Understanding Teachers’ Perceptions of Academic Coaching Quality in an On-site Professional Development Program

by Phillip Wood

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ABSTRACT

Phillip Russell Wood. UNDERSTANDING TEACHERS’ PERCEPTIONS OF ACADEMIC COACHING QUALITY IN AN ON-SITE PROFESSIONAL DEVELOPMENT PROGRAM. School of Education, November, 2013.

Quality teacher training and continued learning is essential to providing the high quality education that yields adequate levels of student success. Though called by many different names, academic coaches appear to be the answer to the continuing problem of creating a positive learning environment that meets the challenges of educating students with varying abilities and needs. Driven by the analysis of student performance data, academic coaches train teachers in the best instructional practices and build teacher content knowledge to support improved student learning. Additionally, academic coaches offer support during the implementation of content learned through staff development. This study utilized the APS teacher perceptions survey, along with a survey of principals regarding how they utilized coaches in their schools, to determine if the method of coach usage at the schools influenced teachers’ perceptions of the three dependent variables—teacher perception of coaching effectiveness, teacher perception of the school personnel-academic coaching affiliation, and teacher perception of overall coaching quality. The quantitative data analysis involved using ANOVA to detect if there were any differences between the groups of teachers on how they viewed academic coaching, then using Tukey’s post hoc test to determine which groups differed specifically. The results indicated that the manner in which academic coaches are used in
elementary schools do influence teacher perceptions of academic coaching, but explain only a small amount of the variance between the teacher groups.

Descriptors: Academic Coaches, Collaboration, Data-Driven, Best Practices, On-going Professional Development, Instructional Coaches, Helpfulness, Mentoring, Professional Learning Communities, Research-Based, Summative Assessments, Perceptions
DEDICATION

This work is dedicated in whole to the family that I love more than life itself. To Kathy, my beautiful wife, Jackson and Jaden, my two talented and gifted sons, I give this work that has too often taken me from you when you needed me. It is with mixed emotions that I put an end to this work. There is joy, relief, and exhilaration in its completion, but there is also an incredible amount of guilt, frustration and pain. This project represents years of difficult and heartbreaking moments where I missed the opportunity to spend quality, valuable time with those I love the most. That time can never be returned to me or you. All that is left, then, is to enjoy the freedom that this completion now permits us. I hope that the pain, frustration, and grief this has brought us can be put behind us. I give thanks to God that HE has permitted this to come to fruition and has allowed me to return to the people and things that I love.
This work is a culmination of years of mind-numbing and seemingly endless work. It has meant countless hours away from my loved ones and an incredible amount of undue stress. When I entered this program, I had the impression that I was prepared to tackle this challenge head-on and conquer it with little difficulty. Then it was made painfully clear how little I actually knew or understood about this process.

I am fortunate to have had a strong support system of family, friends, and colleagues who have lifted me up supported me through these years. I express my sincere thanks to the faculty at Liberty University for offering a challenging program for me and my peers who have also completed this challenge. I am grateful for the relationships that have been forged by this experience, a brotherhood of people who have shared sufferings through a process that few can begin to understand.

I must thank all of the professors whom I have worked with over the last four years for showing, each in their own way, what it means to be a dedicated scholar. Each of you have given of your time, energy, and expertise, and I am richer for it: Dr. David Holder, Dr. Gary Kuhne and Dr. Jim Knight. Your guidance and direction has allowed me to accomplish my professional and personal goals. You continually supported me when I clearly had no real direction in my study. I appreciate you and your ongoing support. Dr. Tom Granoff & Dr. Craig Courbron also deserve a debt of gratitude for helping me understand the intricacies of statistical development and analysis.
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Finally, to a friendship that has been forged through countless hours of stress, self-doubt, fear, frustration, and intellectual inabilities, I owe an incredible debt of gratitude that can never be repaid. Our shared sufferings have welded a bond that can never be broken. Our group has been the backbone of this operation. Our commitment to each other that quitting was not an option is a bond that sustained me through the long periods of struggle to make it right. To Craig Courbron, Kelly Whitaker, Leigh Ann Putman, Kristi Goodwin, Donna Van Natten, Tracy Allison, Theresa Gardner, Todd Henry, Donna Pitts, Debra Bruster, and Dan Webb, the completion of this journey would have never been complete without you behind me and my family to say that giving up was “not a possibility” so many times as I struggled to carry on. Once a RAT, always a RAT! We are forged in shared sufferings and our friendship will be everlasting!
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CHAPTER ONE: INTRODUCTION

In today’s national and international educational communities, student achievement has become the battle cry of parents, educators, administrators, and politicians (Alexander, Entwisle, & Olson, 2001). Student achievement is at the heart of education. What students learn and the milestones they achieve are a reflection of the education community. When there is a failure in student achievement, there can be very serious repercussions for educators.

The need for improvement in student achievement is not in question; the question is how to assure that students are going to be challenged academically and still achieve at a level that will keep the United States competitive with the rest of the world. As stated by Tuerk (2005), student achievement disparities over the past 40 years have occurred between students from low income and high income families and between students from different races. NCLB was enacted in an effort to close these achievement gaps (Hirsh, 2005; NCLB, 2001; Tuerk, 2005). The NCLB law has caused states to scramble to individually identify the proper means of achieving the goals of NCLB, with the most significant of those goals being the improvement of student achievement.

**Background of the Study**

Continuous on-site professional development, mentoring, coaching, and peer assistance was being offered to teachers through teacher in-service and training in a rural school system in a southeastern section of the United States. These trainings were intended to improve teacher pedagogy, instruction, and student assessment as well as
analyze data to drive instructional practices.

Data collected through a series of assessments that were administered at the state and local school levels were evaluated and disaggregated to both teachers and coaches. Ideally, results of these assessments were then utilized to guide planning, instruction, and future professional development. The intention of the study was to understand teachers’ perceptions of the academic coaching that is provided at their elementary schools as a result of this on-going professional development.

**Federal Guidelines**

The measurement of student achievement is a challenge. With the lack of an effective, nationwide measuring tool, states are given latitude to develop testing and define the boundaries of what fails to meet, meets, or exceeds the standards (NCLB, 2001; Tuerk, 2005; United States Government Accountability Office, 2009). The NCLB legislation created in 2001 by President George W. Bush’s administration created high expectations regarding student achievement and called for 100% of students to meet grade level standards by the year 2014, but left the definition of meeting the standards to the state in which the student resides (NCLB, 2001; Nichols, Glass, & Berliner, 2005; Seastrom & Chapman, 2006). Additionally, NCLB also requires schools to achieve adequate yearly progress (AYP) based on certain indicators that demonstrate student achievement and progress. Thus, given the lack of federal direction, each state is allowed the unique opportunity to determine the rigor of their standards and the means by which they are measured (NCLB, 2001; Young & Giebelhaus, n.d.). Improving student
achievement is at the heart of NCLB, but the responsibility for raising student achievement has been placed squarely on the shoulders of the individual states.

With different presidential administrations have come varying standards in student achievement. Certainly, NCLB is one of the most aggressive set of standards in our nation’s history, especially when considering the repercussions or sanctions handed out to local schools and districts which are deemed “needs improvement” schools. This unprecedented process requires schools and school districts to monitor student progress like never before. The high-stakes system of accountability and testing has created an atmosphere which holds administrators, teachers, and schools accountable for student results. Successful AYP results are necessary if schools want to continue to have the freedom to operate as independent local educational agencies (LEAs).

**Influences on Student Achievement**

To parents, student achievement is a personal matter of their child’s academic standing. Student achievement is comprised of their child avoiding retention, becoming a high school graduate, and hopefully moving on to college and becoming a contributing member of society (Gym, 2011). To teachers, student achievement is the pride of knowing that they have taken the mind of a child and shaped it. Teachers take pride in the notion that they have offered students a wealth of knowledge that they can build on or use to continue to grow and develop in their lives. Consequently, it is also a matter of pride that teachers utilize student achievement data to identify where professional growth is needed, and to improve the teaching profession to meet the needs of students in a
changing world. To administrators, student achievement is a reflection on the way in which they run their schools or manage their school systems. It is a means of ranking the individual schools within their school system, the measuring stick of how those schools compare to other school systems in the state, and the standard by which the state system is compared to other states across the country. To some politicians and legislators, student achievement is something they must focus on because their careers can often hinge on the success or failure of students (Young & Giebelhaus, n.d.).

Researchers have found that many things can have a dramatic impact on student achievement (Tuerk, 2005). Examples are the influence of the community, parental involvement and support, gender, race, socioeconomic status, class size, instructional technology, teacher experience, teaching styles, school culture and organization, and funding (Covington-Clarkson, 2008; Darling-Hammond, 2000; Douglas, Burton, & Reese-Durham, 2008; Durden, 2008; Tuerk, 2005).

Despite all of the research on the topic, it has been consistently shown that there is no greater impact on student achievement than the influence that a teacher has on a student’s success (Darling-Hammond, 2000; Goe, 2007; Hirsh, 2005; Miller, 2003). However, researchers have concluded that teacher preparation and training has little actual effect on student achievement, but content-specific professional development does have a minimal impact on achievement (Harris & Sass, 2007; Marzano, 2000; Rockoff, 2003). A study that examined student and teacher data over a decade of results found some evidence of teacher impact on student achievement. However, as seen in Rockoff’s
(2003) study, the findings pointed toward raising teacher quality as the primary factor in raising student achievement. Subsequently, Rockoff suggested a better way of encouraging teacher growth based on rewards and bonuses, according to their own students’ growth and academic achievement.

Marzano (as cited in Miller, 2003) indicated that school and teacher factors accounted for only 20% of variation in student achievement. Twenty percent is what Miller (2003) referred to as “a marginal impact” (p. 1). In somewhat of a clarification, Marzano implied that those findings were misleading. He showed that placing students in a classroom with a moderately effective teacher usually leads to marginal student achievement. However, placing those same students in a classroom with a highly effective teacher leads to a higher level of student achievement. Likewise, Marzano showed that placing students in the least effective teacher’s classroom would significantly lower that student’s academic achievement (Marzano, 2003). Thus, student achievement seems to be directly related to teacher effectiveness.

Teacher Preparation

Many college institutions have teacher preparation programs with excellent reputations that are sought out by students longing to become educators. Practically every accredited institution across the country has an education program. New York state alone has over 110 programs of teacher certification (Baines, 2011). There is also a growing list of schools that are offering distance learning as a means for training teachers. Truly, there are a variety of ways teachers can receive either initial training or
ongoing training in the field. However, not all of these programs are of equal quality and rigor, or even teach the same content. School systems across the country are now finding that teachers come to them with varying levels of pedagogical knowledge and theoretical understanding of scientifically-based methods of instruction.

In addition to traditional programs of licensure and online programs, alternate forms of certification are also being offered. Luster (2010) and Darling-Hammond (2008) found that various certification programs like Teach for America and the Boston Teacher Residency Program certify people to teach in public schools who have little or no training at all beyond teacher licensing assessment and content knowledge.

Decker and Rimm-Kaufman (2008) found that preservice and first year teachers begin their careers with predetermined beliefs and understandings about teaching, children, and learning. They rely on their past experiences rather than a solid theoretical and pedagogical foundation to guide them in the learning process. Decker and Rimm-Kaufman, both directly involved with educating developing teachers, have found in their research that “it is more difficult to unlearn existing beliefs than it is to learn new beliefs” (p. 46). Therein lies the difficulty with teacher training. As these preservice teachers begin their education careers, many of them fall back on what they know, which is the manner in which they were taught themselves. Decker and Rimm-Kaufman and other researchers have come to similar conclusions (Ginsburg & Newman, as cited in Decker & Rimm-Kaufman, 2008). The importance of quality teacher training, with emphasis placed on pedagogical skills and best practices strategies, is undeniable.
As previously stated, research supports the theory that highly trained and qualified teachers have a positive impact on student achievement. One of the leading advocates for improved teacher training is Linda Darling-Hammond, who has researched teacher training and effectiveness for years. Darling-Hammond, Holtzman, Gatlin, & Vasquez (2005) concluded that the students of teachers who had completed an appropriate, accredited teacher certification program consistently produced better student achievement scores than those who had not. Additionally, they concluded that teachers who were certified through conventional methods, as opposed to those who were certified through nonconventional means, tended to stay in education for longer durations of time (Darling-Hammond et al., 2005; Goe & Stickler, 2008).

Conversely, some educational researchers have found that traditional teacher training that leads to certification is not necessarily a precursor to teacher effectiveness (Goldhaber & Brewer, 2000). The decisions made by the United States Department of Education during the George W. Bush administration reflects that sentiment. The NCLB legislation’s (2002) clause regarding having highly qualified teachers in their fields encouraged the hiring of teachers who only have degrees (as opposed to degrees and state certification) in history, science, and math (Luster, 2010). Furthermore, Education Secretary Rod Paige’s own beliefs indicated that the U.S. Department of Education wanted to make teacher education and coursework optional. Paige believed that extensive coursework and teacher education programs were keeping too many prospective teachers out of the field (U.S. Department of Education, 2002, reviewed in
This belief was reflected in *The Secretary’s Second Annual Report on Teacher Quality* when he said, “The current system dissuades many high-achieving college students and midcareer professionals from entering the teaching profession because it places unnecessary obstacles in their path. At the same time, its’ academic standards for new teachers are generally much too modest” (p. 1). The result of these views was programs created to certify and license teachers alternatively from traditional methods. The state of Georgia created the Georgia Teacher Academy for Preparation and Pedagogy (TAPP) program to alternatively certify teachers in this way (Georgia Professional Standards Commission, n.d.).

Questions remain regarding the quality and impact of alternatively-licensed teachers, but the research is still quite young. Goe & Stickler (2008) found differing views about whether teachers who had completed a traditional education program performed better in terms of contributing to student achievement than teachers who had completed an alternative route to certification (Betts, Zau, & Rice, 2003; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Decker, Mayer, & Glazerman, 2004; Goldhaber & Brewer, 1999; Kane, Rockoff, & Staiger, 2006). However, Humphrey and Wechsler (2007) found that the quality of the program itself mattered most, not whether it was an alternative or traditional teacher preparation program. Because of the varying degrees of readiness with which teachers arrive in public school classrooms, professional teacher development has become as important to student achievement as any variable in the world of education.
Professional Development

Teacher development does not end when teachers begin their practice. At that point in their careers, teachers are just beginning their learning process. Neufeld and Roper (2003) stated:

The need for professional development is obvious: Many teachers are not prepared for the challenge of educating *all* students to high levels. And district leaders know that the traditional workshops, conferences, and courses do not provide the ongoing, context-sensitive support that teachers and principals need to improve teaching and learning substantially. (p. iii)

The skills of teaching are learned over many years of practice. Teachers are constantly called upon to adapt and hone their skills as instructional leaders, curriculum providers, classroom managers, counselors, and caregivers. To ensure that these improvements continue over the course of the teacher’s career, states have required teachers to attend staff development training sessions, seek additional college courses, or attend ongoing professional learning in order to renew their teaching certificate (Georgia Professional Standards Commission, 2009). According to the Georgia Professional Standards Commission,

The goal of . . . professional learning is for educators within a school system to work together to enhance established educational goals for the individual educator, the school, and the district to assist students in meeting state standards for student achievement. (p. 1)
In the past, staff development had taken the form of quick fixes, with a “one size fits all” approach that did not worked to improve teaching (Froschauer, 2010). Recent research has shown that staff development training that focuses on curriculum matters, how students learn, and content and teacher pedagogy are the most beneficial to teachers in terms of impact on student achievement (Christie, 2009; Guskey, 2002; Hirsh, 2005; Klingner, 2004; Lewis, 2002). Further, the same research contends that the most significant staff development leads to communities (often referred to as professional learning communities) of teachers who are united in their efforts towards school improvement (Glassett, 2009; Holland, 2005; Joyce, 2004; Lewis, 2002; Schuck, Aubusson, & Buchanan, 2008).

The NCLB legislation has placed unprecedented demands on schools to show dramatic increases in student achievement on a year-by-year basis. The demands and accountability factors have resulted in a major re-evaluation of staff development techniques, styles, and foci (Hirsh, 2005). NCLB has forced school systems across the country to adapt their processes for ongoing staff development to meet the requirements of the law.

Research has shown that the most important elements of school reform and improvement are ongoing professional dialogue (discussion), collaboration and reflection among the members of the staff that leads to improved instruction, changes in teachers’ attitudes toward school reform, changes in teachers’ perceptions of new processes, and improved student achievement (Denton & Hasbrouck, 2009; Denton, Swanson, &
Mathes, 2007; Guskey, 2002; Russo, 2004; Saphier & West, 2009). Increasingly, school systems across the nation are beginning to utilize instructional coaches as a means of providing ongoing staff development that is more focused, intensive, and sustained (Denton & Hasbrouck, 2009; Guiney, 2001; Knight, 2005; Knight, 2006; Russo, 2004).

Instructional coaches in this study were used in a blended style of coaching that incorporated various forms of coaching into a unique style of professional development that impacted teacher pedagogy and practice. All of the coaches were involved in professional development of some form in that their end goal was directed toward teacher growth and improvement. The system established procedures for the coaches and directed their responsibilities. However, principals at each school modified responsibilities for the coaches according to the needs of their individual school. One school utilized their coaches in a way that provided professional development through observation and demonstration of lessons. Other principals used their coaches in a way that combined direct professional development with mentoring of individual teachers. Another school also utilized the blended form of coaching, but then added the element of direct student intervention in the classroom.

Statement of the Problem

Teaching, as a professional practice, is evolutionary. Teaching has traditionally been conducted with little or no adult intervention, but outdated and ineffective teaching methods have not generated academic success for the majority of students (Kennedy, 1998; Klingner, 2004). Despite this, few significant changes have been undertaken by
teachers that have resulted in substantial improvements to student achievement (Cicchinelli, Dean, Galvin, Goodwin, & Parsley, 2006). As a result, efforts have been made in recent years to increase student achievement by encouraging teachers to work collaboratively (Crandall, 1983; Knight, 2009; Showers & Joyce, 1996; Showers, Joyce, & Bennett, 1987). An important part of that collaboration is the interplay between academic coaches and teachers in regards to improving teaching pedagogy, and subsequently, academic achievement. Academic coaches often take a leadership role and have become central to academic success (Institute for Educational Leadership, 2001).

Research suggests that new information and strategies must be related to teachers and modeled for teachers on multiple occasions before teachers become confident and capable of implementing those practices in the classroom (Christie, 2009; Hassel, 1999; Kolb & Fry, 1975; Roberts, 2010; Schön, 1996). For this reason, ongoing training and support within the teaching environment is absolutely necessary. Unfortunately, teachers do not always perceive the assistance of academic coaches as helpful. Often, the duties of the academic coaches within a school influence how teachers perceive their effectiveness in that school. This study quantified the impact of academic coach use within a school on teacher perceptions of the effectiveness of those academic coaches.

**Purpose Statement**

The purpose of this research was to delineate teacher perceptions of the academic coaches who conduct the ongoing professional development programs in a school system. Further, the study led to a better understanding of which specific tasks and behaviors
performed by academic coaches were perceived by teachers to be the most beneficial. This study enabled the target school system to better understand the value of the academic coaches they employ in regards to changes in student achievement.

**Professional Significance of the Problem**

Because of the impact of government legislation that maps out the specific course educational curriculum and assessment must follow, school systems are forced to become more proactive in meeting the demands of that federal legislation. In order to achieve maximum performance from teachers and to meet the federal guidelines for education, school systems have been looking for highly-trained and specially-prepared individuals to act as academic coaches. The ultimate benefit of hiring these highly qualified individuals is the mutual gains to be made by students and teachers.

This study was significant in that it built on years of research in regard to student success and the idea that a strong, highly qualified, and well-trained teacher can improve student achievement. Results of this research add to the body of knowledge in the areas of academic coaching and teacher perceptions by establishing the differences between teacher perceptions of academic coaching in schools that utilize their coaches differently.

**Research Questions and Hypotheses**

The following research questions and hypotheses guided this study:

RQ1: Will there be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.
H1: There will be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.

RQ2: Will there be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

H2: There will be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

RQ3: Will there be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

H3: There will be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

Research Hypotheses in Null Form

H_{01}: There will not be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.
H₀₂: There will not be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

H₀₃: There will not be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

**Operational Definitions of Variables**

*Teacher Perception of the Effectiveness of Academic Coaching:* The perceptions that teachers hold regarding how significantly academic coaching impacts testing results at their school.

*Teacher Perception of the School Personnel-Coach Affiliation:* The perceptions that teachers hold regarding how well academic coaches develop and maintain beneficial relationships with the teachers in the school.

*Teacher Perception of Overall Coaching Quality:* The perceptions that teachers hold regarding the quality of the academic coaching that occurs at their school.

*School 1:* This school utilized coaching that was focused on the professional development piece of coaching.

*Schools 2/3:* These schools utilized blended coaching (professional development and mentoring of teachers in the classroom) without direct classroom intervention with students.

*School 4:* This school utilized blended coaching (professional development and
mentoring of teachers in the classroom) with direct classroom intervention with students.

**Key Terms and Descriptors**

The following list of key terms and descriptors provides a brief description of words and phrases, which are specifically associated with this study, in an attempt to give a clearer understanding of vocabulary used. These terms are also found throughout the professional research on the topic:

*Academic Coaches*: Personnel whose primary responsibility is to provide professional learning support to teachers through various designs including but not limited to training sessions, observations, conferencing, and modeling (Georgia DOE, n.d.).

*Collaboration*: Professional learning that improves the learning of all students and provides educators with the knowledge and skills to collaborate (Georgia DOE, n.d.).

*Data-Driven*: Professional educators who use disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement (Georgia DOE, n.d.).

*Formative Assessments*: According to the Florida Center on Instructional Technology (n.d.) formative assessments are “on-going assessments, reviews, and observations in a classroom. Teachers use formative assessment to improve instructional methods and student feedback throughout the teaching and learning process” (n.p.).

*Helpfulness*: "The quality defined by the ability to be of practical use" (Courbron, n.d.).

*Instructional Coaches*: They provide intensive, differentiated support to teachers, allowing them to implement proven practices. They “partner with teachers to help them
incorporate research-based instructional practices into their teaching” (Knight, 2009).

Mentoring: When a role model, or mentor, offers support to another person. A mentor has knowledge and experience in an area and shares it with the person being mentored (ASCD, n.d.).

Professional Learning Communities: According to Garmston (2007), PLC’s are a creation of a culture of inquiry rather than a continuation of work in a culture of isolation. “Systems successful in improving student learning are characterized by: articulated norms and values, a focus on student learning, reflective dialogue, collaborative practice, and deprivitization of teaching” (p. 55).

Research-Based: Professional learning that improves the learning of all students and prepares educators to apply research to decision making (Georgia, n.d.).

Summative Assessments: According to FCIT (n.d.), summative assessments are “are typically used to evaluate the effectiveness of instructional programs and services at the end of an academic year or at a pre-determined time. The goal of summative assessments are to make a judgment of student competency after an instructional phase is complete” (n.p.).

Perceptions: “The conscious recognition and interpretation of sensory stimuli that serve as a basis for understanding, learning, and knowing or for motivating a particular action or reaction” (Mosby’s Medical Dictionary, 2009).
CHAPTER TWO: REVIEW OF LITERATURE

Hollins (2006) stated, “Changing instructional practice is at the heart of improving learning outcomes for underserved and underachieving students” (p. 48). Caregivers, parents, and educators collaborate to serve their single most important natural resource: children. The acquisition of knowledge by our children is among the top concerns of parents today. Knowledge is the foundation upon which other abilities are built. Next to parents, teachers have the greatest impact on children’s knowledge acquisition; therefore, educators should be very aware of how their instructional practices impact student achievement.

This chapter consists of a review of the relevant literature pertaining to academic and instructional coaching. Because the author is researching the perceived impact that coaches have on teachers and student achievement, the review will incorporate historical background regarding the development of the issue over time, a discussion on the theories which drive this research study, and a comprehensive review of the existing literature on specific types of coaching, teacher perceptions of coaching, and coaching responsibilities. Because academic coaching is a relatively new phenomenon, and the literature is still in an emergent state, this review only highlights peer-reviewed research from the past quarter century that contains reviews of literature, journal articles, meta-analyses, and general research into coaching and ongoing professional development. Though this review of literature does not reflect the totality of the broad spectrum of coaching issues, it does incorporate the most relevant literature related to this study.


**Theoretical Framework**

Because there are so many factors that are involved in improving student achievement and providing teachers with the appropriate form of ongoing professional development, several different theoretical approaches can be applied to encourage student success. While these models are somewhat similar in their dynamics, it is important to understand that their coordination makes for a more meaningful approach.

**Experiential Learning Model**

Kolb (1984) popularized the learning model known as Experiential Learning. The concept of experiential learning can be traced as far back as Aristotle, but was largely developed into its present state by Dewey, Lewin, and Piaget (Armstrong & Fukami, 2008). Kolb defined learning as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb, 1984, p. 41). The concept of the resulting cycle is that the more time a student has to reflect on a problem, the more the student can modify and change their understandings. Though many different variations and editions of experiential learning have emerged over the years, the core of the theory still remains. In essence, Kolb’s experiential learning stated that to become a lifelong learner, a student must make sense of experiences and lessons that take place every day (Kolb, 1976; Smith, 2001). It is in this theory that coaching to improve classroom learning and student achievement merges. As Smith (2001) indicated in his review of Kolb’s model, “Kolb’s
interest lay in exploring the processes associated with making sense of concrete experiences and the different styles of learning that may be involved” (n.p.).

The Experiential Learning Model (sometimes called the learning cycle) was created out of four elements which can be directly linked to coaching. Those four elements are (1) concrete experience, (2) observation and experience, (3) forming abstract concepts, and (4) testing in new situations (Kolb & Fry, 1975). This cycle has been revised and reworked numerous times and adjusted to meet the needs of those applying the learning cycle (see Figure 1), but the basic foundation of the model outlined the basic premise of coaching in education.

Kolb and Fry (1975) also stated that students can possess different learning styles and characteristics (see Figure 2). These learning styles fall within, and correspond to, the learning cycle. When the learning cycle and learning styles are applied to coaching, then teachers can better match their own styles of learning with those of their students to best meet their needs. Kolb and Fry determined that most teachers (learners) operate in an instructional comfort zone based on their learning styles, which creates a challenge in regards to staff development because teachers and students sometimes learn in different ways.

(Chapman, 2005)
<table>
<thead>
<tr>
<th>Learning style</th>
<th>Learning characteristic</th>
<th>Description</th>
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| **Converger** | Abstract conceptualization + active experimentation | • strong in practical application of ideas  
• can focus on hypo-deductive reasoning on specific problems  
• unemotional  
• has narrow interests |
| **Diverger**  | Concrete experience + reflective observation          | • strong in imaginative ability  
• good at generating ideas and seeing things from different perspectives  
• interested in people  
• broad cultural interests |
Reflective Practice Model

The concept of reflective practice was originally proposed by Lewin (1952), but was further developed by Schön (1996) into a process that has proven beneficial for the professional development of both preservice and inservice educators. The theory addressed the learning capacity of individuals through a coaching process and lengthy reflection. Schön’s theory was based on the idea that individuals (teachers in this case)
learn better when they are immersed in a situation. Schön’s theory, in essence, was a challenge to the traditional staff development in that he valued the artistry, the practical experience, over the content itself, though the content was still important. Schön believed that regardless of the immediate outcome, reflection on the situation provides the best opportunity for personal growth when the learner is given the proper direction through a mentor, coach, or supervisor who can make the learning valuable (Schön, 1983; 1987).

The key element in reflective practice is the reciprocity between the coach and the student. If Schön’s (1987) belief is that people learn by doing, then the experience gained from involvement in a real setting allows for greater growth in the end. Students are actually involved in the learning taking place prior to knowing what it is they will be required to learn. That being the case, the reflective practice model is integral to the instructional coaching model of professional development (Schön, 1983; 1987).

Coaching, as a practice, is based on this theory. As part of their duties, coaches spend time in observation of teachers and become active participants within the classroom. Follow-up meetings are held with the teachers, during which the teacher and coach reflect on the lesson and activities. That reflection, coupled with collegial feedback, enables the teacher to grow in their practice and professionalism.

**Constructivist Theory**

Atherton (2010) provided a concise description of constructivist origins and growth and its place in educational reform. Atherton credits Constructivist Theory to three individuals, Dewey (1938), Piaget (1966), and Vygotsky (1978). According to Atherton, Dewey’s Constructivism emphasized experience in education, Piaget focused on the cognitive abilities of children to understand content (epistemology), and Vygotsky’s Zone of Proximal Development (1978) emphasized the importance of collaboration with a teacher or adult. Whether it is treated alone or as a part of Experiential Learning Model or the Reflective Practice Model, the idea of constructivist learning is found throughout the fields of education and instructional reform (Atherton, 2010).

Pratt (2002) published a review of constructivist learning and teaching entitled, Good teaching: One size fits all? He cautioned against educators’ rush to adopt the constructivist view, calling it “a reaction against teacher-centered instruction that has dominated much of education, particularly adult and higher education, for the past forty years or more” (p. 1). Pratt went on to say, “I fear we are about to replace one orthodoxy with yet another and promote a ‘one size fits all’ notion of good teaching” (p. 1).

However, Pratt did not fail to recognize the value of constructivism as part of a pedagogy of teaching perspective. Citing a decade of research defending numerous forms of teaching, Pratt argued that good teaching covers a wide range of teaching theories and practices.

In stark contrast to the Constructivist Theory is E. D. Hirsch’s Theory of Cultural Literacy (1987) that discounted experiential learning and, instead, emphasized the
importance of the traditional skill and drill method. Hirsch believed that learning requires effort and that drill and practice are necessary to build on the core knowledge that a child has (Hirsch, 1996; Summers, 1999). Additionally, Hirsch contended that the hands-on learning and critical thinking skills that have become the focus of recent educational practice should be replaced with a core body of content knowledge (Hirsch, 1999).

**Partnership Principles**

Knight outlined the framework for instructional coaching in his book *Coaching: Approaches and Perspectives* (2009). His Partnership Principles were seven principles based on sound, research-based practices. Following are those Partnership Principles and a brief description of each (p. 31-33).

- **Equality**: The true partnership expected to exist between teachers and coaches must be founded on the basis that they are equal partners who value each others’ experience.

- **Choice**: Throughout the process, teachers still retain the freedom of choice. It is not the job of the instructional coach to make teacher think their same way. Coaches should see what teachers have and then present them with choices.

- **Voice**: Through the partnership, teachers are encouraged to have their own feelings, opinions and thoughts. The partnership builds on these things and allows the teacher and coach to grow together.
 Dialogue: Conversation is the foundation of coaching. Coaches should encourage open discussion with teachers and allow the teachers to voice their beliefs and understandings.

 Reflection: Instructional coaches and teachers must take the time to reflect and review the lessons being learned and taught. The freedom of thought, freedom of expression and the voice that teachers have are the foundation of the professional reflection and really allow for change to occur.

 Praxis: The ideas and lessons learned should be put to practice in the classrooms. Teachers should be free to experience their understandings and the coaches are there to support and enhance the teachers’ experiential learning.

 Reciprocity: Teachers and coaches should learn to get as much from the experience as they give. Coaches should see the instruction through all those involved in it - teachers, students and coaches.

 Review of Literature

 Historical Background

 Historically, there has been a debate amongst educators about whether effective professional development design is the result of strong program content or an effective process for making decision. In response to this question, Hassel (1999) stated:

 Good professional development design includes both strong content and an effective process for making initial and ongoing decisions. Relevant content is
essential to ensuring that professional development helps you meet student learning goals. But good professional development content without a strong decision-making and organizational process to support it will be short-lived. (p. 9)

Organized professional development in the United States has grown as a result of constantly changing standards and a perpetual influx of new educational programs and pedagogies (Hood, 1993). As the United States emerged from World War II, the landscape of American education began to change. For the first time, the federal government began to take an active role in American education. Congress began to set aside monies for the building of schools, minimum per student expenditures and slowly began to legislate for state educational systems. Passage of legislation like the GI Bill of Rights (1944) would also impact higher education (Kaestle, 2001). With the emergence of the Cold War, American fears of Soviet takeover drove the United States into a new age of military and industrial development. The subsequent launch of Sputnik in 1959 showed the United States that they trailed the Soviets in academic excellence and pushed them to quickly re-evaluate their academic system (Clark, 1993; Hood, 1993). The push was made to increase academic excellence in the areas of science and mathematics (Markley, 2004). As the United States began to close the gap on the Soviets in the 1960s and 1970s, the country’s education once again stabilized. This stabilization led to a false sense of achievement. That ended with the publication of A Nation at Risk in 1983. The United States once again understood that education was in trouble and that students were graduation from the nation’s public schools without the basic skills to be successful. A
Nation at Risk emphasized the need for better schools and more highly qualified teachers; thus, teacher performance was brought to the forefront of American education. With teacher professional development becoming more important during the 1980s, the targeted funding for teacher training increased through Title I budgets. As seen in Manna (2008), training in the 80s and 90s tended to focus on improvements in math and science instruction to meet the at-risk populations. As Manna showed, federally funded professional development was low-impact and only consisted of about 6 hours per teacher, per year. One day workshops had very little impact on teachers or students (Manna, 2008).

NCLB

The driving force behind improved student achievement and improved schools is the NCLB legislation that was enacted by the George W. Bush administration. Discussing NCLB, Dee and Jacob (2009) said, “NCLB is an extraordinarily influential and controversial policy that, over the last seven years, has brought test-based accountability to scale at public schools across the United States” (p. 36). The Four Pillars of NCLB Report (2004) stated, “No Child Left Behind is based on stronger accountability for results, more freedom for states and communities, proven education methods, and more choices for parents” (n.p.). As a tool that was created to better student achievement, NCLB has sometimes created even more problems than it has solved. According to Henley, McBride, Milligan, and Nichols (2007), none of the states have been able to meet the quality goal as put forth by the NCLB act. As a result of these
failures, “at least one-half of the states are facing the possibility of receiving reductions in federal funding for educational programs” (Henley et al., 2007, p. 57).

The problem with NCLB was the method of implementation. Adequate Yearly Progress (AYP) was the measuring stick used by the federal government to determine if schools and school systems are making the progress they should. However, most educators object to using AYP as a method of measurement. Wallis and Steptoe (2007) addressed the difficulties of meeting AYP by stating, “One of the biggest problems: there are too many ways to fail, even when a school is moving in the right direction” (p. 37). Though schools can evaluate their progress over time, the law failed to take into account student growth, only that the school is not achieving the minimum standard. Furthermore, of the fifty states in our nation, each state was responsible for administering their own test, which have varying degrees of rigor and differing expectations for different levels of learners. Despite the call for immediate revisions to the pass/fail model made by thousands of educators, the federal government has only gone as far as testing the growth model in a few states and was not yet ready to move on the idea that schools could be moving in the right direction and improving each year, but still not passing AYP (Wallis & Steptoe, 2007).

In looking at a positive side of NCLB, the bar for student achievement has been dramatically raised and states have moved toward trying to meet those goals. In an attempt to meet those goals, many states have turned to coaching as a means of attaining those goals. One of the states that led the way in designing a plan for meeting NCLB
requirements was Pennsylvania, which took drastic steps to implement a framework for school improvement that included coaching (Pennsylvania Department of Education, 2012). Pennsylvania focused on improving professional development as a tool for enhancing student achievement. Coaching was one of the primary methods they designated to improve professional development in the areas of teacher knowledge, skill, and practice.

Opponents of the law have stated that NCLB is jeopardizing the holistic needs of the nation’s Schoolchildren. Parents, and some researchers, believe that NCLB has cost children their childhood. Henley et al. (2007) stated that schools have experienced the loss of the traditional school day because of the need for “squeezing every minute of the school day to meet the mandates of NCLB” (p. 56). As a result of the intent of the law, many schools across America have stripped away recess, art, physical education and music to make room for more structured class time on core subjects. The down-side to this is that students are not given that free-time that is needed to exercise, burn off excess energy and form appropriate social relationships with other students (Axtman, 2004).

Also, as a result of the time-consuming requirements of NCLB, many schools have also turned to de-emphasizing science and social studies courses simply because they do not impact AYP. Many School districts have had to teach science and social studies curriculum within the confines of the core classes.

In contrast to some reports that say the major objectives of NCLB have not been met (Joftus & Maddox-Dolan, 2003; Kernan-Schloss, 2004), a study released in
November 2009 indicated that there might be progress towards meeting NCLB goals after all. Dee and Jacob’s (2009) study concluded that some statistically significant increases occurred in the test scores of fourth and eighth grade math students, especially among groups that were traditionally either low-performing or high performing. The study maintains that though there were some notable increases, there were still areas (fourth and eighth grade reading, for example) where there were no significant indicators of improvement. As researchers continue to investigate specific areas of these testing results, new findings will eventually surface. Therefore, these findings must be viewed with caution and skepticism. Some researchers see the outcomes as positive based on NCLB’s marginal success, whereas others will claim the program is a failure because it has not yielded the amount of increase expected (Dee & Jacobs, 2009; Marzano, 2003).

The intent of NCLB was to see a certain percentage of growth each year until 100% is achieved in 2014, however, overall, the percentages of increase in achievement is just not as promising as hoped or expected.

Wrightslaw (2010) is an advocacy organization that was created to educate people on the legal aspects on dozens of issues related to children and education. Their organization is highly regarded as one of the leaders in publishing up-to-date findings regarding legal matters and education with a special emphasis on advocacy for children with disabilities. Wrightslaw has dedicated an enormous amount of manpower and research into the scope and effects of the NCLB legislation. A detailed understanding of the law can be found in their libraries.
The full scope of NCLB is not fully understood by all people. Educators should especially spend more time in attaining a better understanding of the law in its entirety, as opposed to just looking at the obvious mandates. Educators often overlook the “good news” of the law. The intent of the NCLB law is to increase academic achievement for the purpose of having a positive impact on society. The Wrightslaw group (2011) said of the possible influence of NCLB,

nations that invest in quality education enjoy higher levels of growth and productivity, and a high quality education system is an indispensable element of a strong economy and successful civil society. High school graduates are more likely to continue their education and receive the additional job skills and knowledge necessary to compete for jobs in a high-technology, knowledge-driven economy. More educated individuals lead healthier lives and have lower mortality rates. They are more likely to donate time and money to charity, and to vote in elections . . . the educational level of parents is a positive predictor of children’s health, cognitive development, education, occupational status, and future earnings . . . education is negatively correlated with criminal activity and incarceration, and highly educated mothers are less likely to have daughters who give birth out of wedlock as teens. (n.p.)

**Student Achievement**

Professional development in schools has taken an abrupt turn in recent years. The increased federally-mandated focus on student achievement has placed increasing
pressure on school systems to generate and carry out plans for staff development that bring them closer to the requirements of NCLB (2001). Although student achievement has always been at the top of priorities for educators, it has become a nationally recognized issue since the emergence of NCLB legislation. Regardless of its place in our educational agenda, the legislation has created a very real sense of urgency among educational leaders and teachers across the United States.

The increasing gap between the achievements of American students versus their counterparts throughout the rest of the world has brought about some major changes in the nation’s educational system. Students in the United States, on average, receive less math and science instruction than other students around the world; they also have a shorter school day (Marcotte & Hansen, 2010; Anderson, 2011). In fact, as of 1994, American students spent less than 41% of their time in core subject study than did students in other industrialized nations around the world (National Education Commission on Time & Learning, 1994). The further researchers and educational leaders delve into the problem, the worse the scenario gets. In addition to the decline of American education as a whole, the picture for specific minority groups is even more dismal. The minority achievement gap showed signs of closing during the 1970s and 1980s, but has once again begun to grow wider (Tuerk, 2005).

In July 2009, the National Center for Educational Statistics produced a report outlining the mathematics and reading scores for African American and Caucasian public
school students in grades four and eight for the 2007-2008 school year. Also, the National Assessment of Educational Progress (2007) scores similarly evaluated the achievement gap between these two groups. The findings from both indicated that in some states, actual gains were being achieved; however, in other states the achievement gap was still present. The 2009 study did indicate that scores for both groups of students had shown marginal improvement overall, but further indicated that the achievement gap was still present between them (Cavanagh, 2008; Vanneman, Hamilton, Anderson, & Rahman, 2009).

According to a recent press release from the Georgia Department of Education (2010), the achievement gap across the state has begun to close. Former state school superintendent Kathy Cox credited this improvement in the achievement gap to the Georgia Performance Standards (GPS). The GPS have increased the rigor being applied to teaching and learning in Georgia schools. The statistical reports showed a 12 percentage point jump for Georgia eighth grade math students since GPS was implemented in 2008. Since the inception of the GPS program in science in 2006, seventh grade science has shown a 17 percentage point increase statewide. Some of the most substantial gains came in third grade reading, where the pass rates for English Language Learners have increased 26 percentage points statewide since the implementation of the GPS (Rome News-Tribune, 2009).

**Ongoing Professional Development**

There are a multitude of things to consider when evaluating a specific practice;
this is also the case with the practice of coaching. Knight (2009) indicated that there are factors other than coaching that have influence over student achievement. For example, the duration of time that coaching has been in place, the daily influence coaching has on instruction, the various responsibilities that coaches have, the requirements for becoming a coach, and the academic background of coaches all impact student achievement (Knight, 2009). Conducting a solid, quantitative study of a specific school system that has instituted coaching provides a more revealing look at the impact these academic coaches have on students’ academic achievement and student retention in schools.

Research has shown that teachers in higher performing schools are actively engaged in some form of collaboration or peer coaching. Accordingly, those higher performing schools have teachers who are involved in professional development that is directly related to changing their instructional practices to improve student achievement (Klingner, 2004; Peterson, Taylor, Burnham, & Schock, 2009).

In a study conducted by Shidler (2009), content specific coaching was shown to have a direct, positive impact on teacher efficacy, which in-turn led to improved student achievement. The study was conducted over a three-year period and utilized varying degrees of instructional coaching and reflection. Shidler’s findings were similar to other studies conducted in the field that have concluded that the coaching that took place was impactful on student achievement (Ross, 1992). The specific modeling of best practices in content areas proved more beneficial in year one of the study; whereas, in years two and three, time spent by the coaches in content specific areas was reduced, resulting in a
decrease in student achievement. The implications of the study indicated that there are four components to coaching:

- instructing for specific content
- modeling techniques and instructional practices,
- observing teacher practices
- consulting for reflection (p. 459).

Many school systems across the United States have committed themselves to the idea that appropriate change in schools only happens over time (L’Allier, Elish-Piper, & Bean, 2010; Neufeld & Roper, 2003). This change over time often occurs when schools and school systems implement professional learning communities (PLC). These PLCs, which embrace data-driven adaptations in the classroom setting, are based on collaboration, mentoring, coaching, and adequate professional development (Crandall, 1983; Knight, 2009; Showers & Joyce, 1996; Showers, Joyce & Bennett, 1987). Schools that consistently show higher scores on standardized testing do so because of the adoption of school-based initiatives that foster effective, challenging classroom instruction (Blankstein, 2004). One of the most popular of these school-based initiatives is the utilization of academic coaches to help transform and modernize classroom instruction. Because this is a relatively new trend in schools and because of the expense involved, the numbers of schools who do not use coaches are much larger than the number of schools which do utilize them. However, that is quickly changing. Knight (2006) indicated that the number of schools utilizing coaches is growing “at a staggering
rate” (p. 36). The increasing number of schools using coaches is the result of its effectiveness and because school leaders now realize the positive impact that coaches have on student achievement (Knight, 2006; Knight, 2009).

NCLB has given birth to numerous school reform initiatives as educational leaders at the state and local levels look for ways to encourage the greatest increase in student achievement (U.S. Department of Education, 2002). Districts go to great lengths to implement appropriate professional learning in order to achieve those goals. Unfortunately, in the rush to provide teacher training, ineffective “quick fixes” for professional development often find their way into professional development curriculum (Dana & Yendel-Hoppey, 2008; Eisenberg, 2008). Kennedy (1998), referring to these ineffective workshops as “one-shot,” says this method of staff development is “much maligned” (p. 3). Other researchers found similar results. Dole and Donaldson (2006) stated “the notorious one-shot workshop has been typecast as a failure for the amount of time, energy, and effort wasted” (p. 486). Klingner (2004) suggested that “the majority of past professional development programs were marginally successful at best” (p. 248). According to Roberts (2010), change does not come easily in education; the success of any change depends largely on the amount of teacher buy-in that occurs regarding the change to be made. She said, “Professional development practices such as mentoring (or coaching) that provides one-to-one guidance and ongoing on-site support can be more successful because learning depends on the collegiality among teachers” (Roberts, 2010, p.4).
Providing this training is one thing, actual implementation of the strategies is another. Following up the learning with proper support in and out of the classroom has now become necessary for school systems (Joyce & Showers, 1996). Available research also shows that some of the best learning and professional growth comes from what is learned in practice (Schön, 1983; Schön, 1996). In essence, teachers become better practitioners when they study the practices of those around them (Dole, 2004; Hansman, 2001). As Swafford (1998) pointed out, a meta-analysis of studies examining outcomes of staff development programs concluded that coaching is more meaningful in transferring training than all other components combined if teachers are willing to accept the coaching and adapt to the situations appropriately. Strickland and Riley-Ayers (2007) supported Swafford’s conclusions regarding staff development. They stated that the most effective professional development occurs on site, close to the classrooms where the strategies were to be used. Again, Strickland and Riley-Ayers indicated that training which takes place within the School 1 and allows reinforcement of the new learning helps teachers to remain engaged.

There is a wealth of research and literature available on both professional development and academic coaching, but there exists only a handful of resources that incorporate the two together, although the number is growing (Darling-Hammond & McLaughlin, 2011; Engstrom & Danielson, 2006; Joyce & Showers, 1980). These two branches find common ground in that academic coaching occurs within the framework of professional development.
As the numbers of academic coaches increases across the nation, more and more administrators are struggling in simply identifying the specific roles these coaches will play at their schools. One of the most respected names in the field of practical education, and that of professional development, is Harry Wong. Wong, H. and Wong, R. (2008) clearly outline the roles coaches should play in the academic setting and make the connection between winning coaching in athletics and winning coaching in teaching. Wong, H. and Wong, R.’s presentation of comprehensive induction compares teachers to doctors and lawyers. In essence, doctors and lawyers would not be allowed to practice without the proper guidance and direction. Developmentally, teachers should be supported by coaches who help them refine and sharpen their skills. Their findings agree with other research that came to similar conclusions. In a study conducted by Dole and Donaldson (2006), coaches’ responsibilities were assessed and evaluated for their effectiveness. Like Wong, H. and Wong, R. (2008), Dole and Donaldson concluded that academic coaches add substance to the ongoing professional development of teachers through appropriate modeling of highly effective teaching practices. Shidler (2009) reinforced their findings by writing,

Adult learning theory holds that adults (teachers) must be allowed to move through the learning process at their own pace; they also need to be allowed time for repeated and guided practice of their new skills. Teachers must unlearn old habits and replace them with new behaviors. This will require reflection on existing practices. Academic coaches can be employed to assist teachers in
moving through this process. (p. 454)

Though coaching has technically been around for more than thirty years, the first truly nationwide reform programs to mention coaching by name were the Literacy Collaborative, America’s Choice, and Reading First (Knight, 2009). America’s Choice was an educational program that utilized a rigorous standards-based curriculum much like the curriculum many schools across America have gone to (including the school system in this study). Currently, under Reading First, more than 5,600 schools have hired full-time literacy coaches to support teachers in raising student achievement (Deussen, Coskle, Robinson, & Autio, 2007; Peterson, Taylor, Burnham, & Schock, 2009).

The practice of coaching is not only a phenomenon found here in America, but is practiced throughout the world. For examples, “Leading from the Middle” (Simkins, Coldwell, Caillau, Finlayson, & Morgan, 2006) is an international study of academic coaches as a means of leadership development. Simkins et al. (2006) found that the process of coaching in Britain focuses on leadership that emerges at the midelevel (teacher leadership) of academia. Their findings indicated that academic achievement is possible if there is successful professional development to actuate the achievement. The Institute for Educational Leadership (IEL; 2001) published a task force report on teacher leadership (coaching) that was similar to the study by Simkins et al. in Britain. The foundation for the study by IEL (2001) was that in school reform initiatives, often the teacher leader is overlooked. Teacher leaders are essential in bringing about the positive and lasting changes that are necessary to truly impact education, but they are largely
ignored. As the study demonstrated, “the organizational structure of today’s schools will not survive” without the use of teacher leaders, like academic coaches, who can shape new reform efforts (IEL, 2001, p. 2).

Teachers cannot be properly prepared without the persistent training that comes through ongoing professional development. Over the past thirty years, the world of education has been in the midst of a transformation to try to address some of the real problems hurting schools. The area most in need of help is in the area of ongoing professional development (Brandt, 1987). More recently, schools of education at universities have been teaming with local school systems to address this need (Darling-Hammond, Bullmaster, & Cobb, 1995). An example of ongoing teacher training is the program at the University of Kansas Center for Research on Learning, which is working to prepare the teacher leaders of tomorrow. The intent of these programs is to prepare teachers for moving into leadership roles within their schools that will not result in hierarchical discontent, yet will yield important opportunities for the growth of the entire School community (Darling-Hammond, Bullmaster, & Cobb, 1995). These programs encourage personal characteristics that teachers will need to be successful in schools, such as individuals who are “open to learning and [who] understand the major dimensions of learning in schools: the learning of students, learning of colleagues, learning of self, learning of the community” (Lambert, 2003, p. 422).

A multitude of sources exist which support the notion that appropriate professional development leads to better teachers and better student achievement.
The greatest impact that academic coaches have on the field of education is in the spectrum of professional development (citation needed). Kansas University’s Center for Research on Learning’s director, Jim Knight, has published a number of works on coaching and ongoing professional development. One of Knight’s studies published by the National Staff Development Council in 2004 shows the impact of academic coaches on a local school system. Knight’s (2004) findings suggest that academic coaching serves as an “on the spot, everyday professional development” that encourages teachers to utilize research-based instructional strategies (p. 33). Following that work, Knight (2006) outlined eight factors that can increase the likelihood that academic coaches can serve schools as effective tools of continuing professional development. Spending sufficient time with teachers was his first factor. Essentially, to improve academic success at a given school, coaches have to spend most of their time working with teachers on instruction (Knight, 2006). Coaches must educate teachers using proven, research-based techniques and scientifically proven practices. Additionally, coaches must take part in furthering their own knowledge through ongoing professional development to stay current and informed. They must protect their coaching relationship by building a profound trust with other teachers to enable a positive relationship to be formed. A collegial relationship must also be formed with the leadership of the school. The principal is still the captain of instructional leadership at the school, but the instructional coach is the first officer of the ship. The most critical of Knight’s (2006) eight factors is
the hiring of the right people to function as academic coaches. Success is not likely when hiring the wrong coaches. When the best available coaches are hired, the other seven factors will fall in line. When all of Knight’s (2006) factors are considered, not only are the coaches cost-effective, but they are also proven to be more substantial in their impact than other types of staff development trainings (Knight, 2006). Roberts (2010) also supports Knights’ emphasis on hiring the most effective coaches saying, “The leadership in this area needs to be someone who can develop a positive relationship in which they can train adult teachers” (p.4).

According to Eisenberg (2008), the state of Pennsylvania had acquired a federal grant for the purpose of placing academic coaches in high schools as a means of establishing a collaborative and collegial environment conducive to improved teaching and learning. The study outlined the relationships that are developed throughout the coaching process, both with teachers and with administrators. The content of the paper and significance of the study is supported by a body of evidence provided by the statistical increase of success rates of students during a four year period (Eisenberg, 2008). Also supporting the idea of collegiality between teachers and coaches is Cordingley’s (2005) report on coaching as a means of development. Much of what is found in the research indicates that there are levels to the framework of the coaching process including, but not limited to, the ideas of collaboration, experimentation, learning conversations, and positive relationships (Cordingley, 2005; Roberts, 2010; Showers & Joyce, 1996). Collegial models such as mentoring and coaching enable teachers to
communicate with one another about common practices they share. The coaching model allows professional teachers to work together, collaborate in planning, design challenging lessons, sort through mountains of research, and evaluate the curriculum at hand (Roberts, 2010). An even more insightful article published in the same year as Cordingley’s also expounded on the importance of the relationship between coaches and teachers. Kent (2005) developed his support for literacy coaches by embracing the notion that successful coaches are generated out of successful relationships with fellow teachers. As research shows, the best way to get the maximum academic value from coaches is with a positive and open working relationship that is established between the coach and teacher (Kent, 2005; Roberts, 2010). Cassidy and Medsker (2006) said,

> since teamwork, collaborative approaches, and knowledge sharing have become increasingly important for high performance in today's workplace, performance improvement professionals must continue to explore ways to enhance team performance and to encourage colleagues, clients, and students to collaborate and cooperate rather than compete. (p.4)

One of the best sources for information on coaching comes from a review of literature on the subject completed by Greene (2004). Among the findings of that survey, Greene determined that a number of consistencies emerged on the positive side of coaching. The consistencies included, but were not limited to, positive relationships between teachers and coaches, common planning time that allows for positive support, informal contacts between coaches and teachers, and teacher/coach time to reflect on
lessons and modeling (Greene, 2004). Additional findings by Murray, Ma, and Mazur (2009) also supported Greene by finding that coaching allowed teachers the opportunity to learn from one another in shared experiences and reflection of their teaching.

Despite the growing use of coaches in an academic setting, there exists little empirical evidence that using coaches, either literacy or instructional, leads to improved academic achievement (Peterson et al., 2009). Peterson et al. (2009) cited the reason for this lack of evidence on coaches and student achievement when he stated,

fairly new phenomenon, there is little uniformity in the role of coaches from site to site, there is lack of data linking coaching directly to changes in teacher practice and student achievement, and there is limited documentation of what actually occurs during coaching interactions. (p. 500)

Peterson et al.’s study examined the professional development and conversations of coaching that lead to improved instruction in the classroom. Though the study does not empirically demonstrate that student achievement improved, it is known that improving instruction positively impacts student achievement (Peterson et al., 2009).

Killion (1999) conducted an extensive review of professional development reforms from across the country and evaluated each one based on its stated goals and impact on professional development and student achievement. Of the most successful forms of staff development, Killion found that those that had the greatest impact reflected the learning styles expressed within this research of Constructivism and Experiential Learning.
In his evaluation of coaching models, Killion (1999) found that “training was an efficient way of developing knowledge and skills” (p. 177). However, when staff development included modeling, demonstrations, coaching and observation, “it was extremely effective as a means to acquire knowledge and skills” (p. 177). Killion’s other conclusions greatly resembled those of researchers like Showers and Joyce (1996), whereby follow-up processes in the classroom at the point of delivery were suggested. In other words, Killion recognized that on-site follow-up with coaching would enhance the impact of the staff development. Killion stated,

This easy access to local support increases the likelihood that teachers will seek and receive assistance in a timely manner when they have problems. Access to support also helps to sustain teachers’ efforts and motivates them to continue implementing new practices, rather than falling back on more familiar or more comfortable processes. (p 179)

**Coaching Characteristics**

**Duties of Coaches.** There is not a commonly agreed upon job description of what a coach does on a daily basis. Despite the growing prevalence of coaches, there still is no standard model or definition of an instructional coach, but a common definition is slowly starting to form (Kowal & Steiner, 2007). Research indicates that many school systems are still very misinformed about what coaches do, what their primary duties should be, what role their coaches should play, and their qualifications for the job (Knight, 2009). Even some coaches do not have a clear picture of their duties and
responsibilities. This lack of direction is likely due to coaching programs being based on the needs of the system and on available resources rather than the needs of students or staff (Kowal & Steiner, 2007).

Examination of current research conducted by the leaders in the field and some job descriptions from around the country indicates that coaching is beginning to be more clearly defined in regard to duties and responsibilities. However, there is some vagueness that still exists within some school districts and among teachers, and that vagueness needs to be clarified (Knight, 2009).

L’Allier et al. (2010), like other studies, found that the top priority/responsibility for coaches involves “helping classroom teachers improve their instruction through job-embedded, ongoing professional development” (p. 545). This definition, generic though it is, provided a solid foundation for administrators to assign coaching duties. L’Allier et al. went on to define coaches’ responsibilities as large group presentations, study groups among teachers, grade level meetings, individual classroom observations, and teaching (modeling). L’Allier et al. provided a series of guiding principles that describe the qualities and expectations of coaches. Citing other research studies, L’Allier et al. found that only 28% of coaches spent their time working with teachers. Those results are surprising considering that coaches should be providing ongoing staff development to teachers on a consistent basis. Coaches are expected to develop collaborative relationships with teachers that serve as a solid foundation for professionalism and growth. Coaches should be dynamic, initiators of change, and curriculum experts to
ensure that adequate interventions are taking place with teachers and students when needed. Kowal & Steiner (2007) provide a more simple set of skills that an effective coach should possess, including pedagogical knowledge, content expertise, and interpersonal skills. Certainly school systems can choose their coaches based on more stringent requirements, but the most important elements are those which improve teacher performance and student achievement.

One of the more successful coaching systems in America is located in Boston Public Schools. Since deciding to commit over $7 million annually to the program, Boston Public Schools have been enjoying enormous success with their Collaborative Coaching and Learning process (CCL), which employs more than 80 instructional coaches. According to Richardson (2004), the coaching process in Boston has emerged to be quite an elaborate, yet simple process. The CCL works on eight week cycles where teachers are placed in cohort groups made up of ongoing training in three component areas: inquiry, demonstration, and one-on-one coaching (Richardson, 2004). One of the things that make their program so successful is that the board established an account to fund substitute teachers to allow teachers time to meet and debrief following their sessions. The CCL is vital to the success of Boston Public Schools. Though teachers may only participate in one 8-week rotation per school year, the system has found that teachers continue their cohort groups even after the cycle so as to retain their focus on best practices and student achievement (Richardson, 2004).

Education Matters, Inc. funded a study for the Annenberg Institute for School
Reform on coaching that thoroughly reviewed the multiple dimensions of instructional coaching. The authors, Neufeld and Roper (2003), reported extensively on the practice of coaching, including coaching as a professional development, what coaches do, and how coaching promises to improve achievement. Next, their study examined the implementation of coaching practice as professional development. Finally, they looked at what school systems should expect regarding improvements as a result of coaching.

**Qualities of Effective Coaching.** Darling-Hammond and McLaughlin’s (1995) conducted a study that looked primarily at improving teacher learning, teacher practice, student learning, and the professional development known as coaching. Their conclusions in the first section of their synthesis primarily agreed with the suggestions made by Darling-Hammond, Wei, Andree, Richardson, and Orphanos (2009), whereby the essential features for effective coaching suggested:

- It must be grounded in participant driven inquiry, reflection and experimentation.
- It must be collaborative and focus on communities of teachers rather than individuals.
- It must be sustained, ongoing, intensive, and based on modeling, coaching, and collective problem-solving methods.
- It must be connected to teachers’ work with students.
- It must engage teachers in tasks of teaching, assessment, observation, and reflection.
It must be connected to aspects of school change. (Darling-Hammond & McLaughlin, 1995)

**Benefits of Coaching for Principals and Teachers**

Neufeld and Roper (2003) reflected on the benefits that principals can reap from coaching that occurs in their schools. Because the coaches benefit from ongoing professional developments themselves, and are constantly trained on changes in curriculum and instruction, they offer principals a great opportunity for support in their roles as instructional leaders. Neufeld and Roper listed some of these benefits as:

- Coaches help principals understand the importance of recruiting teachers to assume instructional leadership roles to drive whole-school change.
- Coaches act as strategists and assistants in building capacity for shared decision making.
- Coaches model leadership skills for principals as well as for teachers.
- Coaches assist in scheduling.
- Coaches help principals organize their time so that they are able to visit classrooms regularly to observe instruction and offer feedback to teachers. (p. 5-6)

Taylor, Moxley, Chanter, and Boulware (2007) indicated that administrative support provided to coaches was important to the success of the schools involved, particularly as it impacted teacher perceptions of academic coaching. According to the authors, administrators who attended the training sessions provided by the coaches sent a
powerful message to teachers about the overall importance of the initiatives being made. According to Neufeld and Roper (2003), these coaches also offer assistance at the school level by helping teachers implement what they had learned in their classrooms and creating a safe environment in which teachers can practice and improve their skills without fear of negative evaluations. Neufeld and Roper claim that coaches

- work with other teachers to plan and implement lessons;
- work with some content-area teachers to hone specific strategies;
- develop/find materials and other curriculum resources;
- work with new teachers on new-teacher issues as well as on instructional strategies;
- encourage teachers to talk about their practice with them and with one another;
- observe classes and provide written and oral feedback after observations; and
- provide demonstration lessons. (p. 9)

School Districts and Coaching

Perhaps the most important aspect of coaching is how the individual School districts determine exactly what duties they want the coaches to perform and how they want those duties done. One of the most profound statements made by Neufeld and Roper (2003) is that

coaching does not occur in a vacuum; it is part of a district’s reform strategy for increasing the quality of teaching so that students achieve at higher levels. As
such, coaching needs to be embedded in the district’s overall reform strategy and professional development plan; it is not a stand-alone or complete approach to professional development. (p. 15)

In essence, School districts cannot go into coaching half-heartedly; they must commit and give full support for the program. Because coaching has been around now for some time, and because it is being adopted in more districts across the country, school systems are now able to look at the experience of other districts and avoid the tough challenges normally associated with coaching before many of them even surface. Numerous systems around the country (Massachusetts, Kansas, and Pennsylvania for example), have very successful programs in place and can be extremely valuable resources for new districts coming into the practice (Neufeld & Roper, 2003).

**Coaching Outcomes**

The final segment of the Education Matters report is on the expected outcomes of coaching. At the time the research was conducted, coaching was not yet widely implemented and the research of the effects was virtually nonexistent. Much of the research that existed was on the technical aspects of coaching. Neufeld and Roper (2003) laid out the expected outcomes of coaching implementation when they stated that there is a reason to think that coaching, thoughtfully developed and implemented within a district’s coherent professional development plan, will provide teachers with real opportunities to improve their instruction, principals with real
opportunities to improve their leadership, and districts with real opportunities to improve their schools. (p. 26)

According to their research, they concluded that the following outcomes should be expected:

➢ better, school-based professional development that is focused on teachers’ and students’ needs

➢ teacher learning that is transferred directly to the classroom because the coaches help to implement the learning

➢ a collegiality among teachers and staff and the willingness to share learning, practice, techniques, and responsibility with each other for the students’ benefit

➢ principal-led instructional improvement

➢ improved school culture with high-quality instructional focus.

Much of what Neufeld and Roper (2003) found in their research has been echoed by other research leaders across the country. Knight (2006, 2009) reported on the dynamic changes that were taking place in schools and districts that utilize coaching. What Knight referred to as the “attempt, attack, abandon cycle” has finally been pushed aside and replaced with research-based, proven models of professional development (n.p.). Knight’s work on instructional coaching has been instrumental in developing fundamentally sound practices and principles used in this method of professional development.
Athletic Coaching

The term “coach” has long been one associated with the world of athletics. Throughout a person’s lifetime, they come into contact with dozens, perhaps hundreds of people who fall into the category of coach. Coaches can be a part of a young person’s life from elementary school through college, and sometimes as far as professional sports. They range from unpaid volunteers to graduate assistants to managers of professional organizations who make millions of dollars to share their knowledge and understanding of the game. According to Carter and Bloom (2009), “coaches perform various duties: guiding the practice of skills, providing instruction and feedback, and monitoring learning and performance; all of which are designed to help athletes realize their potential” (p. 420). Often, these individuals are looked upon as the people who know the game most intimately; whose knowledge, perceptions, and understanding of the sport far outweigh that of ordinary people.

It has not been until recent years that athletic coaches have been looked upon favorably in the eyes of academic leaders. Coaches have not always been revered as one of the most important features that a school has to offer, at least regarding academics. In fact, coaches have often been viewed as anti-intellectuals who were looked upon with disdain for their superfluous attitude of athletics over academics (Baines & Stanley, 2003). It has long been considered an oxymoron to speak of academics and athletic coaching in the same sentence. Coaches have traditionally been associated with dumb jocks, locker rooms, and physical education (Baines & Stanley, 2003).
Those concerned with success have often looked to the world of athletics for the characteristics needed to succeed. Coaches who celebrate continued success and accomplishments in the athletic arena typically share many of the same traits, characteristics, virtues, beliefs, work ethics, and commitment. Athletic coaching (or mentoring) educates both participants as a “learning opportunity in which an experienced colleague, the mentor, socializes the learner or the protégé to the larger context of an organization, profession, or industry” (Onchwari & Keengwe, 2008, p. 20). Just as athletic coaches seek to improve the performance of athletes, academic coaches “should encourage our students, colleagues, and clients to maintain and raise performance standards, while treating people as individuals with unique capabilities, motivational states, and growth needs” (Cassidy & Medsker, 2006, p. 3).

In a study that included both athletic and academic coaches, Schroeder (2010) found that characteristics of successful coaches were measured as they related to the overall impact made by the coach on the team. The impact of athletic coaching is often measured by wins and losses; however, an atmosphere now exists that looks at other factors besides wins and losses. Communication is a dynamic that is sometimes overlooked in success. Schroeder’s research indicated that the communication of the coaches in his sample helped to generate a team culture that was based on values. According to Schroeder, the communication practiced by these coaches opened a channel of dialogue that helped to establish a high level of expectation and understanding between the coaches and players. All coaches are ultimately measured by wins and
losses; academic coaches are ultimately measured by student improvement. Communication is just an end to that means. Gilbert, Côté, and Mallett (2006) also supported the idea of improved communication in their study of successful coaches. They found that a mark of a strong coach was increased time spent in discussion with others who were developing strategies for improvement.

In addition to shared values and communication, Schroeder (2010) also indicated that certain teaching tools and strategies are applied by successful coaches. One of these teaching styles is role modeling. As role models, the coaches exhibit the very behaviors they want their players to exhibit. Role modeling leaves no doubt in the players’ minds that their shared sufferings, highs, lows, successes and failures are also shared by their coach (Schroeder, 2010).

Schroeder (2010) further suggested that environment also plays a role in successful coaching. The “culture of the institution” (p. 81) has a great deal to do with ability of the coach to carry out his/her ambitions. As is often the case, the support offered to the coach by the administration plays a large part in the success of the coach. If little support is offered, then little progress will be made; however, if the administration does all it can to support the changes and improvements being made by the coach, the more likely it is that the intervention will be successful.

Arguably the greatest athletic coach to ever impact the lives of his own players was the John Wooden at the University of California at Los Angeles (UCLA). During his more than 40 year career as a head basketball coach at the high school and college levels,
Coach Wooden amassed a record and a level of respect that has gone unmatched since (Wooden & Carty, 2005). As a testament and tribute to the great coach and mentor on his passing, Kareem Abdul-Jabbar remembered,

It’s kind of hard to talk about Coach Wooden simply, because he was a complex man. But he taught in a very simple way. He just used sports as a means to teach us how to apply ourselves to any situation. (O’Connell, 2010, n.p.)

Coach Wooden has been revered throughout his life for the success he inspired on the basketball court and in so many other realms of life. During his tenure at UCLA, Coach Wooden amassed a collection of records that will likely go unmatched for generations. According to the UCLA basketball website (2010), his records include the following:

- 10 National Collegiate Athletic Association (NCAA) Men’s Basketball Championships
- Seven NCAA basketball tournament championships in seven consecutive seasons: 1967-1973
- 16 appearances in the NCAA Final Four basketball tournament
- Nine consecutive NCAA basketball tournament appearances
- 21 NCAA basketball tournament victories
- 88 consecutive victories (1971, 1972, and 1973)
- 38 straight victories in NCAA tournament play between 1964 and 1974
- Eight perfect Pacific Athletic Conference (PAC) 10 Conference seasons
Throughout his lifetime of coaching, Wooden accumulated a winning record of 885-203, and a staggering 81.3% winning percentage.

Along with his prolific athletic coaching success, Wooden is also recognized as a foremost expert in leadership and success. “Success,” as Wooden said, “is a peace of mind that is the direct result of self-satisfaction in knowing you did your best to become the best that you are capable of becoming” (Wooden & Carty, 2005, p. 17). Wooden has published a number of books on leadership; his leadership style has been a topic of discussion in classes; his leadership model has become the subject of documentaries. He was awarded the Presidential Medal of Freedom by President George W. Bush, and the bestowment of honors continued even after his death.

Wooden’s *Pyramid of Success* was created and carried with him through 40 years of basketball coaching and development of boys into men. The pyramid (Figure 3) has been one of the most popular motivational and training tools used in the past 60 years. Businesses and corporations use it, speakers around the country celebrate it, and Coach Wooden’s former players attest that the pyramid’s building blocks gave them a solid foundation to help them become better men (Wooden & Carty, 2005).
Figure 3: Wooden’s Pyramid of Success. Source: Wooden & Carty, p. 162 (2003)

John Wooden’s Pyramid of Success

(SUCCESS

COMPETITIVE GREATNESS
“When the going gets tough, the tough get going.” Be at your best when your best is needed. Real love of a hard battle.

POISE

CONFIDENCE
Respect without fear. Confident not cocky. May come from faith in yourself in knowing that you are prepared.

CONDITION
Mental–Moral–Physical. Rest, exercise and diet must be considered. Moderation must be practiced. Dissipation must be eliminated.

SKILL
A knowledge of and the ability to properly execute the fundamentals. Be prepared. Cover every detail.

TEAM SPIRIT
An eagerness to sacrifice personal interests or glory for the welfare of all. “The team comes first.”

SELF-CONTROL
Emotions under control. Delicate adjustment between mind and body. Keep judgment and common sense.

ALERTNESS
Be observing constantly. Be quick to spot a weakness and correct it or use it as the case may warrant.

INITIATIVE
Cultivate the ability to make decisions and think alone. Desire to excel.

INTENTNESS
Ability to resist temptation and stay with your course. Concentrate on your objective and be determined to reach your goal.

FRIENDSHIP
Comes from mutual esteem, respect and devotion. A sincere liking for all.

LOYALTY
To yourself and all those dependent upon you. Keep your self-respect.

COOPERATION
With all levels of your co-workers. Help others and see the other side.

ENTHUSIASM
Your heart must be in your work. Stimulate others.

INDUSTRIOUSNESS
There is no substitute for work. Worthwhile things come from hard work and careful planning.

(Wooden & Carty, 2003)
As characterized in the book by the same name, the Pyramid of Success is made up of building blocks which stack one on the other to form the triangle. Discussing Wooden’s pyramid, Glasser (2010) said, "The cornerstones of success to me, in anything, are hard work and enjoy what you're doing. So, one cornerstone is industriousness and the other is enthusiasm. Your heart must be in your work. Eliminate others" (n.p.).

Wooden’s principles of coaching and his Pyramid of Success can be applied in any situation, but are especially relevant in the case of academic coaches. Academic coaches can apply the concepts presented throughout the pyramid to their duties of promoting teacher improvement as well as student achievement. The characteristics of ambition, adaptability, resourcefulness, fight, faith, patience, integrity, reliability, honesty, and sincerity are all traits that would make any teacher or student more successful if adopted (Wooden & Carty, 2005).

An increasing number of areas of our lives are being impacted by coaches. Organizations have begun to see the value of capitalizing on the techniques and strategies used by coaches to bring out the very best from their employees. Major companies, businesses, government entities, and now the educational field have begun to employ coaches as a way to improve success. Gilbert et al. (2006) stated, “Although the coach’s influence will vary across cultures, sports, and stages of talent development, guidance from a competent coach is essential to becoming an expert performer” (p. 70). Webster’s dictionary defines the term coach as a private tutor or an individual who instructs a performer or team of performers on basic game fundamentals and team strategy
The term “coach” is most closely associated with athletics; however, the term is now commonly utilized outside the realm of athletics.

**Academic Coaching**

Perhaps one of the last bastions to come on board with coaching, the world of academia is beginning to appreciate the potential benefits of coaching. Coaching, in the educational sense, has grown out of the complete failure of so many other forms of professional development that have been carried out since the 1950s (Joyce & Showers, 1996). After numerous studies by many researchers including Showers and Joyce (1996), coaching has begun to become a more common classroom practice.

According to the *Harvard Education Letter*, school-based coaching involves “experts in a particular subject area or set of teaching strategies working closely with small groups of teachers to improve classroom practice, and ultimately, student achievement” (Russo, 2004, p. 1). Russo (2004) explained that coaching was pioneered primarily in large School districts like New York and Boston, but have quickly spread to other parts of the nation and into urban School districts. Russo concluded that coaching largely meets the standards set forth by the National Staff Development Council’s (NSDC) standards of organization of professional learning communities, leadership support for continuous instructional improvement, application of research to School and classroom strategies, and support for teacher collaboration.

**Coach Mentoring in the Classroom**
Mentoring in the classroom is not a new concept and has been utilized for decades. According to Dennen (2004), mentoring in its academic sense is described as a professional development relationship in which a more experienced participant assists a less experienced one in developing a career. In any sense, mentoring can be seen as a long-term or short-term professional development relationship for teachers. Based on Little (1990), mentors provide expert knowledge to others and know how to effectively transfer that knowledge from themselves to others.

Studies such as Bandura (1977) showed that modeling exhibited by a professional is a more effective process than learning by trial and error. Modeling is done through various means and looks different in almost every case. Tharp and Gallimore (1988) and Jonassen (1999) indicated that an individual might model a specific decision-making process that falls into a behavioral category, but that a coach moves beyond simple mimicry of a concept or similar strategies into a category known as cognitive modeling. Cognitive modeling is exhibited by an expert or more experienced peer who can demonstrate a characteristic that enables others to grow professionally. According to King (1999), this learning can take place with, or without, direct modeling if the learning or strategies are utilized by others who are working on similar tasks. Coaching follows this same premise. Coaches make their connections in many different ways, but direct classroom modeling, according to (Cooper, 1999), is most impactful when it is done directly. Observation, reflection, and practice are more effective in transforming teaching when directly observed, rather than those who receive a more passive model (Cooper,
1999). Knight (2009) also supported this perception of coaching in a recent study published with the National Staff Development Council, when he showed that coaching strategies were 95% applied in classrooms when appropriate instruction and follow-up was provided to teachers.

It is worth noting that not all researchers envision a parallel between coaching and mentoring. Hopkins-Thomson (2000) suggests that mentoring mirrors a longer, extended relationship that promotes growth and career advancement, whereas coaching is described as a skill building process where knowledgeable coaches extend and refine practices. In contrast, Dole (2004) also provided examples of the effectiveness of coach mentoring. As she pointed out, new teaching methods and techniques may not be completely comprehended or clear to the classroom teacher when it was presented, noting that the presenter likely offered information that was “insufficient for teachers” (p. 467). Coaches would then fulfill that void by mentoring teachers and demonstrating the skills necessary for teachers to effectively implement the new methods in their classrooms.

**Coaching as Professional Development**

With the recent focus on mandated improvements to the education of students at the state and national levels, school systems have been forced to improve the very nature of what teachers are teaching and at what level they have been taught at (Garet, Porter, Desimone, & Yoon, 2001). According to Garet et al. (2001), by shifting to a more balanced approach to teaching and learning whereby the emphasis has been placed on understanding subject matter and critical thinking skills, teachers are now compelled to
change their entire approach to teaching and need improved methods of professional
development in order to meet those needs.

Studies of professional development are all around and can be found spread over
numerous decades and focusing on various perspectives of teacher professional
development (Garet et al., 2001). The coaching model of professional development was
a program, in part, developed by the National Staff Development Council (2001) in their
Standards for Staff Development. Within these standards, NSDC called for staff
development requiring resources to support adult learning and collaboration, provide
educators with the knowledge and skills to adequately collaborate and deepen educators’
content knowledge in their area. Showers and Joyce’s (1996) research on coaching
determined that coaching as a professional development served as a mechanism to
increase classroom implementation of instructional strategies and content curriculum.
This model has provided opportunities to support teachers and time for teams of teachers
to collaborate and work together through the implementation process (Reed, 2003).

With the deviation from traditional forms of professional development, like the
workshop model, to a more reform style professional development, like coaching, are
showing a greater impact on teacher change and teacher perceptions (Garet, Porter,
Desimone, Birman, & Yoon, 2001). These reform styles of professional development
happen in multiple ways. Within the context of professional development, these
activities did not require teachers to leave school, nor take extra time out of their day.
Teachers were allowed to spend time in small group settings during their regular planning time and collaborate with coaches in a collegial setting (Garet et al., 2001).

In the development of this research, the author utilized the core features put forth by Garet et al. (2001) that outlined what professional development by coaches should look like. As described in the study, the first core area focuses on content. The core content described in the work refers to the subject and grade level content, teacher pedagogy, classroom management techniques, lesson planning and other specific areas. The second core of professional development opens the doors for teachers to become engaged in discussion, planning, and practice. This opportunity allowed teachers to observe master teachers at work in their classrooms and created an atmosphere of collegial discussion amongst peers. The third core of professional development comes in the form of teachers’ perceptions of the relevance of coaching as a coherent program of teacher learning. According to Garet et al. (2001), professional development activities must be connected in three different ways. They stated:

The extent to which it builds on what teachers have already learned; emphasizes content and pedagogy aligned with national, state and local standards, frameworks, and assessments; and supports teachers in developing sustained, ongoing professional communication with other teachers who are trying to change their teaching in similar ways. (p. 927)

This study followed the same contexts as was established by Garet et al. (2001) in that it sought teacher perceptions and principal responses regarding the usage of coaching
in this particular school system. The APS survey gave teachers a plethora of opportunities to express their opinions and feelings on coaches as professional development and thereby attempt to measure the value teachers’ hold of coaches. The principals established the frameworks of how coaches were utilized in their schools and how much time was given in each activity. By looking at those two sides of coaching, the researcher was able to determine what it is that coaches do and what tasks teachers came to value the most when supported by coaches.

**Coaching Interventions in the Classroom**

Hasbrouck and Denton (2007), gave an excellent description of coaches providing direct interventions in the classroom. Though this study concluded that few schools in the system utilized coaches with students in the classroom, there was an indication that coaches did provide direct student interventions. Hasbrouck and Denton (2005) defined this student-focused coaching as “a cooperative, ideally collaborative relationship with parties mutually engaged in efforts to provide better services for students” (p. 2). This method of student focused coaching differs from other forms of coaching because the primary goal focuses on the improvement of students. Student-focused coaching incorporates data-based decision making that is directly linked to student achievement. The interventions used in this form of coaching are individualized on student needs and are carried out through a relationship with students, not based on what teachers’ needs might be. Hasbrouck and Denton (2007) said,
Providing services as an student-focused coach involves three categories of activities: *facilitator*—assisting and supporting the work of teachers, *teacher/learner*—providing and participating in professional development, and *collaborative problem solver*—systematically addressing school-based concerns about individual or groups of students or systemic issues such as curriculum or scheduling decisions. (p. 690)

Though it is not common to find coaches practicing direct student interventions in the classroom or in pull-out groups, one group from the Institute of Educational Sciences indicated that intensive interventions through Response to Intervention (RTI) should be used to enhance and build student achievement. Gersten et al. (2009) recommended that coaches should be involved in the interventionist process and devote a portion of their schedule to working directly with students in need. Though their recommendation was not completely centered on coaches, their suggestions reflect the same interventions that are the focus of this study.

**Resistance**

Teachers are a unique bunch! One thing education is not short on are teachers willing to offer their opinions on the state of educational affairs. Teachers, likewise, are some of the most resistant people when it comes to change. As previously discussed in this study, teachers are very territorial and do not wish to have their methods or classrooms trampled on.
Numerous works have been conducted on resistance and the nature of it in education. Knight (2009) produced an article discussing teacher resistance and how school leadership could work to solve the issues at the core of resistance. As a leader in the coaching community, Knight’s focus for years has been on adequate and ongoing professional development and what makes them successful. In his continuing research on the topic, Knight has found that there are numerous factors that go into either the success or failure of the professional development being utilized.

In *What can we do about teacher resistance?* Knight (2009) explained that there are fundamental guidelines that should be considered when evaluating the successful implementation of or failure of change efforts in schools. In the article, Knight suggests that in evaluating the causes of teacher resistance, there are six distinguishing questions that should be considered.

- Are the teaching practices powerful?
- Are the practices easy to implement?
- Are they experienced (with regard to change leaders & teachers)?
- Are teachers treated with respect?
- Are teachers doing the thinking?
- What has happened in the past?

While it seems that these are some obvious anecdotes for effective professional development, Knight has personally conducted hundreds of interviews that show these things are often overlooked when systems and administrations put plans into action.
Knight’s conclusions are practical and reflect the proper steps for applying appropriate learning and new ideas with teaching staffs. Knight suggests the following:

- Use teaching practices that are proven and powerful.
- Use data to evaluate and support practices.
- Use coaching to support, model and provide feedback to teachers.
- Professional developers provide precise directions (for application) and still allow teachers freedom to adapt the practice as it fits their specific pedagogy.
- Make teachers’ feedback and opinions important.
- Focus learning and changes to a few critical practices. Don’t overdo it.
- Alignment of activities

Forms of Academic Coaching

Coaching in the academic world, as previously noted, has been in practice for more than 30 years; however, it has been a slow process for it to take root and grow (Showers, Joyce, & Bennett, 1987). With the passage of NCLB, increased pressure and accountability in education has led to an increased need to solve problems in regards to student achievement and ongoing professional support/learning (USDOE, 2001). Those solutions now often come in the form of differing types of academic coaching.

There are a multitude of names and styles of coaching that are in common use in education, though many educators only see coaching as one particular type or style. Though, there exists many names for coaches, there are just as many different job descriptions and duties assigned to them. From school system to school system, the ways
coaches are identified may be the same, but the responsibilities are often quite diverse (Knight, 2009).

According to the Professional Association of Georgia Educators (PAGE), there are currently at least nine different forms of coaching being utilized across the state of Georgia and the nation. Among some of the ones cited by the PAGE Issue Brief (2009) are cognitive coaching, peer coaching, mentor coaching, literacy coaching, and classroom management coaching. This plethora of coaching options allows school systems a wide range of latitude and gives them the opportunity to evaluate each style to find which one best suits their individual needs. Some coaching models, such as cognitive coaching and mentoring focus primarily on directing and aiding teachers, whereas literacy coaching includes the student element where coaches are directly involved in aiding students. Ample research exists in support for each of these forms of coaching, and studies have been produced that adequately evaluate each area (Knight, 2009).

**Cognitive Coaching.** Cognitive Coaching, having been developed and researched by Costa and Garmston (1985), is one form of coaching that builds on, and enhances, the cognitive processes of teachers. Research by Costa and Garmston has shown that implementation of cognitive coaching has been linked to increased student achievement and improved teacher cognition and collaboration. Constructivism and reflective thinking are important characteristics of this model. Teachers are taught through this method to become independent thinkers, to reflect on their teaching, to lead others in improving instruction, and to develop independent thinking and learning among
teachers and students (Costa & Garmston, 1985). Sometimes referred to as collegial coaching, the practice is not geared toward new innovations in instruction, but used more as a means of improvement of existing practices (Showers & Joyce, 1996).

**Peer Coaching.** Peer coaching is also among the older models of coaching that have led to the development of the modern coaching programs used in schools. Originating in the early 1980s with the studies conducted by Joyce and Showers (1980, 1982, 1996) and Showers (1984), peer coaching was created because they found that fewer than 10% of participants who had participated in staff development actually implemented what they had learned. In reflecting on their hypotheses from the 80s, Showers & Joyce (1996) found that the weekly seminars (peer coaching sessions) led to dramatic increases in implementation of training, and therefore might have had a direct effect on student achievement.

The act of peer coaching is different from cognitive coaching in that it maintains no supervisory element (Showers & Joyce, 1996). Teachers (and coaches) reported that the feedback portion of the program led them to feel they were being technically evaluated, so that the feedback element was eliminated. The principles of peer coaching call for fellow teachers to plan together to implement new instruction and curriculum, create additional support material, observe each other during lessons, and work together on their behavior to see the real impact on their students. The key element of the peer coaching design is collaboration time. Coaches can, and should, accommodate teachers’
schedules in order to make progress toward meeting their predetermined goals (Showers & Joyce, 1996).

**Mentoring.** Another form of coaching is the practice of mentoring. Mentoring is a process that focuses mostly on new teachers. The expectation, as stated by Furlong (1997) is that “an effective mentoring experience leads to beginning teachers’ increased satisfaction and competence in teaching, consequently, professional growth of mentored teachers outpaces non-mentored ones (p. 99). Whereas coaching is an ongoing process, mentoring was originally designed to enable new teachers, or even preservice teachers, to make a more comfortable transition into teaching and to help them adapt to the challenges that education presents.

Mentoring has been a popular form of teacher improvement and retention since the early 1980s, but also has subtle differences from the other forms of coaching. In a critical review of teacher mentoring for Eric Digest, Feiman-Nemser (1996) discussed the lack of growth of mentoring programs in empirical research. According to Feiman-Nemser, mentoring shows promise regarding teacher retention and learning of pedagogy, however, “some studies show that mentors promote conventional norms and practices, thus limiting reform” (p. 2). In essence, while mentoring might help new teachers transition, the nature of mentoring does not allow for additional reforms be implemented. What Feiman-Nemser said that teachers are isolated and “autonomous” (p. 3) in their jobs, and unless the mentor is actually a reformer in their own school or classroom, then the mentoring may reinforce methods that are not consistent with reform.
Feiman-Nemser’s (1996) research is somewhat dated and does not address the more recent changes that have been made to mentoring. In some ways, mentoring does look a great deal more like coaching today than it ever did in the past. Onchwari and Keengwe (2008) published a case study of the mentor-coach initiative. In this case study, they indicated that “mentoring in teacher training was especially useful for supporting teachers in keeping up with constant demands of new educational reforms that require teachers to adopt new practices” (p. 1). Mentoring, like coaching, is an active process where the mentor and the mentee are actively involved in ongoing dialogue and reflection, as well as instruction, that translates into improved student performance (Gertsen, Morvant, & Brengelman, 1995; Maynard & Furlong, 1993). The findings of Onchwari & Keengwe’s research continues to show that the main difference between mentoring and coaching lies in the reality that mentoring deals mainly with inexperienced teachers and coaching is for continuing professional development of all teachers.

**Literacy Coaching.** Literacy coaching, as explained by Toll in Knight’s work on coaching (2009), is not a model of coaching, but rather is a “category of instructional coaching that focuses on literacy” (p. 57). Literacy coaching encompasses the wide spectrum of learning as a whole, but zeroes in on the area of reading development. A leader in the area of literacy, Dole (2004) has produced numerous publications on coaching that reflect both the development of reading coaches and the impact they have. Reading specialists were originally designated in the Elementary and Secondary Education Act of 1965 (ESEA of 1965) where teachers were funded by Title I money and
were designated to help struggling readers in poverty (at-risk) to improve their reading skills. Most of the time was spent with the students in pull-out settings. Very little, if any, interaction took place between the regular classroom teacher and the reading teacher. As Dole concluded, most of the progress achieved in the pull-out sessions was lost once the student re-entered the regular classroom (Dole, 2004).

Under ESEA 2000, the policy of improving reading remained the same with regards to serving at-risk students. However, the process of ensuring achievement “changed quite substantially” (Dole, 2004, p. 463). As the law requires, all teachers must be highly qualified so that they are able to provide first class instruction in the regular classroom in order to minimize the need for pull-out sessions. Additionally, instruction is to be scientifically based on proven instructional methods. Best practices, as it is known, is also widely supported in the literature as a fundamental responsibility that falls on the literacy coach. In addition to Dole’s (2004) work, Blachowicz, Obrochta, and Fogelberg (2005) also presented a clear plan for the literacy coach to follow. The last major change in the law came in the area of progress monitoring. By consistently maintaining monitoring progress, teachers will be able to recognize the specific areas of need for each student (Dole, 2004; Dole, Liang, Watkins, & Wiggins, 2006; U.S. Department of Education, 2001).

In reviewing the major legislation that led to the development of literacy coaches, Dole (2004) found that the billions of dollars that have been funneled through the Title I program have resulted in little significant improvement in student achievement. Dole
cited study after study that showed the most effective use of financial resources is utilizing on-site individuals to provide ongoing literacy support and training to teachers. Dole’s study established a clear plan for using literacy coaches to supplement reading instruction and to maximize the impact of continued staff development (Blachowicz et al., 2005; Dole, 2004; Dole & Donaldson, 2006).

**Classroom Management Coaching**

Research shows that veteran teachers are often resistant to the presence of a person whom they perceive as threatening in their classrooms and view the coaches as more of a hindrance than a benefit (Dole & Donaldson, 2006; Knight, 2006). It is evident that veteran teachers believe that their way is the right way to teach. However, even within the realm of classroom management there is a need for improvement among all levels of teacher experience. When classroom management is poor and the students are not completely focused on instruction, student learning can be lost (Sprick, Knight, Reinke, & McKale, 2006).

Learning proven, research-based practices for classroom instruction and teaching is not all that teachers stand to gain from coaches. In a school or classroom where behavior is out of control, coaches are often asked to lend a hand to improve the situation.

**Teacher Perceptions of Coaching**

As associate professor of public policy and education at the University of Pennsylvania, Laura Desimone is keenly aware of the fact that one of the keys to improving the quality of American schools is effective professional development
(Desimone, 2011). On a larger scale, however, is the need for empirical evidence that proves what makes professional development effective. According to Reio (2005), teachers’ perceptions of professional development have a profound impact on the success of any professional development initiative. As indicated in his study, teachers’ emotions and behaviors related to change greatly impact their willingness to implement school reform or take chances on the uncertainty of change. Is professional development doing “what we want it to do – increasing teacher knowledge and instruction in ways that translate into enhanced student achievement” (Desimone, 2011, p. 68)? Desimone related a core set of values at the heart of effective professional development, but her study revealed that it was the substantive features of staff development that matter most “when it comes to enhancing teachers’ knowledge, skills, and classroom practice” (Desimon, 2011, p. 69).

Desimone concluded that “no matter what the design, we have to decide how to measure teacher experiences, learning, and instruction” (p. 70). In that statement, Desimone captured the essence of this study as the design is such that it is attempting to evaluate the effectiveness of the coaching model in the school system.

Ensuring that professional development improves student learning begins by incorporating identified features of effective learning into teacher professional development. District leaders must then ensure that they use appropriate tools to evaluate teachers’ experience, learning, and instruction so that they can continue to refine the professional development they offer to teachers. (p. 71)
Another study conducted by Hochberg and Desimone (2010) described professional development in the accountability context. Their expansive study evaluated not only the changes posed by accountability, but also investigated the teachers’ capacity to change themselves. The coaching format of professional development that is on-going forces teachers to adjust their knowledge, change their teaching, and in some cases, transform their entire epistemological beliefs. Within this framework, Hochberg and Desimone made a connection to Gregoire’s (2003) concept of teacher belief change and the impact teacher perceptions have on the success of a program. The Cognitive-Affective Model of Conceptual Change suggests that teachers’ realization of their stake in school reform will lead to their willingness to conceptually change their methods in order to successfully implement the reform. Knight (2000) also made similar conclusions regarding teacher ownership and stake in professional development. In essence, their belief in the proposed changes and their willingness to adapt will ultimately result in the success or failure of the reform effort. Hochberg and Desimone ultimately concluded that teachers must feel a part of the reform and then show a certain willingness or satisfaction for the change. Huffman and Jacobson (2003) also identified the importance of the professional learning community concept in providing a process where stakeholders engage collaboratively in professional growth. They identified the perceptions of teacher leaders as important in the development of meaningful learning communities and professional growth. The more positive the perceptions of teachers toward a given reform method, the greater chance of success of the reform.
In a paper presented by Knight at the Annual Meeting of the American Educational Research Association (2000), he referred to teachers in a professional development setting as “books written in a language we do not understand” (p. 7). He went on to suggest that as professional developers, coaches must learn the language of the teacher so as to better understand the contextual factors that shape professional development. Knight found that teachers respond more appropriately to professional development when given a real stake or have real choices in their own professional development. The perceptions teachers have regarding their training are often influenced by the lack of belonging or ownership in the process (Knight, 2000).

Davis (2011) studied instructional coaching in a Reading First initiative and evaluated the perceptions of teachers who were subject to the specific coaching. Though the research was limited to two schools in the K-3 setting, Davis’ cross-case analysis revealed perceived diverse benefits of coaching as it impacted teacher practice. Davis’s conclusions indicated that teachers perceived that the type of experience a coach possessed impacted the success of the coaching program. Teachers perceived that coaches should equally assess the needs of all teachers; teachers perceived that coaching roles should be expanded to work directly with students; teachers perceived that coaches should take a more active role in changing practice in the classroom; and teachers perceived that coaches take more time to build a collegial relationship with the teachers. Though Davis’ research provided multiple incidents of negative teacher perceptions, the participants still felt that there was value to the coaching model.
Ai and Rivera (2003) found that where sample lessons and observations were in place as a common practice by teachers and coaches, teacher perceptions were very positive. However, their study was inconclusive when determining whether those positive perceptions actually translated into changes in teacher practice. On the negative side, Ai and Rivera found that teachers perceived coaches to be untrustworthy, teachers were generally resistant to change, teachers felt that they did not have adequate time for implementation of coaching ideas, and teachers felt that there was an overall inconsistency in the coaches’ roles.

Engstrom and Danielson (2006) conducted a study on teacher perceptions of coaching. The researchers provided an on-site staff development model to the leaders and exceptional teachers of a school system that was very similar to the coaching model. The resulting survey and interview evaluated the teachers’ feelings and opinions about the professional development. The knowledge gained from the experience has “important implications” (Engstrom & Danielson, 2006, p. 170) for the creation of and maintenance of teacher-led professional development models. The results of the study showed the success of the training. However, it also demonstrated the needs for collegiality and continuous support throughout the process.

Summary

There are a multitude of things to consider when evaluating a specific practice. Recent studies regarding coaching and the presence of coaches in schools are often related specifically to evaluating practices. Success or failure is measured in so many
ways. A practice could show increases or impact in student achievement, but could be considered a total failure in the perceptions of teachers or administrators. Knight (2009) indicated that there are factors other than coaching that have influence on student achievement. This study, too, has its variables that must be considered. Some of these factors are the duration of time that coaching has been in place at the target schools, the daily influence coaching has on instruction, the various responsibilities that coaches have, the requirements for becoming a coach, and the academic background of coaches. This study is a small portion of that bigger picture. However, quantitatively studying a specific school system that has instituted coaching paints a better picture of the impact coaches have on teacher professional development.

The availability of studies on academic coaches, their roles, their impact on student achievement, and professional development have laid appropriate groundwork for the study proposed here. However, few quantitative studies exist that truly foster an understanding of the relationship between coaches and teachers, and the impact that relationship has on teacher pedagogy, and subsequently, student success. Thus, this study is important to a community of educators and school administrators. This researcher is an examination of the impact of academic coaches on teachers’ professional development, teachers’ perceptions of academic coaching, and student achievement.
CHAPTER THREE: METHODOLOGY

Introduction

The purpose of the study was to determine if any difference existed between teachers at four elementary school in terms of their perceptions of the instructional/academic coaching that had been part of on-site and ongoing professional development. Continuous, on-site professional development, mentoring, coaching, and peer assistance was delivered in the target schools through teacher in-service and trainings, and measured through a series of tasks (see APS Academic Coach Survey, Appendix A). These trainings were intended to inform teacher pedagogy, improve instruction, and promote more appropriate student assessment so the resultant data could be used to drive instructional practices.

Chapter Three is comprised of descriptions of the research methodology used in this study. The process of how the study was conducted is explained through the presentation of the research question followed by the related null hypotheses, a detailed description of the setting in which the study took place, an examination of study participants and their demographics, a discussion of the research instruments that were utilized, and an explanation of the data collection process and how that data was analyzed. The chapter concludes with study limitations, recommendations for future research, and recommendations for practice.

Research Design
This study utilized survey methodology and the ANOVA (analysis of variance) statistical test to determine if any difference existed between teachers at the four schools on the 38 rated APS items pertaining to teacher perceptions of coaching tasks/behaviors. A purposive sampling approach was used to gather available data from 102 volunteer teachers who taught at four schools within one school district in the Southeastern United States. The selection criteria for this study was that the potential respondent was a full-time teacher in the district during both the 2009-2010 and the 2010-2011 school years and had participated in the district mandated coaching sessions. Teachers who were newly hired to the system were excluded from the survey.

A survey was also administered to the principals of the four schools in order to establish the specific duties and responsibilities of the academic coaches assigned to their schools and the amount of time (frequency) spent on those duties in one week. The principals were included in the study based on their role as the on-site supervisors of the various duties and responsibilities assigned to the coaches at the four schools. The survey data was aggregated and utilized along with the APS results to determine which coaching practice(s) were perceived as the most useful by the teachers who were involved in the coaching.

**Research Questions**

The following research questions guided this study:
RQ1: Will there be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.

RQ2: Will there be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

RQ3: Will there be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

**Statement of the Hypotheses and Null Hypotheses**

Based on the research questions, the hypotheses and null hypotheses were as follows:

H1: There will be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.

H₀₁: There will not be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.

H2: There will be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

H₀₂: There will not be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.
H₀²: There will not be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

H₃: There will be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

H₀³: There will not be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

Participants

Teachers

The teachers who were the subjects of this study taught in the four largest elementary schools in an independent school system in Northwest Georgia. The sample of teachers was 102, which represents the eligible teachers from the four schools who chose to participate in the study. Of the 102 participants, the numbers of teachers from each school were as follows:

- School 1: 21 teachers
- School 2: 29 teachers
- School 3: 31 teachers
- School 4: 21 teachers.
The sample for this research was purposive. In purposive sampling, subjects are chosen as representative of a specific population; in this case, teachers were selected as a means of determining teachers’ attitude and opinions (Ary et al., 2006). The teachers surveyed had all been participants in a professional development focused on academic coaching and had been in a classroom setting for at least one full school year.

All four of the schools involved in the research were Title I schools and have utilized academic coaching for a minimum of six consecutive school years. The researcher excluded any teachers who were newly hired to the target schools for the calendar school year during which the study took place. This decision was based on the premise that they had not received the coaching that was being researched, so they would not have perceptions about the effectiveness of the coaching. Given the current economic picture and the fact that there have been very few new hires, this number was very small in comparison to the size of the chosen sample.

**Principals**

The principals were chosen for this study by default because they were the principals of the four largest elementary schools in the system. There were no exclusions of principals in the study because they were all veteran principals who had been overseeing the utilization of coaches since they were introduced to the school system. The principals surveyed had intimate knowledge of the daily duties and responsibilities of
the coaches who were working at their school site. Once again, the sampling of the principals was purposive in nature (Ary et al., 2006).

**Setting**

**School System Demographics**

Schools today are faced with tough challenges regarding academic achievement, language barriers, socioeconomic situations, and parental involvement. However, ongoing professional development is the area where schools are finding their greatest challenges. In order to meet the needs of the students, school systems are forced to address the topic of ongoing teacher training head on.

The school system that is the focus of this study is an example of one of these incredibly diversified school systems that is academically successful, but struggles to continually adapt and meet the needs of a changing community of students. The school system has made some significant strides in recent years in raising student achievement and sustaining ongoing teacher training. The steps they have taken have created a professional learning community of teachers.

The system is an independent school district located in the northwestern portion of the state, and served 5,647 students during the 2010-2011 school year. It is one of the largest employers in this portion of the state with 516 employees, including certified and classified employees, administrators, and non-teacher personnel. Because the school system that is the focus of this study is a city school system and is totally separate from the county in which it is located, there are distinct differences between the population of
the county and the city itself. The city school system reflects the changing diversity of the city, though when compared directly to the population of the area, it is somewhat misleading. Eighty-one percent of the county’s residents are Caucasian, 15% are African American, 4% are Hispanic, 2% are Asian (GDCA Community Snapshot, 2006, Rome, Georgia, 2009).

The city school system’s diversity of population can be seen in its demographic population; African American students account for 35.9% of the student population, 29.4% are Caucasian, 27.3% are Hispanic, 5.1% are multiracial, and 2.2% are Asian. The community is not as diversified as this school system because the system (city) is made up largely of people who are either Hispanic or African American, whereas the county school system is largely Caucasian. The high percentage of foreign born citizens of the city and county is also reflected in the school’s makeup, as approximately 10% of all students are classified as English Language Learners (ELL). The system faces additional challenges in that more than 72% of its students are classified as economically disadvantaged (ED), as defined by eligibility for free or reduced lunch (State of Georgia, 2011). Research suggests that students who are classified as ED students traditionally perform more poorly on state and federal academic standards as compared to those students who are classified as noneconomically disadvantaged (Taylor, 2009).

School system demographic data for the sample of schools in this study can be seen in Table 1:
Table 1

*School Demographics*

<table>
<thead>
<tr>
<th>NorthFace City Schools</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
<th>School 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009-2010</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enrollment</strong></td>
<td>502</td>
<td>744</td>
<td>616</td>
<td>490</td>
</tr>
<tr>
<td><strong>White</strong></td>
<td>57</td>
<td>43</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td><strong>Black</strong></td>
<td>26</td>
<td>17</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td>11</td>
<td>29</td>
<td>46</td>
<td>55</td>
</tr>
<tr>
<td><strong>Asian</strong></td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Students with Disabilities</strong></td>
<td>6</td>
<td>7</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td><strong>Eligible for Free/Reduced Meals</strong></td>
<td>42</td>
<td>65</td>
<td>95</td>
<td>92</td>
</tr>
<tr>
<td><strong>Limited English Proficient</strong></td>
<td>6</td>
<td>13</td>
<td>23</td>
<td>49</td>
</tr>
</tbody>
</table>

(Source: State of Georgia K-12 Report Card 2009-2010)

**Community Demographic Data**

NorthFace Schools are located in the southeast region of the United States. Jackson County is one of the eight counties that make up the mountainous region of Northwest Georgia. The population of Jackson County is 96,317, with 36,142 living within NorthFace district (U.S. Census Bureau Quick Facts, 2011). Jackson County has a population that is becoming more diverse with each passing year, but according to the 2010 census, 76.9% of residents were Caucasian; 14.2% were African American; 9.3% were Hispanic, and 1.3% were Asian. Jackson County is growing at a fast pace,
averaging a population growth of over 10% from 2000 until 2010. The city of NorthFace has a large percentage of foreign-born residents included in the makeup of the population. Those numbers are projected to keep rising in the coming years (Demographics Table, n.d.). According to the U.S. Census Bureau (2010), 19.8% of NorthFace county residents are living below the poverty level.

Implementation of Coaches and Job Descriptors

Prior to the 2006-2007 school year, the NorthFace City School system agreed to follow a growing national trend and place instructional leaders into the schools in an attempt to address student achievement and ongoing teacher training. Academic coaching was researched and viewed as a suitable option for ongoing professional development of teachers and increasing student achievement.

Expectations and job descriptions for academic coaches remain somewhat undefined or vague. Across the nation, states have not developed a consistent set of descriptors for coaches. The lack of a national plan or job description for coaches has resulted in a wide variety of uses for coaches, ranging from miniscule responsibilities to elaborate, well-conceived job descriptions (Knight, 2009).

Instrumentation

Two survey instruments were administered over a two month time period during the data collection process. The instruments were designed to measure teacher perceptions of academic coaches and principal use of academic coaches. The APS
measured teacher perception of academic coaches; the principal questionnaire measured principal utilization of academic coaches.

**Albuquerque Perceptions Survey**

The survey instrument was created by the Albuquerque Public Schools Department of Research, Development, and Accountability (RDA). Though no specific steps have been taken to validate the survey, the Albuquerque Public Schools created the survey using their department of RDA to form a tool that would accurately measure the impact coaches were having on their large school system. RDA used The Success Case Method (SCM) developed by Robert O. Binkerhoff (2005) to create their evaluative instrument. The SCM is designed as an evaluation tool used for finding out what is working and what is not working and can provide accurate and trustworthy information that can be used to make timely decisions (Bell & McDonald, 2006; Binkerhoff, 2003; Binkerhoff, 2005). According to Binkerhoff (2005),

> The SCM is relatively simple and can be implemented entirely in a short timeframe. It is intended to produce concrete evidence of the effect of training (or lack of it) in ways that senior managers and others find highly believable and compelling, relating verifiable incidents of actual trainees who used their learning in specific behaviors that can be convincingly shown to lead to worthwhile results for the organization. (p. 90)

As cited in Bell & McDonald (2006), Binkerhoff has identified five major steps of the SCM method. Those steps are as follows:
STEP 1  Focusing and planning in order “to clarify and understand what the study needs to accomplish”

STEP 2  Creating an impact model that defines “what success should look like in order to understand what successful behaviors and results should be found if the program were working well”

STEP 3  Designing and implementing a survey to search for best and worst cases that may take the form of a written survey as well as interviews with key stakeholders

STEP 4  Interviewing and documenting success cases in order “to capture and document the very particular and personal ways in which an innovation or intervention has been used to achieve successful results”

STEP 5  Communicating findings, conclusions, and recommendations “that includes some sort of process to help stakeholders understand the results and reach consensus on the study’s implications. (Binkeroff, 2003, pp. 29-39)

Having initially established their coaching program in school year 2001-2002, Albuquerque Public Schools saw it grow to over 111 coaches in 101 public schools from primary grades through high school. Using the SCM as the basis for the development of their survey, the Albuquerque Public Schools set out in 2004, in phase one of their program evaluation, to create the instrument using the steps outlined above. RDA evaluators used the model to describe their coaching program activities, to assess fidelity to plans, to identify perceived outcomes, and highlight the factors that enabled and constrained success. To further develop the instrument, RDA administered a survey to all of their coaches, reviewed their time logs, and completed staff interviews at six of their elementary schools (Dunavin & Heath, 2010).

Phase two of the RDA evaluation program was begun in February 2005. As explained by Dunavin & Heath (2010), “The purpose was to verify, quantify, and explain the Phase 1 findings (p. 4).” A total of 1,965 surveys were sent to teachers in all
elementary and middle schools with coaches. Principals and coaches were also surveyed using similar instruments. Five-point Likert scale survey items addressed satisfaction, program coverage, program activity and perceived impacts of the coaching program. Respondents to the survey were reported to be 908 teachers from 76 schools (46% of teachers), 59 principals (58%) and 75 coaches (68%).

For the purpose of this study, minor changes were made in wording, descriptions, and definitions of duties in order to adapt the survey to the particular school system being sampled. The nature of the survey and the information to be gained remained the same as the survey created by the RDA department at APS. As part of the data analysis, Cronbach Alpha tests were run on each of the survey items and all were deemed reliable by the analysis.

The survey was divided into four sections of Likert-scale style questions. Each survey answer could have fallen between a score of one and five in the first two sections with a score of three or more indicating a positive perception by the teachers. The final two sections of the survey fell between a score of one and five with a score of two or less indicating a positive perception by teachers. Results of the 38 survey items from the APS survey are found in Appendix B.

**Principal Questionnaire**

The principal’s questionnaire was researcher-generated based on a need to evaluate coach usage in each of the schools where the APS Survey was administered. It was an informal survey and the results were not statistically analyzed. The purpose of the
questionnaire was to gather information that would be important in interpreting the results of the APS Survey. The time spent by coaches at each school in each of the categories allowed the researcher to have a better understanding of the feedback provided by the teachers in their responses to the APS Survey, to evaluate how coaching was specifically used at each school, and how their usage might have impacted teacher perceptions and student success at their school. The possible range of scores was 0 – 5 based on the number of times the task was performed each week. For the purposes of this study, a coaching duty that was conducted five or more times per week was considered a daily assignment.

**Procedures**

**Data Collection**

Permission to conduct this study in the chosen school system was given by the superintendent of the system. A meeting was held with the superintendent and the plans were laid out and any questions were answered. A follow-up letter (Appendix C) was also written to the superintendent, which once again explained the study in detail. The superintendent gave verbal approval in the meeting and also followed up with a written letter of approval (Appendix D) for the study to be conducted. Approval for the study was also requested, and received (Appendix E), from the Liberty University Institutional Review Board (IRB) prior to the onset of research.

In addition to the superintendent’s permission and the IRB approval, the teachers had a consent form/release (Appendix F) attached to their survey which explained all
aspects of the research. The teachers were read the consent form by the researcher at two schools and the principal at the other two prior to completion of the survey. The informed consent form was designed to provide teachers with background information regarding the study, the procedures to be used, the risks and benefits of the study, confidentiality, and the voluntary nature of the study. As approved by the Liberty University IRB, completed surveys indicated a teacher's consent to participate in the study. After teachers were read their consent forms and completed the survey, they retained their consent forms for their records and placed their completed surveys in a separate large envelope.

The participants in the study were all certified teachers in four K-6 elementary schools in a small, independent school district in the Southeastern United States. All of the schools were Title 1 schools and have had very little teacher turnover in the past few years. Additionally, all of the schools surveyed have had full-time, on-site academic coaches who have been in place for at least five full years.

The survey size was 102 teachers who ranged in age from 22 to 70 years and had varying degrees of education. The minimum education was a bachelor’s degree and ranged as high as the doctoral level. All teachers were certified by the Professional Standards Commission of the state of Georgia.

The survey was conducted using paper and pencil during a school-wide faculty meeting. By conducting the survey while the teachers were gathered in a meeting, the return rate was much higher than doing an online survey. Because the researcher was on-
site prior to the survey administration, teachers were informed of their right to refuse to participate by the researcher and principal and were encouraged to ask questions regarding the research and their rights as participants. Teachers were then given a copy of the consent form describing their rights as a research participant (Appendix D). In addition, they were given a copy of the survey to complete (Appendix A). The researcher remained in the room to provide administration instructions and answer any general questions before leaving the room. Because the researcher needed to survey all four schools in two days, the principals at two of the schools collected the surveys when completed. The results of the survey instrument were used to compare teacher perceptions of academic coaches and their impact.

The principal questionnaire was another feature of the research process and allowed the researcher to gain a better understanding of how coaches were specifically used at each school. The researcher met with each of the four principals and discussed the questionnaire thoroughly. Each principal was informed that the purpose of the survey was to gain a unique perspective concerning how much time was spent by coaches at their school on the different tasks/duties that were identified in the APS Survey. Each principal was allowed to ask questions to the researcher if necessary. Once they completed their survey, the principals then returned the survey to the researcher, thus ending that portion of the research. The questionnaire was administered while the researcher was present with the principal.

**Data Organization**
All of the data collected from the APS Academic Coaching Program Survey for Teachers was entered into an Excel spreadsheet so that each teacher was considered one case that included the teachers’ demographic data, responses to the survey questions, and number (1-4) of their school. The APS response data that was entered into the spreadsheet were numbers from 1-5 (which were the answers to the Likert Scale questions).

The principal questionnaire was organized into the specific tasks/duties of coaches identified through the APS Survey. The questionnaire was simple in its design and asked the principals to indicate the number of times per week that coaches performed those tasks/duties. When recording and organizing their responses, any answer of five times per week or more was understood to mean that those responsibilities were a daily part of their job. As the data from the APS Survey was analyzed, results from the principal’s questionnaire were compared to gain an understanding of how certain coaching duties impacted teacher perceptions of academic coaching.

**Data Analysis and Statistical Procedures**

**Rationale for type of data analysis.** This research was nonexperimental and utilized parametric methods because the mean and standard deviations were known and were discovered to be normal. A one-way, between groups ANOVA was the most appropriate analysis to use for this study because the three dependent variables were continuous and the independent variable was categorical with three levels, or groups (Tabachnick and Fidell, 2006). ANOVA allowed the researcher to compare the three
groups on three different dependent variables simultaneously. However, due to the unequal group sizes in the study, a Tukey’s post-hoc test was conducted to confirm the ANOVA results and identify which pairs of means were statistically different, as the ANOVA only told the researcher that the means were different, not which means were different. All ANOVA assumptions were found to be tenable, confirming the appropriateness of using parametric analysis (Howell, 2010). However, one practical issue in one-way ANOVA is that very unequal sample sizes can affect the homogeneity of variance assumption. ANOVA is considered robust to moderate departures from this assumption, but the departure must be smaller when the sample sizes are extremely different. For this reason, Levene’s test results alone are not considered sufficient to confirm the assumption of homoscedasticity. A Welch test and a Brown-Forsythe test were conducted in SPSS 21 (which is normally used to test for homoscedasticity for one-way ANOVAs) in order to confirm the Levene’s results, which indicated a tenable homogeneity of variances assumption. The Welch and Brown-Forstyhe tests were both significant at the $p < .05$ level, meaning the homogeneity of variances assumption was confirmed.

**Analysis of Hypotheses 1-3.** All three hypotheses stated that there would be a statistically significant difference between schools in some aspect of the teachers’ perceptions of coaching (either perception of coaching effectiveness, perception of the school personnel-academic coach affiliation, or perception of coaching quality) as measured by teacher responses on the APS survey. The original research plan was to
analyze if the teacher perception variables were statistically different between schools, thus reflecting how the teachers felt about coaching at their particular schools.

Preliminary analyses were used to examine the ANOVA assumptions of approximately normally distributed data, independence of observations, and homogeneity of variances. The assumption of normality was visually assessed for all three teacher perception variables through normality histograms and Q-Q plots, and statistically assessed using the Shapiro-Wilks test and an examination of skewness and kurtosis numbers (Tabachnik & Fidell, 2006). The assumption of independence of observations was also assessed for all three teacher perception variables. The relationships between the observations in each group and between the groups themselves were examined for independence. The assumption of homoscedasticity was assessed using the Levene, Welch, and Brown-Forsythe tests. Some authors (e.g., Glass and Hopkins, 1996) have called into question the use of Levene’s test to affirm homogeneity of variances when there is unequal n in the groups that are to be compared. That is why the Welch and Brown-Forsythe tests were conducted (Salkind & Green, 2011).

A $p < .05$ level of significance was used for the analysis of all three hypotheses to determine if the null hypotheses could be rejected. Significance levels of .05 were established to minimize the chances of rejection of the null hypothesis due to Type I errors. Scientists have concluded that a standard $p = .05$ is acceptable in the scientific community (STATS at George Mason University, 2012). The practical significance of each correlation was calculated using the eta squared statistic (how much of the
variability in the dependent variable that can be explained or accounted for by the independent variable), and was interpreted using Cohen’s guidelines (Cohen, 1988). Cohen characterized effect sizes this way:

Small effect: .20

Medium effect: .50

Large effect: .80

The size of effects that lie between the Cohen points are left up to interpretation. For example, .40 may be considered a medium effect because it is closer to the medium effect number than the small effect number. However, it could be considered a small effect if the effects are viewed as ranges (.20-.49, .50-.79, .80-1.00). The specifics of the aforementioned assumption testing, statistical procedures, and findings are presented in Chapter 4.

Issues with data analysis. There are many potential problems that can arise during data collection. However, appropriate adjustments can be made prior to final analyses. Below, four of these problems are listed along with how the researcher controlled for each problem when it occurred.

Extreme Outliers. Extreme outliers can have dramatic effects on ANOVA results and subsequent interpretations. The extreme outliers in the study were identified using Tabachnick and Fidell’s (2006) guideline of +/- 3.29 standard deviations from the mean. Each of the dependent variable means was tested at each level of the independent variable in an attempt to locate any extreme outliers that would skew the statistical results. There
was only one extreme outlier in this study that had to be accounted for. The easiest, and most commonly used, method of dealing with outliers is to eliminate any cells (rather than entire cases) that are determined by the researcher to contain extreme outliers. That is the method that was used in this study, in keeping with the researcher’s desire to retain as much data as possible for analysis. The extreme outlier (APS138 in Case 44) caused the elimination of that cell, and was the only cell eliminated in this study. This is especially appropriate because the absence of the one deleted cell did not significantly influence results or assumptions and did not create a significant association where one did not previously exist (Tabachnik & Fidell, 2001).

Normality. Many simple statistical tests are robust (sample data might deviate quite a bit from normality, but the test will still lead to the right conclusion about the null hypothesis) to the normality assumption (Salkind & Green, 2011), and normality does not necessarily have to be met for data to be analyzed with a parametric measure such as ANOVA (Hettmansperger & McKean, 1998). However, it is preferable to use parametric measures to decrease the likelihood of Type I errors (Tabachnik & Fidell, 2001). ANOVA only requires approximately normal data because it is quite robust to violations of normality, meaning that assumption can be a slightly violated and still provide valid results. Since the assumption of approximate normality was met in this study, there was no need to control for nonnormality.

Homoscedasticity. When the dependent variables do not exhibit similar amounts of variance across the range of values for an independent variable, the assumption of
homogeneity of variances is not met (Hamisci & Martinez, 2007). After Levene’s test was completed, both the Welch test and the Brown-Forsythe test were also conducted to test for homogeneity of variances and found to be tenable. The researcher felt that these two robust tests should be used along with the traditional Levene’s test to control for this study’s unequal sample sizes, which could result in finding data homoscedastic that was actually heteroscedastic. The Welch and Brown-Forsythe tests confirmed the homoscedastic nature of the data. Therefore, it was determined that the assumption of homogeneity of variances was met for all three of the variables.

**Summary**

This analysis of how academic coaches’ specific duties influence the teachers’ perceptions of academic coaching contributes to the growing body of literature on academic coaches/coaching. School systems are investing large portions of their budgets into the systematic use of academic coaches and should find in the results of this study the real value of their investment, both the positive and the negative. The study used statistical analysis to either accept or reject the null hypotheses that there is no difference between schools in how teachers perceive academic coaching. School systems will be able to utilize the findings of this study to explore how the assigned duties of academic coaches influence how teachers perceive coaching effectiveness and quality.
CHAPTER FOUR: RESULTS/FINDINGS OF THE STUDY

The primary purpose of this study was to measure the difference between teachers’ perceptions of instructional/academic coaching (with the APS survey) at four schools that utilize coaches in different ways. Detecting the differences between how separate groups of teachers feel about academic coaching in relation to their principal’s coach use gave the researcher valuable insight into which coaching duties are most helpful to teachers. A teacher survey and a principal survey were utilized to compare teacher perceptions of academic coaching at four different elementary schools in order to determine if there was a statistically significant difference between how teachers perceived academic coaching at their particular schools. Complete data sets were available for 102 total teachers amongst the four schools. The research questions in the study addressed how teachers perceive the academic coaches in light of their daily duties in the school. This chapter is organized into four sections. First, the descriptive data for the variables of interest are displayed. In the next section, the results of the assumptions tests for the research hypotheses are given. The third section describes the data analysis for the four hypotheses. The final section provides a summary of the results.

Results

Descriptive Statistics

A total of 124 teachers met the criteria for inclusion in the research; however, only 102 responses to the survey were available for analysis (82% response rate). Some of the 124 teachers were unavailable to complete the survey due to after-school
responsibilities, or simply chose not to participate. Others were exempted from the survey based on their lack of status as a teacher at the school when the staff development was used, or they were serving in a different capacity at the school (not as a classroom teacher) when the staff development took place. Teachers worked at their current schools between one and 31 years \((M = 8.58, SD = 5.79)\). These teachers had between two and 39 years of experience \((M = 15.02, SD = 8.95)\). The descriptive statistics for each variable are broken down according to school in Tables 2-4.

Table 2

*Descriptive Statistics for the Individual Variables-School 1*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS125</td>
<td>21</td>
<td>62.00</td>
<td>55.00</td>
<td>117.00</td>
<td>74.61</td>
<td>3.11</td>
<td>14.28</td>
</tr>
<tr>
<td>APS2638</td>
<td>21</td>
<td>38.00</td>
<td>13.00</td>
<td>51.00</td>
<td>34.76</td>
<td>1.85</td>
<td>8.48</td>
</tr>
<tr>
<td>APS138</td>
<td>21</td>
<td>41.00</td>
<td>89.00</td>
<td>130.00</td>
<td>109.38</td>
<td>2.03</td>
<td>9.30</td>
</tr>
</tbody>
</table>

*Note.* School 1 had only two coaches while the other three schools had three coaches each.

School 1 had 21 respondents to the survey and made up 20.6% of the overall survey responses. Overall, School 1 had 81% of its classroom teachers participate in the coaching survey.
Table 3

*Descriptive Statistics for the Individual Variables—Schools 2/3*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. Error</td>
<td>Statistic</td>
</tr>
<tr>
<td>APS125</td>
<td>59</td>
<td>49.00</td>
<td>65.00</td>
<td>114.00</td>
<td>91.50</td>
<td>1.38</td>
<td>10.61</td>
</tr>
<tr>
<td>APS2638</td>
<td>59</td>
<td>28.00</td>
<td>13.00</td>
<td>41.00</td>
<td>25.38</td>
<td>0.74</td>
<td>5.71</td>
</tr>
<tr>
<td>APS138</td>
<td>59</td>
<td>45.00</td>
<td>101.00</td>
<td>146.00</td>
<td>116.89</td>
<td>1.28</td>
<td>9.86</td>
</tr>
</tbody>
</table>

School 2 had 29 respondents to the survey and made up 28.4% of the overall survey responses. Overall, School 2 had 83% of its classroom teachers participate in the coaching survey.

School 3 had 31 respondents to the survey and made up 30.4% of the overall survey responses. Overall, School 3 had 86% of its classroom teachers participate in the coaching survey.
Table 4

Descriptive Statistics for the Individual Variables-School 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS125</td>
<td>59</td>
<td>39.00</td>
<td>68.00</td>
<td>107.00</td>
<td>89.90</td>
<td>2.29</td>
<td>10.50</td>
</tr>
<tr>
<td>APS2638</td>
<td>59</td>
<td>18.00</td>
<td>17.00</td>
<td>35.00</td>
<td>26.19</td>
<td>1.05</td>
<td>4.82</td>
</tr>
<tr>
<td>APS138</td>
<td>59</td>
<td>28.00</td>
<td>102.00</td>
<td>130.00</td>
<td>116.09</td>
<td>1.78</td>
<td>8.16</td>
</tr>
</tbody>
</table>

School 4 had 21 respondents to the survey and made up 20.6% of the overall survey responses. Overall, School 4 had 78% of its classroom teachers participate in the coaching survey.

Assumption Testing

Preliminary assumption testing for a between groups ANOVA analysis was conducted. The assumptions tested were normality, independence of observations, and homoscedasticity (Tabachnick & Fidell, 2001). Normality histograms (approximately one-third of the cases should be one standard deviation or less from the mean) and Q-Q plots provided the visual evidence of normality. The statistical determination of normality was determined by the Shapiro-Wilks test and examination of the skewness and kurtosis values of each variable.

The normality histograms for the three dependent variables at all three levels of the categorical independent variable can be seen in Figures 4-6.
Figure 4. Normality Histogram for APS125, Perception of Coaching Effectiveness, With Normal Curve Displayed
Figure 5. Normality Histogram for APS2638, Perception of School Personnel-Academic Coach Affiliation With Normal Curve Displayed
The Q-Q plots for the three dependent variables at all three levels of the categorical independent variable can be seen in Figures 7-9.
Figure 7. Q-Q Plot for APS125, Perception of Coaching Effectiveness
Figure 8. Q-Q Plot for APS2638, Perception of School Personnel-Academic Coach

Affiliation
Since normality could not be confirmed visually because several of the normality histograms appeared platykurtic, the researcher used other methods to verify normality. Another way of determining normality is by employing statistical methods, such as using the Shapiro-Wilks test (Table 5) and examining the skewness and kurtosis numbers (Table 6) given in SPSS. Skewness measures the symmetry of the distribution and
kurtosis defines the shape of the distribution. If the skewness and kurtosis fall within a range that is +/- twice the standard error for skewness and kurtosis, then the distribution presents no problematic deviations from normality (De Carlo, 1997; Kendall, Stuart, Ord, & O’Hagan, 1999).

Table 5

Shapiro-Wilks Statistics for All Study Variables at All Three Levels of the Categorical Independent Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>School Type</th>
<th>Shapiro-Wilks Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS125</td>
<td>Professional Development Schools</td>
<td>.90</td>
<td>21</td>
<td>.050</td>
</tr>
<tr>
<td></td>
<td>Blended Schools Without Direct</td>
<td>.98</td>
<td>59</td>
<td>.561</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blended Schools With Direct</td>
<td>.96</td>
<td>21</td>
<td>.610</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APS2638</td>
<td>Professional Development Schools</td>
<td>.91</td>
<td>21</td>
<td>.059</td>
</tr>
<tr>
<td></td>
<td>Blended Schools Without Direct</td>
<td>.98</td>
<td>59</td>
<td>.782</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blended Schools With Direct</td>
<td>.96</td>
<td>21</td>
<td>.603</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APS138</td>
<td>Professional Development Schools</td>
<td>.94</td>
<td>21</td>
<td>.320</td>
</tr>
<tr>
<td></td>
<td>Blended Schools Without Direct</td>
<td>.94</td>
<td>59</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blended Schools With Direct</td>
<td>.94</td>
<td>21</td>
<td>.272</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Shapiro-Wilks test showed one violation of normality. The APS138, Blended Schools Without Direct Instruction statistic was significant at the $p < .05$ significance level, indicating a violation of normality. One violation of normality on the
Shapiro-Wilks test does not disqualify the researcher from using ANOVA in this study since ANOVA is robust against small violations of normality.

Table 6

*Skewness and Kurtosis Statistics for All Study Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>School Type</th>
<th>Skewness Statistic</th>
<th>Skewness Std. Error</th>
<th>Kurtosis Statistic</th>
<th>Kurtosis Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS125</td>
<td>Profession Development Schools</td>
<td>1.20</td>
<td>0.50</td>
<td>2.54</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>Blended Schools Without Direct Instruction</td>
<td>-0.26</td>
<td>0.31</td>
<td>0.01</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>Blended Schools With Direct Instruction</td>
<td>-0.45</td>
<td>0.50</td>
<td>-0.08</td>
<td>0.97</td>
</tr>
<tr>
<td>APS2638</td>
<td>Profession Development Schools</td>
<td>-0.91</td>
<td>0.50</td>
<td>1.54</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>Blended Schools Without Direct Instruction</td>
<td>0.17</td>
<td>0.31</td>
<td>0.16</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>Blended Schools With Direct Instruction</td>
<td>-0.24</td>
<td>0.50</td>
<td>-0.42</td>
<td>0.97</td>
</tr>
<tr>
<td>APS138</td>
<td>Profession Development Schools</td>
<td>-0.36</td>
<td>0.50</td>
<td>1.24</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>Blended Schools Without Direct Instruction</td>
<td>0.77</td>
<td>0.31</td>
<td>1.19</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>Blended Schools With Direct Instruction</td>
<td>0.24</td>
<td>0.50</td>
<td>-0.45</td>
<td>0.97</td>
</tr>
</tbody>
</table>

While the skewness and kurtosis statistics indicated violations of normality, all violations were slight. The skewness statistic for APS125, Modeling Schools fell 0.20 outside of the +/- twice the skewness standard error guideline. The skewness statistic for APS138, Blended Schools Without Direct Instruction fell 0.15 outside of the +/- twice
the skewness standard error guideline. The kurtosis statistic for APS125, Modeling Schools fell 0.60 outside of the +/- twice the kurtosis standard error guideline. Since ANOVA is robust against slight violations of normality (Tabachnick & Fidell, 2001), the researcher determined that the data was normal enough to utilize the ANOVA test to determine the differences in teachers’ perceptions at the four target schools. The two visual and two statistical tests of normality revealed only slight violations, meaning that assumption of approximate normality is met.

The assumption of independence was determined through a careful examination of study design. Teachers from four separate elementary schools were chosen for this study, so there was no chance of any teacher becoming a member of any group other than the group represented by their own school. There was also no instance of a single principal or academic coach being present at any school other than their own during the course of this study; thus, no outside entity had an opportunity to influence the perceptions of the teachers at more than one of the target schools. These design features mean that the assumption of independence of observations was met for this study.

The assumption that the data is homoscedastic means that a similar variability in scores exists at all values of the dependent variable (Tabachnick & Fidell, 2001). The assumption of homoscedasticity was assessed statistically using the Levene test. The Welch test and the Brown-Forsythe test were also included because both are considered to be very robust in cases of unequal sample sizes. The results of the Levene test are depicted in Table 7.
The Levene test of homogeneity of variances was non-significant for all of the variables in the study. This confirms that the data meets the assumption of homogeneity. The corresponding Welch test is seen in Table 8.

Table 8

*Tests of Homogeneity of Variance-Welch*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS125</td>
<td>Welch</td>
<td>12.15</td>
<td>2</td>
<td>38.18</td>
</tr>
<tr>
<td>APS2638</td>
<td>Welch</td>
<td>10.92</td>
<td>2</td>
<td>39.25</td>
</tr>
<tr>
<td>APS138</td>
<td>Welch</td>
<td>5.02</td>
<td>2</td>
<td>43.09</td>
</tr>
</tbody>
</table>

The Welch test of homogeneity of variances was also significant for all of the variables in the study. This confirms that the data meets the assumption of homogeneity. The corresponding Brown-Forsythe results are depicted in Table 9.
Table 9

Tests of Homogeneity of Variance-Brown-Forsythe

<table>
<thead>
<tr>
<th>Variable</th>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS125 Brown-Forsythe</td>
<td>15.38</td>
<td>2</td>
<td>50.72</td>
<td>.000</td>
</tr>
<tr>
<td>APS2638 Brown-Forsythe</td>
<td>15.79</td>
<td>2</td>
<td>43.37</td>
<td>.000</td>
</tr>
<tr>
<td>APS138 Brown-Forsythe</td>
<td>5.55</td>
<td>2</td>
<td>65.02</td>
<td>.006</td>
</tr>
</tbody>
</table>

The Brown-Forsythe test of homogeneity of variances was significant for all of the variables in the study. This confirms that the data meets the assumption of homogeneity.

Data Analysis Results

Results of Principal Questionnaire

The Principal Questionnaire results shed light on the differences in how the coaches were used at the target schools. According to the Principal Questionnaire that was administered to the principals at all four schools, there were differences in how the coaches were used at each school and how much time coaches spent on particular duties at each school. The results of that Principal Questionnaire are seen in Table 10.

As indicated in the questionnaire, the coaches had very similar duties overall; however, there were significant differences in how much time was spent carrying out these duties at each school, and which of the duties seemed to be most important to the principals of the schools represented in the study. These differences in coaching use, when compared to the APS survey, give valuable insight into the relationship between
how coaches were used at the four schools and how they were perceived by teachers as a result of their use.

In reviewing the questionnaires, some definite similarities surfaced among the schools and their uses of the coaches. In all four schools, coaches were most frequently used on a daily basis to mentor teachers and assist teachers with implementation of standards. Principals also indicated that a primary duty of coaches in their schools was to provide classroom teachers with resources and materials that helped teachers improve teaching strategies and classroom instruction. Principal responses also showed that coaches were consistently involved in one-on-one coaching sessions with teachers on a regular basis. Of all of the responsibilities of coaches noted by principals, the most surprising was in relation to coordination/participation in testing. Principals indicated that with the exception of periodic needs that arose during benchmark testing, coaches were not part of regular assessments delivered to the students. Also, it was rarely noted that coaches were used in the act of providing interventions to students in need. Only one school indicated that coaches were ever used in the act of having direct interaction with students, as opposed to teachers. Following is a summary of the use of academic coaches by school according to the principals.

School 1: The principal indicated daily responsibilities of coaches that were consistent with those of the other schools; however, not all schools’ principals indicated that coaches were responsible for assessing or evaluating teachers. In evaluating the responsibilities of School 1 coaches, the predominant focus of coaches’ duties was on the
mentoring relationship between coaches and teachers. The principal’s responses shows that the coaches at School 1 specialized in helping teachers become better instructionally through direct intervention with teachers, demonstration in lessons and instructional techniques, and one-on-one coaching. It is noteworthy to say that, according to the principal’s responses (at School 1), that blended coaching is present at the school, however, the daily focus is on the mentoring relationship. The coaches are active in professional development through collaboration and facilitation of professional development activities, however, coaches at School 1 are not active on a daily basis in coordination of professional development sessions.

**School 2:** The principal’s responses for School 2’s uses of coaches showed a rather significant difference from coach use than at the other three schools. Most notable was that coaches were not used in coordinating/leading professional development sessions with teachers and staff. School 2’s principal’s responses indicated that this task was not a major responsibility at their school. Also notable at School 2 was the complete absence of any responsibilities in assessing/evaluating teachers. Clearly, the principal at School 2 chose to completely remove that responsibility from their coaches. Additionally, assisting teacher collaborative groups was not listed by the principal at School 2 as being an important role of their coaches. Perhaps the most notable difference in the way coaches were used at School 2 in comparison with the other three schools was in coaching teachers on instructional techniques. As on-site professional development staff, improving the instructional strategies of teachers was a primary responsibility of coaches.
at the other three schools, but was shown as minimally important at School 2. This
difference alone separated school 2 from School 1 in the mentoring role. Coaching
teachers in instructional techniques is a significant part of the mentoring relationship, but
was practically nonexistent at School 2. Therefore, School 2 was categorically described
as a blended school with no direct intervention or interaction with students in need.

**School 3:** The principal’s responses at School 3 indicated that the top priority of coaches
at their school was to focus on the implementation of standards, mentoring, and leading
teacher collaboration groups. While each of those is definitely an important
responsibility for instruction, other areas deemed important by the principals at Schools
1, 2, and 4 appeared to be less of a focus at School 3. One of those areas, facilitating
professional development for teachers, was reported as less important at School 3 than at
any of the other schools. Surprisingly, there was the lack of importance placed on
coaches’ demonstration of lessons for teachers at School 3. Modeling of instructional
techniques was ranked as a daily responsibility of coaches at all of the other schools
surveyed; however, this method was only minimally utilized at School 3. The responses
from the principal of School 3 indicated that the academic coaches were not daily
involved in coordinating and carrying out professional development sessions at the
school. Thus, this lead the researcher to conclude that the methods of professional
development used at School 3 looked somewhat different than at the other schools. The
principal responses at School 3, therefore, led to the researcher as categorizing School 3
as a blended coaching school with no direct intervention with students in need.
School 4: School 4’s principal reported similar coaching duties as the other three schools. However, the results of the questionnaire indicated that the frequency in which the coaches were involved in tasks such as assisting teachers with the implementation of standards was equally as high at other schools. Another area that was important at School 4, according to the responses of the school’s principal, was the area of one-on-one coaching. This area was ranked highly by the other schools as well; however, it was noted by School 4’s principal as an area of strategic importance. Another area where coaches at School 4 committed a great deal of time was in coaching teachers in instructional techniques. The principal identified this task as one of the most important in promoting the professional development of teachers. The area that prevented School 4 from being labeled as a mentoring school was the principal’s response regarding their coaches’ duty to provide resources, materials, and information to teachers. The principal indicated that this responsibility was only a small part of their duties and did not happen on a daily basis. The most important distinction made by this principal’s was regarding the interaction coaches had directly with students. School 4 was the only school where coaches assisted directly with students in need. This element of direct intervention completely separated School 4 from being labeled as just a blended coaching school. In addition to the direct intervention with students, coaches were also active in the assessment of students.

The manner in which academic coaches are used is clearly important to both the teachers and the principals in the four target schools. However, the research data
indicated that the effect of differing coach use between schools (the independent variable) only explained a small amount of the variance in teacher perceptions of coaching effectiveness, teacher perceptions of the school personnel-academic coach affiliation, and teacher perceptions of overall coaching quality (the dependent variables).

Table 10

*Results of Principal’s Questionnaire*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>One-on-One Coaching</td>
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<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Facilitating Professional Dev.</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
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<tr>
<td>A.C. Demonstration of Lessons</td>
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<td>5</td>
<td>2</td>
<td>5</td>
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<tr>
<td>A.C. Coord. Of Prof. Dev. Sessions</td>
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<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Providing Resources &amp; Materials</td>
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<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Assisting Teacher Collab. Groups</td>
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<td>1</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Coaching Teachers in Inst. Techniques</td>
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<td>1</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Assessment/Eval. of Teachers</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Coordination/Participation in Testing</td>
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<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Mentoring Teachers</td>
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<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Assisting Teachers w/Implementation of</td>
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<td></td>
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<td></td>
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<td>Standards</td>
<td>5</td>
<td>5</td>
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<td>5</td>
</tr>
<tr>
<td>Providing Interventions to Students in Need</td>
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<td>3</td>
<td>5</td>
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<tr>
<td># of Coaches in School</td>
<td>2</td>
<td>3</td>
<td>3</td>
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</table>

**Research Hypothesis 1**
There will be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.

**Null Hypothesis 1**

There will not be a statistically significant difference between teacher perceptions of coaching effectiveness in elementary schools (as measured by questions 1-25 of the APS) at School 1, Schools 2/3, and School 4.

Table 11 presents the results of the hypothesis testing for all three research hypotheses.

Table 11

**ANOVA Results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td></td>
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<td>Between Groups</td>
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<td>2275.52</td>
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<td>.000</td>
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<td>Within Groups</td>
<td>12823.50</td>
<td>98</td>
<td>130.85</td>
<td></td>
<td></td>
</tr>
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<td>Total</td>
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<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>APS2638</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
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<td>2</td>
<td>703.08</td>
<td>18.13</td>
<td>.000</td>
</tr>
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<td>Within Groups</td>
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<td>98</td>
<td>38.76</td>
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<td>Total</td>
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<td>100</td>
<td></td>
<td></td>
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<tr>
<td>APS138</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>897.98</td>
<td>2</td>
<td>448.99</td>
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<td>.008</td>
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<tr>
<td>Within Groups</td>
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<td>98</td>
<td>88.79</td>
<td></td>
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<tr>
<td>Total</td>
<td>9600.13</td>
<td>100</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**p < .01

*p < .05

Results for Hypothesis 1
Hypothesis 1 was tested using SPSS 21 by conducting a between groups ANOVA. The categorical independent variable was the school where each teacher worked, and the dependent variable was teacher perceptions of coaching effectiveness (APS125). ANOVA was utilized instead of multiple t-tests because multiple t-tests would have increased the likelihood of committing Type I errors (Tabachnick & Fidell, 2006). The researcher used $p < .05$ as the significance level, as accepted by the research community (Salkind & Green, 2011). The $F$ value was found to be statistically significant, $F(2, 98) = 17.39, p < .01$, thus allowing for rejection of Null Hypothesis 1. Because Null Hypothesis 1 could be rejected, it should be concluded that teacher perceptions of academic coaching effectiveness (APS125) were significantly different between schools. The $\eta^2 = .26$ calculation (see Table 12) indicated that the independent variable (school membership) had only a small effect on those perceptions (Cohen, 1988).

Table 12

<table>
<thead>
<tr>
<th>Variable</th>
<th>ES</th>
<th>$\eta^2$</th>
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<tbody>
<tr>
<td>APS125 SchoolType</td>
<td>.51</td>
<td>.26</td>
</tr>
<tr>
<td>APS2638 SchoolType</td>
<td>.52</td>
<td>.27</td>
</tr>
<tr>
<td>APS138 SchoolType</td>
<td>.30</td>
<td>.09</td>
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Given the statistically significant ANOVA $F$ results, post hoc Tukey test analyses (Table 13) were conducted on all three possible pairwise contrasts for the APS125
variable (teacher perceptions of coaching effectiveness). The purpose was to determine which pairs of variables were statistically significant at the $p < .05$ level. The following pairs were found to be significantly different: Pair 1 (Modeling Schools; $M = 74.61; SD = 14.28$) and Pair 2 (Blended Schools Without Direct Instruction; $M = 91.50; SD = 10.61$); and Pair 1 (Modeling Schools; $M = 74.61; SD = 14.28$) and Pair 3 (Blended Schools With Direct Instruction; $M = 89.90; SD = 10.50$). This indicates that teachers at Modeling Schools have statistically different perceptions of coaching effectiveness from teachers at both Blended Schools Without Direct Instruction and Blended Schools With Direct Instruction, but that teachers at Blended Schools Without Direct Instruction do not have statistically different perceptions of coaching effectiveness from teachers at Blended Schools With Direct Instruction.
### Table 13

**Tukey’s Results**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>(I) School Type</th>
<th>(J) School Type</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
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</thead>
<tbody>
<tr>
<td><strong>APS125</strong></td>
<td></td>
<td>Professional Development Schools</td>
<td>Blended Schools Without Direct Instruction</td>
<td>-16.88*</td>
<td>2.90</td>
<td>.000</td>
<td>-23.89</td>
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<td></td>
<td></td>
<td>Blended Schools With Direct Instruction</td>
<td>-15.28*</td>
<td>3.53</td>
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<tr>
<td></td>
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<td>9.97</td>
<td>23.80</td>
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<td></td>
<td></td>
<td>Blended Schools With Direct Instruction</td>
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<td>-5.31</td>
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<tr>
<td></td>
<td></td>
<td>Modeling Schools</td>
<td>15.28*</td>
<td>3.53</td>
<td>.000</td>
<td>6.88</td>
<td>23.68</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blended Schools Without Direct Instruction</td>
<td>-1.60</td>
<td>2.90</td>
<td>.846</td>
<td>-8.52</td>
<td>5.31</td>
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<tr>
<td><strong>APS2638</strong></td>
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<td>Blended Schools Without Direct Instruction</td>
<td>9.37*</td>
<td>1.58</td>
<td>.000</td>
<td>5.60</td>
<td>13.13</td>
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<tr>
<td></td>
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<td>Direct Instruction</td>
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<td>3.99</td>
<td>13.14</td>
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<td></td>
<td></td>
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<td>.000</td>
<td>-13.13</td>
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<tr>
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<td>1.58</td>
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<td>.006</td>
<td>-13.21</td>
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<td><strong>APS138</strong></td>
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<td>Blended Schools Without Direct Instruction</td>
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<td>.059</td>
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<td></td>
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<td>2.39</td>
<td>.006</td>
<td>1.81</td>
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<td>.940</td>
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<td>2.90</td>
<td>.059</td>
<td>-0.20</td>
<td>13.63</td>
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<tr>
<td></td>
<td></td>
<td>Direct Instruction</td>
<td>-0.80</td>
<td>2.39</td>
<td>.940</td>
<td>-6.50</td>
<td>4.89</td>
<td></td>
</tr>
</tbody>
</table>

* The mean difference is significant at the 0.05 level.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

### Research Hypothesis 2

There will be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.
**Null Hypothesis 2**

There will not be a statistically significant difference between teacher perceptions of the school personnel-academic coach affiliation in elementary schools (as measured by questions 26-38 of the APS) at School 1, Schools 2/3, and School 4.

**Results for Hypothesis 2**

Hypothesis 2 was tested using SPSS 21 by conducting a between groups ANOVA. The categorical independent variable was the school where each teacher worked, and the dependent variable was teacher perceptions of the school personnel-academic coach affiliation (APS2638). ANOVA was utilized instead of multiple $t$-tests because multiple $t$-tests would have increased the likelihood of committing Type I errors (Tabachnick & Fidell, 2006). The researcher used $p < .05$ as the significance level, as accepted by the research community (Salkind & Green, 2011). The $F$ value was found to be statistically significant, $F(2, 98) = 18.13, p < .01$, thus allowing for rejection of Null Hypothesis 2. Because Null Hypothesis 2 could be rejected, it should be concluded that teacher perceptions of the school personnel-academic coaching affiliation (APS2638) were significantly different between schools. The $\eta^2 = .27$ calculation indicated that the independent variable (school membership) had only a small effect on those perceptions (Cohen, 1988).

Given the statistically significant ANOVA $F$ results, post hoc Tukey test analyses were conducted on all three possible pairwise contrasts for the APS2638 variable (teacher perceptions of the school personnel-academic coach affiliation). The purpose was to
determine which pairs of variables were statistically significant at the $p < .05$ level. The following pairs were found to be significantly different: Pair 1 (Modeling Schools; $M = 34.76$, $SD = 8.48$) and Pair 2 (Blended Schools Without Direct Instruction; $M = 25.38$, $SD = 5.71$); and Pair 1 (Modeling Schools; $M = 34.76$, $SD = 8.48$) and Pair 3 (Blended Schools With Direct Instruction; $M = 26.19$, $SD = 4.82$). This indicates that teachers at Modeling Schools have statistically different perceptions of the school personnel-academic coach affiliation from teachers at both Blended Schools Without Direct Instruction and Blended Schools With Direct Instruction, but that teachers at Blended Schools Without Direct Instruction do not have statistically different perceptions of the school personnel-academic coach affiliation from teachers at Blended Schools With Direct Instruction.

**Research Hypothesis 3**

There will be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

**Null Hypothesis 3**

There will not be a statistically significant difference between teacher perceptions of overall coaching quality in elementary schools (as measured by questions 1-38 of the APS) at School 1, Schools 2/3, and School 4.

**Results for Hypothesis 3**
Hypothesis 3 was tested using SPSS 21 by conducting a between groups ANOVA. The categorical independent variable was the school where each teacher worked, and the dependent variable was teacher perceptions of overall coaching quality (APS138). ANOVA was utilized instead of multiple $t$-tests because multiple $t$-tests would have increased the likelihood of committing Type I errors (Tabachnick & Fidell, 2006). The researcher used $p < .05$ as the significance level, as accepted by the research community (Salkind & Green, 2011). The $F$ value was found to be statistically significant, $F(2, 98) = 5.05, p < .01$, thus allowing for rejection of Null Hypothesis 3. Because Null Hypothesis 3 could be rejected, it should be concluded that teacher perceptions of overall coaching quality (APS138) were significantly different between schools. The $\eta^2 = .09$ calculation indicated that the independent variable (school membership) had only a small effect on those perceptions (Cohen, 1988).

Given the statistically significant ANOVA $F$ results, post hoc Tukey test analyses were conducted on all three possible pairwise contrasts for the APS138 variable (teacher perceptions of overall coaching quality). The purpose was to determine which pairs of variables were statistically significant at the $p < .05$ level. The following pair was found to be significantly different: Pair 1 (Modeling Schools; $M = 109.38, SD = 9.30$) and Pair 2 (Blended Schools Without Direct Instruction; $M = 116.89, SD = 9.86$). This indicates that teachers at Modeling Schools have statistically different perceptions of overall coaching quality from teachers at Blended Schools Without Direct Instruction, but not from teachers at Blended Schools With Direct Instruction. It also indicates that teachers
at Blended Schools Without Direct Instruction do not have statistically different perceptions of overall coaching quality from teachers at Blended Schools With Direct Instruction.

**Summary**

This chapter presented the descriptive statistics, assumptions testing, and tests of hypotheses for this study. Analysis revealed that all of the assumptions could be met, allowing the use of a between subjects one-way ANOVA. Although ANOVA was used to detect the existence of differences between the dependent variables at the three levels of the categorical independent variable, Tukey’s test was conducted post hoc in order to identify which variables were different. Eta squared was utilized to quantify the effect sizes found during the ANOVA analysis; those effect sizes were interpreted using Cohen’s $d$ (Cohen, 1988). All of these findings are discussed at length in Chapter Five.
CHAPTER FIVE: DISCUSSION

The previous chapter presented data analysis which utilized a between subjects one-way ANOVA and a Tukey’s post hoc test to measure differences between teacher perceptions of academic coaching at four independent elementary schools. The chapter presented descriptive statistics for each school that was included in the study, assumption testing that showed the viability of utilizing ANOVA, and data analysis to test each of the research hypotheses.

The final chapter of this study provides a brief summary of the findings that were presented in Chapter Four, followed by a discussion of those findings in light of the relevant literature. In addition, the limitations of the study are presented along with recommendations for practical application and future research. The conclusion of the chapter summarizes the primary findings of the research.

Summary of Findings

The answers to the APS Surveys and Principal Questionnaires revealed several statistically significant differences between teacher perceptions of academic coaching at the four target schools. ANOVA results found that all three hypothesis tests were statistically significant at the \( p < .05 \) level, indicating a small difference for all three hypotheses between teacher perceptions at the four schools. Tukey results found that five of the nine relationships between pairs of independent and dependent variables were statistically different.
**Research Question 1**

Research Question 1 asked if there was a statistically significant difference between teacher perceptions of academic coaching effectiveness at School 1, Schools 2/3, and School 4. The researcher hypothesized that there would be a significant difference in teacher perceptions between schools. This hypothesis was confirmed because the difference was statistically significant, $F(2, 98) = 17.39, p < .01$, although the effect size was small ($\eta^2 = .26$).

**Research Question 2**

Research Question 2 asked if there was a statistically significant difference between teacher perceptions of the school personnel-academic coaching affiliation at School 1, Schools 2/3, and School 4. The researcher hypothesized that there would be a significant difference in teacher perceptions between schools. This hypothesis was confirmed because the difference was statistically significant, $F(2, 98) = 18.13, p < .01$, although the effect size was small ($\eta^2 = .27$).

**Research Question 3**

Research Question 3 asked if there was a statistically significant difference between teacher perceptions of overall coaching quality at School 1, Schools 2/3, and School 4. The researcher hypothesized that there would be a significant difference in teacher perceptions between schools. This hypothesis was confirmed because the difference was statistically significant, $F(2, 98) = 5.05, p < .01$, although the effect size was small ($\eta^2 = .09$).
Discussion

Chapter Four results shed light on how the differences in coach use between schools impacted teachers’ perceptions of academic coaching at their schools. According to the Principal Questionnaire that was administered to the principals at all four schools, there were differences in how the coaches were used at each School and how much time coaches spent on particular duties at each school. As indicated in the questionnaire, the coaches had very similar duties overall; however, there were significant differences in how much time was spent carrying out these duties at each school, and which of the duties seemed to be most important to the principals of the schools represented in the study. These differences in coaching use, when compared to how teachers perceived coaching effectiveness, give valuable insight into the relationship between how coaches were used and how effective they were perceived to be.

In all four schools, coaches were most frequently used on a daily basis to mentor teachers and assist teachers with implementation of standards. Principals also indicated that a primary duty of coaches in their schools was to provide classroom teachers with resources and materials that helped teachers improve teaching strategies and classroom instruction. Principal responses also revealed that coaches were consistently involved in one-on-one coaching sessions with teachers on a regular basis. Of all of the responsibilities of coaches noted by principals, the most surprising was in relation to coordination/participation in testing. Principals indicated that with the exception of periodic needs that arose during benchmark testing, coaches were not part of regular
assessments delivered to the students. Though surprising to the researcher, this did follow the basic tenets of coach use that have been previously mentioned in the literature on coaching responsibilities (Knight, 2009; Neufeld & Roper, 2003; Shidler, 2009). While many possible discussion points arose from the findings of Chapter Four, the following five are the most relevant to the study’s purpose.

- The statistically significant ANOVA results demonstrated that teacher perceptions do vary in response to how schools utilize their coaches. This is relevant because teacher perceptions of academic coaching are important to the success of any academic coaching program. Without teacher buy-in and support in regards to coaching, the professional development and modeling that the coaches do with teachers will not transfer to classroom instruction, thus rendering coaches largely ineffective as a means for improving academic success. Therefore, improvement of academic results is at least partly reliant upon how teachers perceive the use of academic coaches.

- The small effect sizes found by performing eta squared calculations indicate that there are many factors other than coach use that contribute to teacher perceptions of coaching. While identifying those factors is outside of the scope of this study, it is an important finding of this research that the manner in which a school utilizes an academic coach plays only a small role in teacher perceptions of academic coaching.
• The Tukey test revealed that differences existed in teacher perceptions of academic coaching effectiveness (APS125) between School 1 and Schools 2/3 and between School 1 and School 4, but not between Schools 2/3 and School 4. These results indicated that the presence or absence of direct instruction does not matter in terms of teacher perceptions of coaching effectiveness, but modeling coaching versus blended coaching does matter. In fact, this was the largest difference (16.88, \( p < .05 \) level) between two pairs that was found for any pair amongst any of the study’s three dependent variables. The teacher responses clearly indicated that they perceive academic coaching as more effective when coaches work to develop them as teachers and work with them in the classroom, as opposed to academic coaching that focuses only on teacher development.

• The Tukey test revealed that differences existed in teacher perception of the school personnel-academic coach affiliation (APS 2638) between School 1 and Schools 2/3 and between School 1 and School 4, but not between Schools 2/3 and School 4. These results indicated that teachers’ perceptions of the teacher-coach relationship differ between schools that use modeling and schools that use a blended approach, but that teacher perceptions do not differ between schools where the presence or absence of direct instruction is the only difference in what coaches do daily. This result seems perfectly logical. If a coach is perceived as not just a tutor, but as someone who is willing to interact with the teacher in the classroom, that coach is much more likely to be perceived as someone who has a
strong and positive affiliation with the entire staff. In this way, coach use has an influence on teacher perceptions of the school personnel-academic coach affiliation.

- The actual duties that academic coaches perform are not as important as how often they perform each duty. The Principal Questionnaire suggested that the daily duties of the academic coaches at the four schools are very similar, but the amount of time they spend on each activity is quite different, depending on the directive of the principals and/or district mandates. The perceptions of the teachers may be influenced more by the amount of time spent on each activity than the activities themselves.

**Implications in Light of the Relevant Literature**

This study has shown that academic coaching must occur in a way that teachers feel is effective, must be administered in the proper proportions, and must be relevant in order to bring about positive teacher perceptions regarding this increasingly common form of professional development. The research did yield some important findings that suggest that utilizing academic coaches as a means of professional development can be successful when the coaches are utilized appropriately.

Guskey (2002) stated,

High quality professional development is a central component in nearly every modern proposal for improving education. Professional development programs
are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students. (p. 381)

The results of this study indicated that the specific professional development of academic coaching impacts teacher perceptions of coaching effectiveness, teacher perceptions of the teacher-coach relationship, and teacher perceptions of overall coaching quality. According to Guskey, most professional development programs fail because they do not take into account the factors of “(1) what motivates teachers to engage in professional development, and (2) the process by which change in teachers typically occurs” (p. 382). Guskey goes on to explain that staff development programs should be engineered so that establishing positive teacher attitudes and beliefs comes first so that the trust and acceptance of teachers and school administrators is assured prior to the implementation of the practice. Coaching, as a practice, can be rather intense. Therefore, resistance to the change is understandable if teachers do not fully understand the context and intent of the training itself. Based on teacher responses from the APS survey, teachers were somewhat mixed in their responses; however, as those survey results were compared across schools, it became evident that the coaches were perceived as impactful to teachers.

As Patterson and Crumpler (2009) have shown, change is usually a very slow and sometimes agonizing process. Additionally, L’Allier et al. (2010) showed that appropriate change happens over time. This is attributable to a number of factors; however, mostly because teachers are generally very protective of their classrooms and
their teaching domain. As new and different ways are introduced to them, especially those that involve major pedagogical shifts, their first responses tend to be defensive and resistant. That wall of resistance becomes even higher as the years of teaching experience increase. Veteran teachers with multiple years of experience are typically difficult to motivate in regards to change. As the APS survey indicated, the average experience of the teachers surveyed was 15.02 years, and some of their responses can be viewed as an indication of resistance. However, some researchers (Janas, 1998) have suggested that resistance is not always negative. Janas (1998) explained that resistance is a fearful response to change and can be quite normal in the change process. She suggested that staff development organizers should respond with a proactive approach to the resistance by identifying the type of resistance and then developing strategies to minimize it before it becomes a formidable barrier to progress. Validation of the existence of this type of teacher resistance was confirmed by Andreasen, Swan, and Dixon (2007), who concluded that teachers with many years’ experience were opposed to making changes to their teaching practices. However, the study also revealed that over time, teachers began to consider possibilities for change in their classrooms, but only after considerable time and deliberation of what might come. Even when the frequency and nature of teacher resistance to change is factored, if teachers are allowed the appropriate time to adjust and adapt to the professional development being provided through coaching, academic coaching can be a meaningful form of staff development. This study showed that coaches are starting to alter the perceptions of academic coaching.
because even experienced teachers are beginning to see the value of the time, skill, and effort put forth by academic coaches.

Klein and Riordan (2009) indicated that districts have “invested heavily” (p. 61) in professional development focused on improving teaching in their schools so that it is consistent with their vision. While qualities of professional development seem to dominate the research, little research exists that emphasizes how the professional development is incorporated by teachers into their planning and instruction. According to Klein and Riordan, teachers may actually report positive implementation of professional development. However, these reports are likely unreliable due to the lack of depth of the change that teachers have implemented in their classrooms. There is a striking similarity between Klein and Riordan’s study and the findings in this study. Just as they found that teacher perceptions are inextricably linked to factors such as the success of teacher implementation of concepts that were presented by academic coaches, this study found that perceptions are fickle and can be influenced by many factors, including how the academic coaches are utilized in the school.

The literature on academic coaching is replete with studies on effective coaching and the means necessary to provide effective, high-quality coaching. Ongoing professional development provided through coaching is described by Killion (in Knight, 2009) as “crucial” (p. 9) to the success of reform efforts. Killion outlined ten roles that coaches play in schools:

1. Data coach
2. Resource person
3. Mentor
4. Curriculum specialist
5. Instructional specialist
6. Classroom supporter
7. Learning facilitator
8. School leader
9. Catalyst for change
10. Learner

Killion explained that these roles are subjective because they rely on employment location. That means coaches may serve in only a portion of these roles, or all of them. Those decisions are usually made on a system-by-system, or school-by-school basis. Killion’s findings fundamentally reflect the findings in this study. In reviewing the activities of the coaches at the four schools sampled, the researcher discovered that the basic roles described by Killion were quite similar in comparison. Principal responses on the questionnaire indicated that the duties at each school included, at least in part, the same characteristics described by Killion.

Hochberg and Desimone (2010) concluded that self-reported teacher change in knowledge, skills, and classroom practices were direct results of professional development that had the core features of “content focus, opportunities for active learning, and coherence with other teacher learning activities” (p. 95). When
professional development makes sense to teachers, there is a distinct positive impact in teacher perceptions of academic coaching. Academic coaching, as an on-site tool, allows coaches to hone in on specific teaching issues and direct teacher learning to those ends.

Recommendations

Recommendations for Practical Applications

The research results from Chapter Four were examined and several relevant issues were discussed that apply specifically to the target schools. These earlier discussion points lead naturally to several practical applications that can be implemented at any school that participates in academic coaching:

- There was a statistically significant difference at four elementary schools on the measures of teacher perceptions of academic coaching effectiveness, teacher perceptions of the school personnel-academic coach affiliation, and teacher perceptions of overall coaching quality. Obviously, elementary school teachers view the effectiveness of an academic coach as dependent upon the function(s) that he/she performs. As previously mentioned, the success of academic coaching in general depends largely upon teacher buy-in and support. Therefore, it stands to reason that to gain teacher support of academic coaching, and thereby make its success much more likely, district level administrators should include the district’s teachers in any planning involving the hiring, assignment, and specific job duties of academic coaches. School districts
reduce the impact of academic coaches before they even step into elementary schools if teachers are not made to feel legitimately included in decisions involving academic coaching.

- When coaches are employed at schools that are already academically successful schools, the time would be better spent on student intervention. Teachers know the needs of their students, and if they see that the academic coach is focusing on teacher development or classroom modeling when they could be used to more directly intervene with struggling learners, they will perceive academic coaching more negatively.

- One of the ancillary discoveries in this study was that teacher perceptions of academic coaching are influenced by how often an academic coach performs their duties rather than just which duties they perform. The principal survey indicated that the target elementary schools used academic coaches in a similar manner, but with varying frequencies. It is recommended that academic coaches increase the frequency with which they perform their teacher-related and student-related duties on a weekly basis.

**Recommendations for Future Research**

More research is needed to truly evaluate the value of academic coaches and the role they play in professional development and improved student achievement. School districts must have more reliable ways of evaluating professional development and the
impact it has on ongoing teacher development and the positive growth of students. Every professional development activity should be thoroughly evaluated for its efficacy and impact. Furthermore, every professional development activity should have adequate follow-up to ensure that the new pedagogy or practice is carried out in the classroom. While there has been a steady increase in research regarding professional development and coaching, further research that focuses on specific coaching impacts and outcomes would add even more to the knowledge base. The following are recommendations that could be applied to future research:

1. This study was limited to one school system. Expanding the study to include additional schools would likely offer more significant results. Coaching has been implemented in multitudes of school systems across the country. The study, given the proper amount of time and effort, could be expanded to cross state lines and expand to hundreds of school systems/districts.

2. The study can be expanded to all teachers who are involved in the training sessions, not just regular classroom teachers. The study could also include teachers of special education classrooms, gifted teachers, foreign language teachers, and special area teachers (physical education, music, art, etc.).

3. Future studies could incorporate an element that surveys more stakeholders than just teachers. The expanded study could include coaches, principals, and even central office staff to solicit their input and evaluation of the program.
4. A qualitative element could be added that would allow teachers, principals, and coaches more freedom of expression and would not limit them to a fixed response. This qualitative element would allow those being surveyed to expand on their expectations, experiences, successes, and failures in a way that would possibly paint a more accurate picture than the quantitative piece alone provides.

5. The study could become more refined to focus specifically on coaches who specialize in math, literacy, writing, reading, or some other discipline. By focusing on specific disciplines, researchers could get a much more refined look at specific programs. Additionally, a more focused study could allow systems to better evaluate the job performance of individual coaches and to gauge the success of individual coaches in meeting the needs of teachers and students.

6. Future research could create a longitudinal study that looks at the effect of academic coaching on student achievement over a period of time.

7. Future research could conduct a study that has the ability to pinpoint causation rather than just correlation. That would be helpful in determining which specific elements of coaching are responsible for improved or decreased student achievement.

8. A regression analysis could be conducted that seeks to identify the influence of other factors, in addition to academic coach use, that influence teacher
perceptions of academic coaching. This would be an important step towards understanding the teacher-academic coach relationship, especially if the factors that were found to be significant could be manipulated.

Delimitations and Limitations

Delimitations

The content of this study was selected because of a gap in the research regarding the relationship between how coaches are utilized in school districts and teacher perceptions of academic coaching. The research on all aspects of academic coaching is growing exponentially, yet it still largely ignores the place of teacher perceptions in coaching success in any school district. Because of the breadth of this topic, and the limited time and resources of the researcher, this study had to be delimited in several ways. The study only examined coaching at the four target schools because they have had coaches the longest in the target school system. These schools have utilized coaches since their inception. The other four schools in the district had small populations and began using coaches later than the target schools, so comparisons would not have been useful. Also, the size (more than 500 students per school) of the four schools in the study allowed for more data to be collected; the four schools not included are all smaller in size. The study also intentionally excluded some otherwise pertinent issues, such as the qualifications and education of coaches, because those issues were peripheral to the interests of this study. In order to obtain research results that were statistically stronger, the scope of the study was delimited to include only the elements that would precisely
answer this study’s research questions. According to Pearl (2009), interpretations can be made with more certainty when there are fewer confounding variables. Spending time on topics that were not directly relevant would have only hindered this goal.

**Limitations**

There are limitations in this study because of certain weaknesses that exist in the research design, study instrumentation, or analytical methods. There is one limitation that applies to every ANOVA study. There are also limitations that apply specifically to this study, and those are explained in this section as well.

**Limitations due to research design.** The sample for this study was not random. The participants were chosen based on their employment as teachers at one of four elementary schools in one school district who had experienced academic coaching. This may have inadvertently caused bias in the research design. While no particular control was put in place to limit the effects of a lack of randomization bias, the sample did include a representative demographic cross-section of teachers who taught at each of the target facilities.

ANOVA studies are often very valuable because they can detect differences between means in target populations. However, ANOVA results do not detect which specific pairs within that population have a statistically significant difference on a given variable (Ary et al., 2006; Tabachnik & Fidell, 2001). For example, it was found in this study that teacher perceptions of coaching effectiveness (APS125) showed statistically significant differences between the four schools. However, it was not clear which
schools were showing statistical differences. To control for this limitation, a post hoc Tukey test was conducted in an attempt to decipher which pairs of schools indicated statistically significant differences in population means.

Additionally, the study was designed to include the four largest elementary schools in one school system, but there were actually nine schools available (seven elementary, one middle, and one high school). In addition, the study did not include special education teachers or other noncertified staff who might otherwise have benefitted from, or took part in, the coaching experience at the schools.

While significant conclusions were reached as a result of this study, it is important to note that those conclusions merely represented the teachers’ perceptions at the schools that were surveyed. Though the results indicated that teachers valued the professional development being offered, these conclusions did not indicate that the professional development was successful in making teachers more effective, or even improved student achievement. A causal research design would have been necessary to make those types of assertions. The primary focus of this research was to evaluate teacher perceptions of coaching as an on-site professional development program. Care should be taken by district and school level administrators to recognize that changes in professional development methods impact teacher perceptions, but does not necessarily mean that teaching effectiveness is impacted in any way.

Limitations due to study instrumentation. The Principal Questionnaire was a limitation of this study. This was a researcher designed instrument and not proven to be
valid or reliable. To control for this limitation, the researcher consulted numerous K-12 administrators and college professors in order to gain insight into any perceived weaknesses of the instrument, and to receive feedback about its overall efficacy as a means to gather principal insight into coach use.

Certain aspects of the APS were also limitations of this study. While the APS itself is a valid and reliable instrument, any survey instrument has inherent limitations. For example, teachers may not have been completely truthful in their answers. They may have had a stake in seeing the research results skewed in a certain direction, and that agenda would have been hidden from the researcher. The teachers may also have answered the APS questions in a way that they believed the researcher expected or wanted, regardless of their own perceptions. Finally, the rating scale, even if defined by the researcher, may have been ambiguous in the minds of the teachers who took the survey. A seven out of ten to one teacher may not have represented the same thing as a seven out of ten to another teacher. The control for these limitations is successful validity and reliability testing.

**Limitations due to analytical methods.** ANOVA studies are particularly sensitive to outliers (Salkind & Green, 2011). However, with the elimination of outliers, there is a danger of obtaining results that do not accurately reflect the reality of the phenomenon that the study examines. Indiscriminant deletion of outliers is not ever appropriate (Orr, Sackett, & DuBois, 1991). In fact, only 8% of researchers even screen their data for outliers (Osborne, Christiansen, & Gunter, 2001). However, Zimmerman
(1994) noted that retention of outliers in the data set increases the error variance and reduces the power of statistical tests. Researchers must use their training and thoughtful consideration in making decisions concerning outliers. Therefore, the decision was made for this study to delete only the cases that contained extreme outliers (+/- 3.29 standard deviations from the mean; Tabachnick & Fidell, 2006) because the main concern was that the findings about the majority of the population were accurate (Tabachnik & Fidell, 2006).

Summary

The primary purpose of this study was to determine if any statistically significant differences existed between schools regarding teachers’ perceptions of academic coaching and the daily use of those coaches in the schools. The research questions in the study addressed how teachers perceived academic coaching effectiveness, the school personnel-academic coach affiliation, and overall coaching quality in light of the daily duties that those coaches performed.

Literature related to the research topic addressed how professional development continues to be a key component in teacher training and development, and how school systems are utilizing various strategies to meet the No Child Left Behind Act’s (2001) requirements for professional growth. Studies on academic coaching found that school systems are embracing the idea of ongoing, on-site professional development programs that provide teacher training in a way shown to be more dynamic and impactful in teacher growth. Joyce and Showers (2002) stated that this form of professional development
includes ongoing modeling in classrooms, practice, appropriate feedback, and reflection.

The literature also is clear that the various types of academic/instructional coaching are increasing in frequency of use in the nations’ schools and are quickly becoming the primary means to achieve the goals of teacher growth and student achievement. However, the literature is not clear on how teachers perceive academic coaching in relation to the duties that the coaches perform every day in the schools.

In order to address this gap in the literature, the researcher administered a principal questionnaire and a teacher survey to in an attempt to detect differences between schools in teacher perceptions of academic coaching. Complete data sets were available for 102 teachers from four different elementary schools in the same school district in Northwest Georgia. An ANOVA test was used to analyze the differences between the teacher perceptions at the four schools on three dependent variables: coaching effectiveness, the school personnel-academic coach affiliation, and overall coaching quality. A post hoc Tukey test was then conducted in order to dig deeper and ascertain which pairs showed the statistically significant difference.

The ANOVA results showed that there were indeed differences in teacher perceptions at the four schools on all three of the study’s dependent variables. For the first dependent variable (teacher perceptions of coaching effectiveness), the Tukey results identified differences between School 1 and Schools 2/3, and School 1 and School 4. For the second dependent variable (teacher perceptions of the school personnel-academic coach affiliation), the Tukey results identified differences between School 1 and Schools
2/3, and School 1 and School 4. For the third dependent variable (teacher perceptions of overall coaching quality), the Tukey results identified differences only between School 1 and Schools 2/3.

These results were then used to evaluate coaching in terms of the types and frequencies of the tasks they perform. It is clear from the findings that coach use does influence teacher perceptions of academic coaching effectiveness, the school personnel-academic coach affiliation, and overall coaching quality. A rewarding coaching system that fosters teacher growth, collegiality, and improved student achievement are certainly possible given the correct atmosphere, administrative support, proper use of coaches, and teacher buy-in to the academic coaching program.
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APPENDIX A: SURVEY RESULTS

Results of APS Survey

Coaching Effectiveness

All items pertaining to coaching effectiveness were organized into a grouping of seventeen questions that covered a wide range of topics from leadership to collaborative planning to pedagogy. The respondents scored the items using a five point rating scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. The data were analyzed using the computer software program Statistical Package for the Social Sciences (SPSS). The table below is the culmination of 17 questions on coaching effectiveness ranked high to low measuring mean (M) and standard deviation (SD).

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.  Academic coaching gets strong support from my principal.</td>
<td>4.31</td>
<td>0.68</td>
</tr>
<tr>
<td>4.   Discussions about effective instructional practices occur frequently at my school.</td>
<td>4.19</td>
<td>0.77</td>
</tr>
<tr>
<td>14.  The leadership at my school is very effective.</td>
<td>4.01</td>
<td>0.79</td>
</tr>
<tr>
<td>3.   Our school schedule provides opportunities for me to collaborate with other teachers.</td>
<td>3.96</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Category</td>
<td>Rating</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>17.</td>
<td>I feel supported by my school’s academic coach.</td>
<td>3.74</td>
</tr>
<tr>
<td>2</td>
<td>Academic coaching has improved instructional practices in my school.</td>
<td>3.66</td>
</tr>
<tr>
<td>5</td>
<td>The principal has clearly communicated the role of the academic coach at my school.</td>
<td>3.66</td>
</tr>
<tr>
<td>7</td>
<td>My school has a highly effective academic coach.</td>
<td>3.61</td>
</tr>
<tr>
<td>1</td>
<td>The academic coaching program is very effective in my school.</td>
<td>3.55</td>
</tr>
<tr>
<td>8</td>
<td>Reversed-Academic coaching is not working well at my school.</td>
<td>3.50</td>
</tr>
<tr>
<td>12</td>
<td>Academic coaching is responsive to my needs as a teacher.</td>
<td>3.49</td>
</tr>
<tr>
<td>10</td>
<td>I am very satisfied with the amount of support I get from our school’s academic coach.</td>
<td>3.47</td>
</tr>
<tr>
<td>13</td>
<td>Academic coaching (IC) has improved my school’s climate.</td>
<td>3.12</td>
</tr>
<tr>
<td>16</td>
<td>Reversed-Academic coaches are used to promote particular instructional methods rather than best practices.</td>
<td>3.03</td>
</tr>
<tr>
<td>9</td>
<td>Academic coaching is one of the best professional development models I have experienced at my school.</td>
<td>2.89</td>
</tr>
<tr>
<td>6</td>
<td>Reversed-I strongly prefer a professional development</td>
<td>2.81</td>
</tr>
</tbody>
</table>
model other than academic coaching.\(^a\)

15. Reversed-The resources used for academic coaching would be better used in another manner.\(^a\)  

\[\begin{array}{ll}
2.75 & 1.10 \\
\end{array}\]

Note. Ratings based on a five-point metric: 1 = *Strongly Disagree* to 5 = *Strongly Agree*.\(^a\) Item was reverse-scored because a response of “Strongly Disagree” was deemed to be the most favorable response.

The table below displays the ratings of coaching effectiveness items sorted by the highest mean rating. These ratings were based on a 5-point scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*). Highest rated items were Item 11, “Academic coaching gets strong support from my principal (\(M = 4.31\)),” and Item 4, “Discussions about effective instructional practices occur frequently at my school (\(M = 4.19\)).” The lowest rated items were Item 15, [Reversed Scored], “The resources used for academic coaching would [not] be better used in another manner (\(M = 2.75\)),” and Item 6, [Reverse Scored], “I strongly [do not] prefer a professional development model other than academic coaching (\(M = 2.81\))” (Table 13).

**Coaching Effect**

Table 14 displays the ratings of coaching effect items sorted by the highest mean rating. These ratings were based on a 5-point scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*). Highest rated items were Item 24, “I have had more access to instructional materials (\(M = 4.01\)),” and Item 25, “Our school’s instructional materials are
more aligned to the school’s instructional priorities (i.e., GPS, Common Core ($M = 3.91$)).” The lowest rated items were Item 18, “I am creating better lesson plans ($M = 3.24$),” and Item 19, “My teaching practice has substantially improved ($M = 3.29$).”

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>24. I have had more access to instructional materials.</td>
<td>4.01</td>
<td>0.81</td>
</tr>
<tr>
<td>25. Our school’s instructional materials are more aligned to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the school’s instructional priorities (i.e., GPS, Common Core)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I have expanded the number of teaching techniques I use.</td>
<td>3.63</td>
<td>1.07</td>
</tr>
<tr>
<td>21. I am doing a better job applying new skills in the classroom</td>
<td>3.53</td>
<td>1.01</td>
</tr>
<tr>
<td>20. My effectiveness as a teacher has improved greatly.</td>
<td>3.36</td>
<td>1.08</td>
</tr>
<tr>
<td>23. I am doing a better job of addressing a wide range of learning</td>
<td>3.31</td>
<td>1.03</td>
</tr>
<tr>
<td>needs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. My teaching practice has substantially improved.</td>
<td>3.29</td>
<td>1.10</td>
</tr>
<tr>
<td>18. I am creating better lesson plans.</td>
<td>3.24</td>
<td>1.15</td>
</tr>
</tbody>
</table>
Note. Ratings based on a five-point metric: 1 = Strongly Disagree to 5 = Strongly Agree.

Teacher/Coach Relationship

Table 15 displays the ratings for teacher/coach relationship items sorted by the lowest mean. These ratings were based on a 4-point metric (1 = Frequently to 4 = Never). The lowest rated score (most frequent) was Item 30, “IC helping to obtain instructional information or materials” ($M = 1.75$) while the highest rated item (least frequent) was Item 28, “IC demonstration of lessons” ($M = 2.63$).

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. IC helping to obtain instructional information or materials</td>
<td>1.75</td>
<td>0.80</td>
</tr>
<tr>
<td>29. IC coordination of professional development sessions</td>
<td>1.88</td>
<td>0.78</td>
</tr>
<tr>
<td>27. Academic coach facilitation of collaboration groups</td>
<td>1.99</td>
<td>0.96</td>
</tr>
<tr>
<td>26. One-on-one academic coaching (IC)</td>
<td>2.19</td>
<td>0.93</td>
</tr>
<tr>
<td>28. IC demonstration of lessons</td>
<td>2.63</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Note. Ratings based on a four-point metric: 1 = Frequently to 5 = I Don’t Know.
**Staff/Coach Relationship**

Table 16 displays the ratings for staff/coach relationship items sorted by the lowest mean. These ratings were based on a 4-point metric (1 = *Frequently* to 4 = *Never*). The lowest rated score (most frequent) was Item 35, “Coordinated/participated in benchmark testing” (*M* = 1.53) while the highest rated item (least frequent) was Item 34, “Conducted teacher evaluations” (*M* = 2.75).

<table>
<thead>
<tr>
<th>Item</th>
<th><em>M</em></th>
<th><em>SD</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>35. Coordinated/participated in benchmark testing</td>
<td>1.53</td>
<td>0.73</td>
</tr>
<tr>
<td>31. Facilitated professional development activities</td>
<td>1.68</td>
<td>0.69</td>
</tr>
<tr>
<td>37. Assisted teachers with implementing standards</td>
<td>1.84</td>
<td>0.83</td>
</tr>
<tr>
<td>32. Assisted teacher collaboration groups</td>
<td>1.91</td>
<td>0.90</td>
</tr>
<tr>
<td>33. Coached teachers in instructional techniques</td>
<td>1.97</td>
<td>0.92</td>
</tr>
<tr>
<td>36. Mentored teachers</td>
<td>2.00</td>
<td>0.92</td>
</tr>
<tr>
<td>38. Provided interventions to students in need</td>
<td>2.22</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>Conducted teacher evaluations</td>
<td>2.75</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------</td>
<td>------</td>
</tr>
</tbody>
</table>

*Note.* Ratings based on a four-point metric: 1 = *Frequently* to 5 = *I Don’t Know.*
Dear Dr. Cooper, Superintendent,

I am currently a doctoral candidate in Educational Leadership – Teaching and Learning at Liberty University in Lynchburg, Virginia, and I have been employed in the NorthFace City Schools system for 15 years as both teacher and administrator. Recently, you and I discussed my research design for my dissertation in a meeting held at your office. In that discussion, we spoke of the design and survey I was planning to use. The overall purpose and goal of my dissertation is to gain a perspective on the impact of academic coaches and the benefit they have on NorthFace City Schools.

I propose to survey teachers from the largest four elementary schools within the system regarding their overall satisfaction with the helpfulness of coaches and the impact coaches have had on their personal pedagogy since they (the coaches) have been employed with the system. I respectfully request your permission to contact the principals of School A, School B, School C and School D regarding my study. Additionally, I would like your permission to have the teachers of those schools complete a short survey to satisfy the data collection process of my study. It is my intention that this survey will be completed anonymously early this fall during faculty meetings at each school.

Upon receiving your permission, I can proceed with seeking final approval from my committee and the Liberty University Institutional Review Board (IRB). As I indicated to you in our meeting, the anonymity of NorthFace City Schools will be maintained, as I will make a general reference to the system as “a small city school system in northwest Georgia.”

Thank you for your consideration. If you have any questions, please feel free to contact me by email at pwood@liberty.edu.

Sincerely,
Phillip R. Wood
Doctoral Candidate
July 11, 2011

Dr. David Holder
Dissertation Chairperson
School of Education
Liberty University
1971 University Boulevard
Lynchburg, Virginia 24502

Dear Dr. Holder:

It is with pleasure that I write to you granting permission for Mr. Phillip R. Wood to conduct his doctoral research study within our school system. Mr. Wood is an employee with our system and we want to support him in any way possible in his academic and research efforts.

Mr. Wood has shared with me the focus of his research on coaches and the survey he is planning to use. It seems to be an honest evaluation of the work we do here. We look forward to the results of his study.

Please do not hesitate to contact me should you need further information.

Sincerely,

[signature]

Gayland Cooper
Superintendent

GC:tlp
APPENDIX D: IRB PERMISSION

The Graduate School at Liberty University

August 25, 2011

Phillip R. Wood
IRB Exemption 151.002511: Understanding Teachers' Perceptions of Academic Coaches as an On-Site Professional Development Tool

Dear Phillip,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and that no further IRB oversight is required unless your data collection extends past the one year approval granted by this memo, in which case you would submit the annual review form attached to your approval email.

Your study falls under exemption category 46.101 (b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(3) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
(4) Any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a new application to the IRB and referencing the above IRB Exemption number.

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

Sincerely,

[Signature]

Fernando Garzon, Psy.D.
IRB Chair, Associate Professor
Center for Counseling & Family Studies

Liberty University
40 Years of Training Champions for Christ: 1971-2011
APPENDIX E: INFORMED CONSENT

Consent Form

INFORMED CONSENT FORM

Understanding Teachers’ Perceptions of Academic Coaches as an On-Site Professional Development Tool

APS Academic Coaching Program Survey for Teachers

Phillip R. Wood
Liberty University
School of Education

You are invited to be in a research study of Academic Coaches in our school system. You were selected as a possible participant because coaches have been used as a means of ongoing staff development at your school for years. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Phillip R. Wood, Education Department
Background Information

The purpose of this study is: to understand teacher perceptions of Academic Coaching and to evaluate their effectiveness on changing teacher pedagogy.

Procedures:

If you agree to be in this study, we would ask you to complete the following survey honestly and based on your own personal perceptions of Academic Coaching and its impact on you.

Risks and Benefits of being in the Study

This research is minimal risk and is no greater than everyday activities. There is no risk to the subjects completing the survey. Survey participation is voluntary and anonymous. Participation in the survey has minimal risk. No completed and returned surveys will have names or otherwise identifiable information. Subjects and their respective school/system names will not be stated. Pseudonyms will be used instead.

There are no direct or immediate benefits for the subject of the study, at least in a sense that they are going to gain from answering the surveys. There are possible benefits for teachers in the future staff development opportunities. It is generally understood that if change is to take place, people have to be encouraged and motivated to do it. Teachers are no exception. In fact, they are typically more motivated by their own perceptions than anything.
Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Phillip R. Wood. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at pwood@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502 or email at fgarzon@liberty.edu.

You will be given a copy of this information to keep for your records.
Statement of Consent:

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature: __________________________________________ Date: __________________

Signature of Investigator: ____________________________ Date: __________________
APPENDIX F: PERMISSION TO USE APS SURVEY

From: Clay, Phyllis [removed]
Sent: Wednesday, July 27, 2011 5:47 PM
To: Wood, Phillip
Cc: Stanfield, Barbara A
Subject: RE: Instructional Coaches Survey

Phil, Attached is a survey that APS has used. If you use it or adapt it, please credit the Albuquerque Public Schools. I was not involved in the survey, so if you have additional questions, you may wish to contact Al Dunevin or Debra Heath, my colleagues on the Research and Evaluation team.

Hope this helps,
Phyllis

Phyllis L. Clay, Ph.D.
Coordinator, Research and Evaluation
Strategic Data Project Follow
Albuquerque Public Schools
6400 Uptown Blvd., Ste. 404E
Albuquerque, NM 87109

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From: Wood, Phillip [removed]
Sent: Tuesday, July 26, 2011 2:07 PM
To: Clay, Phyllis
Cc: Stanfield, Barbara A
Subject: Instructional Coaches Survey

Good Afternoon Ladies,

I am currently completing my dissertation at Liberty University. My study is on the effectiveness of Instructional/Academic Coaches on teacher pedagogy. We have used coaches for years here in RCS & have never really evaluated them.

In discussions with my committee, they wanted me to try to find a survey already in use (hopefully that has been through some kind of validation process). I came across your website and thought I would see what you do in your system to evaluate instructional leaders.

If you have any leads on a good survey or might provide some insight, I would be very appreciative.

Regards,
Phil Wood