demonstrated positive relationships between teacher reflection and collaboration as a result of working with IPs, it is recommended that a comparison study be conducted between schools with and without IPs to see if most teachers are naturally reflective or if IPs create an environment that encourages collaboration and reflection.

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APPENDIX A

REMAS: REFLECTIVE ETHICAL MORAL ASSESSMENT SURVEY

Dear Participant,

The purpose of this study is to examine the relationship between collaboration with an Instructional Partner, teacher reflection, and student achievement. All responses will be kept confidential. After completing this survey, please click submit. Please contact Heather Donaldson directly for information about the survey (hdonaldson@madisoncity.k23.al.us). Thank you for your time and efforts.

PART I: REFLECTION. Please mark the frequency with which you engage in the reflective action described for each item. For example, if you perceive that the activity is one in which you engage very often then you would put an X in the far right column (“6”); if the activity is one in which you never engage, please mark an X in the first column (“1”).

While reflecting on activities and actions at work, how frequently do you - - - - -?

1. Review actions in conversations?
2. Ask questions about assumptions and underlying actions?
3. Invite feedback about actions?
4. Respond to feedback from others with clarifying questions or paraphrased statements?
5. Ask questions about perspectives of others?
6. Ask questions about your own perspective?
7. Construct meaning in conversations?
8. Interpret and check interpretations of others?
9. Plan actions?
10. Describe plans and check plans with others?
11. Become defensive when questioned by others?
12. Deny responsibility for decisions or actions you take?
13. Intentionally screen out criticisms, e.g., Use expressions like, “I don’t remember saying that –“?
14. Rationalize behaviors, e.g., “I only did that because –“?
15. Blame others, e.g., “I could not do that because policy/ past practice/ others/ forbid it –“?
16. View workplace decisions and actions as having moral and ethical dimensions?
17. Ask the question: “Is this a moral action?”
18. Ask; “Is that an ethical decision?”
19. Ask: “What is likely to be the result of this action on fellow employees?”
20. Ask: “What is the likely result on future practice?”
21. Ask: “What is the likely result on policy?”
22. Ask: “What is the likely result on clients or customers?”
23. Ask: “What is the likely result on society in general?”

24. Ask: “What is the likely effect on marginalized or disadvantaged groups?”
25. Examine decisions from an ethical or moral perspective?
26. Ask: “Is this decision right or wrong?”
27. Exhibit moral or ethical motivation in the workplace (i.e., prioritize moral and ethical values relative to other values)?
28. Exhibit moral or ethical character in the workplace (i.e., demonstrate sensitivity, courage, persistence, and, implementation behaviors)?
29. Rate the needs of employees first and above future practice, policy, clients or customers, society in general, or persons from disadvantaged groups?
30. Rate practice first and above the needs of employees, policy, clients/customers, society in general, or persons from disadvantaged groups?
31. Rate policy first and above the needs of employees, future practice, clients/customers, society in general, or persons from disadvantaged groups?
32. Rate clients/customers first and above the needs of employees, future practice, or persons from disadvantaged groups?
33. Rate the needs of society in general first, and above the needs of employees, future practice, policy, clients/customers, or persons from disadvantaged groups?
34. Rate the needs of persons from disadvantaged groups first and above those of employees, future practice, policy, clients/customers, or society in general?

Please answer the free response questions to the best of your ability; there is no right or wrong answer.

35. What types of professional learning have you participated in with your Instructional Partner and/or colleagues?
 - a. Whole Group
 - b. One-On-One
 - c. Small Group
 - d. Informal Discussions
 - e. Book Study (or other professional literature)
 - f. Other (please specify):
36. Does reflection empower you as a teacher?
37. Do you feel collaboration among the faculty has increased as a result of school or district professional learning opportunities?
38. Do you feel increased teacher reflection positively influences student achievement?
39. Do you feel you have become a more reflective teacher after collaborating with your Instructional Partner and/or colleagues?
40. What specific changes have you noticed (either in your instructional practices or student learning) as a result of collaborating with the Instructional Partner at your school?
41. What specific changes have you noticed (either in your instructional practices or student learning) as a result of increased reflection on your instructional practices?

PART II. DEMOGRAPHIC INFORMATION: Would you please provide the following information about yourself?

42. Gender: _____ Female _____ Male

43. School:

| | | |
|---------------------------------------|------------------------------------|----------------------------------------|
| <input type="checkbox"/> Columbia | <input type="checkbox"/> Discovery | <input type="checkbox"/> Bob Jones |
| <input type="checkbox"/> Heritage | <input type="checkbox"/> Liberty | <input type="checkbox"/> James Clemens |
| <input type="checkbox"/> Horizon | | |
| <input type="checkbox"/> Madison | | |
| <input type="checkbox"/> Mill Creek | | |
| <input type="checkbox"/> Rainbow | | |
| <input type="checkbox"/> West Madison | | |

44. Highest level of education: Bachelor's

Master's

Specialists

Doctorate

45. Teaching experience:

< 1 year

1 – 5 years

6 – 10 years

11 – 15 years

16 – 20 years

21 – 25 years

> 25 years

46. Grade level(s) taught (Please mark all that apply):

| | | |
|------------------------------------------|------------------------------------------|-------------------------------------------|
| <input type="checkbox"/> Pre-K | <input type="checkbox"/> 7 th | <input type="checkbox"/> 9 th |
| <input type="checkbox"/> Kindergarten | <input type="checkbox"/> 8 th | <input type="checkbox"/> 10 th |
| <input type="checkbox"/> 1 st | | <input type="checkbox"/> 11 th |
| <input type="checkbox"/> 2 nd | | <input type="checkbox"/> 12 th |
| <input type="checkbox"/> 3 rd | | |
| <input type="checkbox"/> 4 th | | |
| <input type="checkbox"/> 5 th | | |
| <input type="checkbox"/> 6 th | | |

47. Subject(s) taught (Please mark all that apply):

| | | |
|------------------------------------------------|--------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Reading | <input type="checkbox"/> Science | <input type="checkbox"/> Special Services |
| <input type="checkbox"/> Social Sciences | <input type="checkbox"/> Fine Arts | <input type="checkbox"/> World Languages |
| <input type="checkbox"/> English/Language Arts | <input type="checkbox"/> Career Tech | <input type="checkbox"/> Physical Education |
| <input type="checkbox"/> Mathematics | <input type="checkbox"/> Health | <input type="checkbox"/> Driver's Education |

48. Age:

< 21 years

21 – 27 years

28 – 35 years

36 – 43 years

44-51 years

52 – 58 years

> 58 years

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APPENDIX B

SUPERINTENDENT PERMISSION LETTER

Dear Dr. Fowler,

I am a graduate student conducting dissertation research in the Department of Leadership at The University of Alabama on *Relationships Among Peer Observation and Coaching, Complexity of Teacher Reflection, and Affects on Student Achievement*. I am requesting your permission to conduct this study with all elementary, middle, and high school teachers in the Madison City Schools district.

The purpose of this study will be to examine the effects of the relationships among teachers collaborating with an Instructional Partner (IP), on their reflections, and on student achievement.

In order to be considered for participation, the educators must be employed in the Madison City Schools district. The benefit of participating is the researcher will share the implications of the study with the participating schools. This information can be used to determine the benefits of participation in the Instructional Partner Network, professional growth areas of concern for the district, and student achievement. As participants, educators will be asked to complete a questionnaire on their reflective practices relative to decision making in the work environment. The survey should take no longer than 15-20 minutes to complete. At the end of the questionnaire is a section that asks some demographic information relative to participant experience in education and grade level taught. A copy of the survey is enclosed.

There are no known risks associated with completing and returning the survey or participating in the interview. Participation is voluntary. All information will be kept confidential, and the participants may withdraw from the study at any time with no further inquiries from the researcher. Should the participants choose not to remain confidential, they are, hereby, made aware of the non-confidentiality risks associated with the inclusion of data in the final report.

Thank you in advance for your consideration. A follow up phone call to answer any questions will be provided within five days of this letter. If you agree to have your elementary, middle, and high school teachers participate, please send your approval in writing by email to hdonaldson@madisoncity.k12.al.us or by fax to 256-772-6698 at your earliest convenience. This letter has also been mailed with a self addressed and stamped envelope if you prefer.

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.

I, _____, give permission for Heather Donaldson to survey employees within the Madison City Schools district.

Signature _____

Date _____

APPENDIX C

PRINCIPAL PERMISSION LETTER

Dear Principal,

I am a graduate student conducting dissertation research in the Department of Leadership at The University of Alabama on *Relationships Among Peer Observation and Coaching, Complexity of Teacher Reflection, and Affects on Student Achievement*. I am notifying you, with the permission of your district's superintendent, that I would like to conduct this study in your school. Dr. Fowler's approval is enclosed with this letter.

The purpose of this study will be to examine the effects of the relationships among teachers collaborating with an Instructional Partner (IP), on their reflections, and on student achievement.

In order to be considered for participation, the educators must be employed in the Madison City Schools district. The benefit of participating is the researcher will share the implications of the study with the participating schools. This information can be used to determine the benefits of participation in the Instructional Partner Network, professional growth areas of concern for the district, and student achievement. As participants, educators will be asked to complete a questionnaire on their reflective practices relative to decision making in the work environment. The survey should take no longer than 15-20 minutes to complete. At the end of the questionnaire is a section that asks some demographic information relative to participant experience in education and grade level taught. A copy of the survey is enclosed.

There are no known risks associated with completing and returning the survey or participating in the interview. Participation is voluntary. All information will be kept confidential, and the participants may withdraw from the study at any time with no further inquiries from the researcher. Should the participants choose not to remain confidential, they are, hereby, made aware of the non-confidentiality risks associated with the inclusion of data in the final report.

Thank you in advance for your assistance. It is my intent to follow up with you via email with the link to the online survey. Upon receiving the email with the survey link, please forward it to your certified faculty and ask them to complete the survey within one week.

Enclosed in this packet are copies of the informed consent and a copy of the survey I would like to have completed. If you have any questions prior to my email, please feel free to call me at 256-772-2547 or email me at hdonaldson@madisoncity.k12.al.us.

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.

I, _____, give permission for Heather Donaldson to survey employees within _____ School.

Signature _____

Date _____

APPENDIX D

PARTICIPANT INFORMED CONSENT LETTER

Heather Donaldson, a graduate student at the University of Alabama, is conducting a research project on The Instructional Partner Network in Madison City elementary, middle, and high schools. The sponsoring institution for this research is The University of Alabama.

The purpose of this study will be to examine the effects of the relationships among teachers collaborating with an Instructional Partner (IP), on their reflections, and on student achievement.

Potential participants were identified based on employment in Madison City Schools.

In order to be considered for participation, the educators must be employed in the Madison City Schools district. The data will provide no personally identifiable information and will be held and maintained by the primary researcher in a private Survey Monkey account. The raw survey data will be maintained until the completion of the research, approximately four months, and then will be deleted by the primary researcher.

The benefit of participating is the researcher will share the implications of the study with the participating schools. This information can be used to determine the benefits of participation in the Instructional Partner Network, professional growth areas of concern for the district, and student achievement. As participants, educators will be asked to complete a questionnaire on their reflective practices relative to decision making in the work environment. The survey should take no longer than 15-20 minutes to complete. At the end of the questionnaire is a section that asks some demographic information relative to participant experience in education and grade level taught. A copy of the survey is enclosed.

There are no known risks associated with completing and returning the survey or participating in the interview. Participation is voluntary. All information will be kept confidential, and the participants may withdraw from the study at any time with no further inquiries from the researcher. Should the participants choose not to remain confidential, they are, hereby, made aware of the non-confidentiality risks associated with the inclusion of data in the final report.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066. Should there be any questions, please contact the researcher at the phone number provided.

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 online, I confirm that I am over 18 years of age and agree to participate in the project on the Instructional Partner Network by Heather Donaldson in The University of Alabama, College of Education.

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

APPENDIX E

IRB APPROVAL LETTER

Office for Research
Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
R E S E A R C H

August 27, 2014

Heather Donaldson
ELPTS
College of Education
Box 870231

Re: IRB # 14-OR-306 "Relationships among Peer Observation and Coaching, Teacher Reflection, and Student Achievement"

Dear Ms. Donaldson:

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

Your protocol has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of 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 August 26, 2015. If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please 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, please complete the Request for Study Closure form.

Please use reproductions of the IRB approved informed 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,



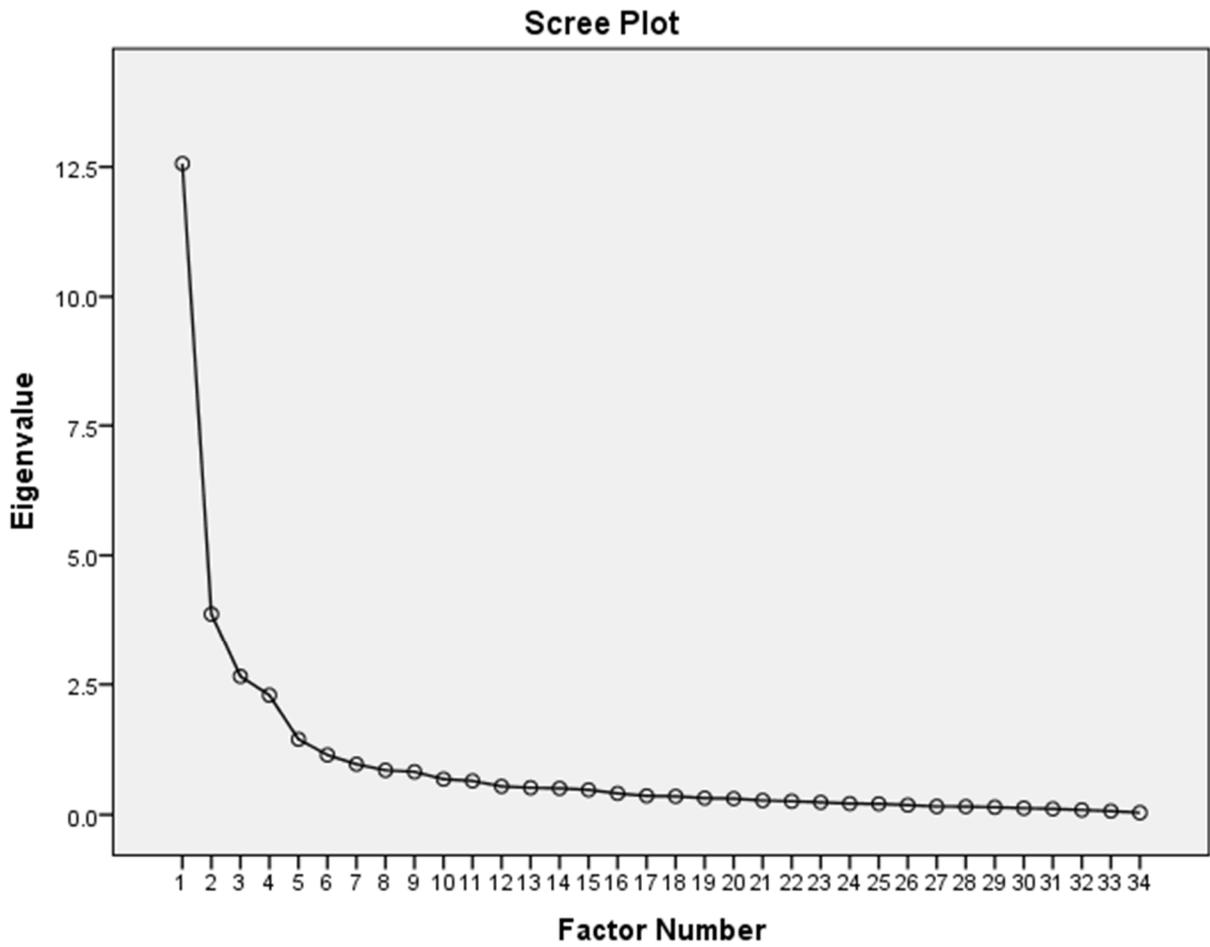
Director & Research Compliance Officer
Office for Research Compliance



358 Rose Administration Building
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FAX (205) 348-7189
TOLL FREE (877) 820-3066

APPENDIX F

COMPARISON OF THE EIGENVALUE TO THE FACTOR NUMBER TO ACCOUNT FOR THE TOTAL VARIANCE



APPENDIX G

MULTIVARIATE TESTS TABLE

Multivariate Tests Table

| Effect | | Value | F | Hypothesis df | Error df | Sig. |
|---------------|---------------|-------|-------|------------------|----------|------|
| Collaboration | Wilks' Lambda | .951 | 1.755 | 4.000 | 136.000 | .142 |

APPENDIX H
MANOVA TABLE

| DV | d f | df error | F | Sig. | Collaboratio n | Mean s | 99.9% Confidence Interval | |
|-----------------------------|--------|-------------|-------|-----------|-------------------|-----------|---------------------------|----------------|
| | | | | | | | Lower Bound | Upper Bound |
| Dimension 1 REFLDMS | 1 | 139 | 5.679 | 0.01 3 | Yes | 4.636 | 4.461 | 4.811 |
| | | | | | No | 4.126 | 3.766 | 4.486 |
| Dimension 2 DEFENBEH | 1 | 139 | 0.005 | 0.93 3 | Yes | 3.874 | 3.717 | 4.03 |
| | | | | | No | 3.889 | 3.567 | 4.21 |
| Dimension 3 ETHMORD M | 1 | 139 | 2.572 | 0.15 3 | Yes | 4.489 | 4.282 | 4.695 |
| | | | | | No | 4.145 | 3.72 | 4.57 |
| Dimension 4 ETHPRIOR | 1 | 139 | 1.221 | 0.22 0 | Yes | 3.52 | 3.354 | 3.687 |
| | | | | | No | 4.284 | 2.943 | 3.625 |

*Significant at $\alpha < .05$ Level (p = .013)