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A PROGRAM EVALUATION OF A LEADERSHIP ACADEMY FOR SCHOOL PRINCIPALS

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A Dissertation Presented to

The Faculty and Staff of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

By

Kristi E. Wagner

May 2014

A PROGRAM EVALUATION OF A LEADERSHIP ACADEMY FOR SCHOOL PRINCIPALS

by

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Dedication

Behind every finished dissertation is a team. Without a doubt, I owe a debt of gratitude to a team that includes numerous friends, colleagues, and family members. I am fortunate that my team formed early in life, with two parents who instilled in me the belief that I can do anything fueled by hard work and perseverance. Chuck, my husband and co-captain, has influenced me personally and professionally in infinite ways. Simply standing beside him each day inspires me to be a better woman, wife, mother, friend, and educator. Our two additional team members, Hayden and Harper, merit my special recognition. Hayden has opened my mind and heart in ways that I didn't know were possible; his charm and world perspective leave an indelible impression on all he encounters...and my darling Harper, who now has empirical evidence that a lady can indeed be a doctor.

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Abstract

This program evaluation focused on mid-range outcomes of a leadership academy for school principals. The mixed-methods evaluation included interviews, principals' instructional observation database, and teacher surveys. The Principal Academy program was designed to build principals' knowledge of high-yield instructional strategies (Hattie, 2009), expertise with tools to collect classroom data that provide immediate feedback to teachers, and facilitate collaborative observation conferences to engage teachers in professional learning to improve classroom instructional practices. Participants in the study included Academy leaders and directors, principals, and identified teachers. Interviews revealed evidence of principals' increased knowledge of intended instructional strategies and targeted professional learning for teachers associated with the instructional strategies. During the Academy, principals' accuracy and rate of instructional observations increased. Teachers reporting higher frequency of instructional interactions with principals also reported higher degrees of instructional change. A positive correlation was found between teachers' perceptions of principal support and instructional change, and perceptions of principal support related to instruction were higher with increased frequency of principal interactions. Teachers also reported that principal feedback, supportive behaviors, modeling, and engagement had a positive impact on their instruction. Implications for practice include ensuring that principals have access to high quality professional development with fellow principals targeted toward impacting teachers' classroom practices. Recommendations include differentiation by school grade configuration, as well as incorporating larger teams of secondary principals.

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A Program Evaluation of a Leadership Academy for School Principals

CHAPTER I

Background

The school principalship requires a complex and diverse set of skills that span a variety of responsibilities, including fiscal and human resource management, student safety, student achievement accountability, and facility maintenance. Increasing public scrutiny and school performance expectations, as well as decreasing public support for public schools, have negatively impacted the principalship (Goodwin, Cunningham & Eagle, 2005); more than half of the nation's superintendents report a shortage of high-quality applicants for principal positions (Bodger, 2011). Although the "need to develop principals as master artisans is as dire as it is immediate" (Hall, 2008, p. 449), a common—but incorrect—belief among many school reformists is that recruiting high-quality candidates will increase both principal retention and student achievement (Darling-Hammond, LaPointe, Meyerson, & Orr, 2010). However, such equations for principal effectiveness and student achievement are neither this simplistic nor idyllic.

The term instructional leader emerged in the 1980s as a result of continued legislation and reform at the national level (Goodwin et al., 2005). Publication of the *Edmond's Report* and *A Nation at Risk* marked the beginning of the accountability era in schools, and thus school leadership (Hallinger, 2005). The Federal No Child Left Behind Act of 2001 (NCLB, 2001) and its academic progress mandates firmly shifted the

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principal's role from school manager to instructional leader (Goodwin et al., 2005). Principals no longer are merely school managers; rather, effective principals understand the dynamics of complicated school organizations and work in ways to promote positive environments that impact school performance (Hoy, 2012).

For the past two decades, educational leadership research has focused on principals as instructional leaders whose primary responsibility is the process of teaching and learning (Hoy & Miskel, 2013). Effective principals are cornerstones of high-quality instruction and have a marked influence on achievement for all students (Darling-Hammond et al., 2010). As instructional leaders, principals are responsible for creating a school organizational culture that promotes student success by supporting teachers and effective teaching behaviors (Alig-Mielcarek & Hoy, 2005; McGuigan & Hoy 2006).

The established link between school culture and student achievement underscores the importance of the principal's instructional leadership skills. The principal's ability to focus stakeholders and resources on the tasks of teaching and learning is paramount to a school culture that values and encourages academic excellence (Grissom & Harrington, 2010; Hoy, 2012; Hoy & Miskel, 2013). Four meta-analyses conducted from 1998-2005 on school leadership practices highlighted the impact of school leadership on student achievement; principals clearly play an essential role in improved student learning (Hallinger & Heck, 1996; Leithwood, Louis, Anderson, and Wahlstrom, 2004; Marzano, Waters, & McNulty, 2005; Robinson, Lloyd, & Rowe, 2008).

University administrator certification programs traditionally have provided foundations in theory, research, and internships (Hall, 2008); however, despite university preparation and endorsement, principals still enter their professional roles often with limited ongoing support designed specifically to further develop and refine their instructional leadership skills and practices (Darling-Hammond et al., 2010). The No Child Left Behind Act (NCLB) makes no accommodations for school leadership experience: even principals in their first year of school leadership experience are held to the same expectations for school performance as more experienced principals (NCLB, 2001).

There is an absence of cohesive, intensive, on-the-job support for the professional development of principals despite the increasing accountability expectations for schools. Sustained, job-embedded, and focused professional learning for principals designed to enhance their instructional leadership practices should be a priority for school districts looking to improve student outcomes (Darling-Hammond et al., 2010). Developing strong instructional leadership skills requires ongoing professional learning and support for principals. The myriad of responsibilities, contextual understandings, and leadership skills necessary to impact student outcomes can easily overwhelm school leaders. Furthermore, with high-quality principals in short supply, school organizations must provide strong, targeted support for principals professionals to fully develop their instructional leadership potential.

Leadership programs, academies, and workshops that target instructional leadership skills are emerging with increasing frequency (Darling-Hammond et al., 2010; Peterson, 2002). In-service, or "career staged," programs vary widely in the degree and level of instructional leadership support they provide and often lack a consistent and systematic approach to professional learning. In addition, professional development programs require significant financial and human resources from both program developers and participants, and the lack of evaluative data on the effectiveness of such initiatives impedes informed decision-making (Darling-Hammond et al., 2010; Peterson, 2002). School districts and program developers with limited resources must consider the emerging research on effective program elements in order to purposefully develop a program that includes components with demonstrated outcomes. School districts and program developers with limited resources must consider the emerging research on effective program elements in order to purposefully develop a program that includes components with demonstrated outcomes.

Program Theory

The premise of any high quality professional development effort is the acquisition of new knowledge and skills in order to increase effectiveness (Guskey, 2000; Spillane, Healey, & Mesler-Parise, 2009). As a result of quality professional development, participants' knowledge increases; as the new learning is integrated and connected to existing knowledge, professional practices should reflect the application of newly acquired knowledge and skills, ultimately increasing effectiveness (Guskey, 2000; Spillane et al., 2009). Although more typically applied to teachers, a similar pathway of professional learning is applicable to principals who engage in learning and applying new leadership skills to positively impact teaching and learning in their schools.

Principals who operate as instructional leaders aim to increase instructional effectiveness within their schools through interactions with teachers in a formative process of supervision (Alig-Mielcarek & Hoy, 2005; Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2008; Supovitz, Sirinides, & May, 2010). Supervision of instruction provides teachers with objective, data driven feedback to

improve their instructional practices (Alig-Mielcarek & Hoy, 2005; DiPaola & Hoy, 2008). Supervision of instruction requires principals to provide high-leverage feedback on classroom performance, i.e. purposeful, classroom evidence-based feedback, designed to initiate reflection, identify areas for improvement, and facilitate changes in teachers' instructional practices (Supovitz & Buckley, 2008). Over time, as teachers change their classroom practices and become more effective, principals refine their leadership focus and adjust feedback, although not measured within this program, should ultimately impact student achievement (Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2008; Supovitz et al., 2010). This proposed pathway to increased instructional effectiveness is demonstrated in Figure 1.

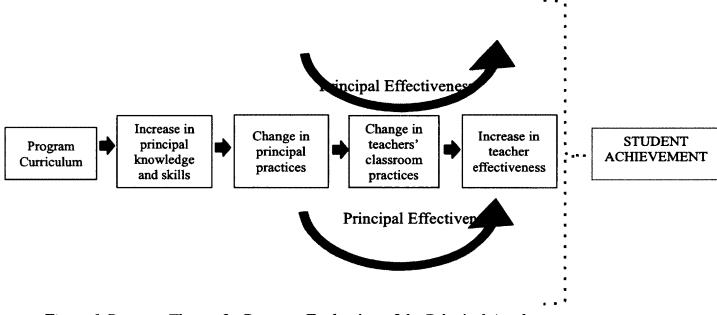


Figure 1. Program Theory for Program Evaluation of the Principal Academy

The core of the Principal Academy leadership program being evaluated included a combination of professional learning activities designed to build principals' knowledge of

high-yield instructional strategies (Hattie, 2009), expertise with tools to collect classroom data associated with those strategies, and confidence to facilitate collaborative and reflective pre- and post-observation conferences to engage teachers in their own professional learning. Supervision of instruction not only requires principals to have content knowledge, but also pedagogical content expertise coupled with an understanding of how teachers operate as adult learners (Stein & Nelson, 2003). The concept of leadership content knowledge includes content knowledge, pedagogy, and skills related to teaching teachers (Stein & Nelson, 2003).

Leadership content knowledge in the Principal Academy is viewed through the lens of instructional leadership (Stein & Nelson, 2003). The dimensions of instructional leadership embedded within the Principal Academy are further outlined in *Figure 2*, Logic Model: The Principal Academy. Academy activities, or processes, target specific instructional leadership skills and behaviors, such as those described in Alig-Mielcarek and Hoy's (2005) model of instructional leadership outlined in Table 1. The Principal Academy maintains a specific focus on supervision of instruction as the means to developing school-wide goals and associated professional development for teachers, resulting in a positive impact on instruction and student learning.

Table 1

Model of Instructional Leadership

	Instructional Leadership	
Defines and Communicates Shared Goals	Monitors and Provides Feedback on the Teaching and Learning Process	Promotes School-Wide Professional Development
This means the leader works collaboratively with staff to define, communicate, and use shared goals of the school. Goals are used in making organizational decisions, aligning instructional practice, and providing targets for progress. These goals focus the staff around a common mission to achieve.	This dimension describes the activities of an instructional leader around the academic curriculum. These activities include being visible throughout the school; talking with students and teachers; providing feedback to teachers, students, and community on academic performances; and ensuring that the instructional time of the school is not interrupted.	Encompassed in this dimension are behaviors that are consistent with life- long learning. The instructional leader encourages teachers to learn more about student achievement through data analysis, collects data for teacher reflections, helps teachers identify areas for growth, provides professional development opportunities that are aligned to teacher needs and school goals, and provides professional literature and resources to teachers.

Program Description

The leadership academy, named The Principal Academy for the purposes of this study, is housed within a university's School of Education's Leadership Center. The Center is a partnership between the college and 27 neighboring school districts. The Principal Academy receives funding from several grants, as well as member school districts. Participating principals are identified from two different sources. Member school districts may select one principal or assistant principal to attend the program each year. Principals or assistant principals who complete the program may be nominated or may self-select to continue in the program the following year. In addition, the Virginia State Department of Education (VDOE) Office of School Improvement (OSI) also identifies principals from low achieving schools and mandates their attendance to the academy.

The Principal Academy is a yearlong professional development program that includes a three-day summer institute and follow-up professional development days during the school year. Principals are expected to participate in a series of job-embedded activities between the on-site professional development days. Those job-embedded activities include: collaborating with academy colleagues and mentors in making classroom observations in each others' schools, facilitating professional development and book study with their faculty, conducting observations using electronic data collection tools, and engaging in action research to demonstrate the impact of their interventions.

The Principal Academy originated in 2011 in response to feedback from the Center's Advisory Board. Consortium superintendents expressed a need for professional development and support for new administrators within their districts. The Advisory Board approved the grant proposals in the spring of 2012, and the first Principal Academy cohort began in July 2012. The Center received additional grant funds in 2013 to continue the Principal Academy and expand the program to include continuing principals as mentors.

The Principal Academy professional learning focuses on building instructional leadership. Learning modules focus on understanding and identifying high-yield instructional strategies (Hattie, 2009), observation tools to collect data, pre/post observation conferencing, and professional goal setting. Principals utilize an electronic database to conduct classroom observations and collect data on high-yield instructional strategies (Hattie, 2009). The electronic observation tools allow principals to provide immediate, data-driven, focused instructional feedback to teachers. Observation protocols are tightly aligned with indicators of high-yield instructional strategies, which are the foundation of the Academy. Principals focus on providing consistent, timely, and objective feedback to teachers that is related to the high-yield instructional strategies (Hattie, 2009). Program goals include: creating a clinical mentor principal program; building a professional network of principals in practice; developing instructional leadership capacity by focusing the work of principals on formative instructional observations, data collection, and feedback to teachers in order to improve instruction, thereby improve student achievement. These program goals are outlined in Figure 2, *The Principal Academy Logic Model* located at the end of Chapter 1. Logic models are a tool used to outline a program and its essential components (Frechtling, 2007). Logic models clarify intended outcomes and the underlying theory associated with the series of activities designed to bring about change (Frechtling, 2007).

Context

The Principal Academy resides in Virginia, which is one of the 45 states that have adopted the Interstate School Leaders Licensure Consortium (ISLLC) standards. The ISLLC standards articulate the knowledge, skills, and dispositions necessary for school administrators to be effective leaders. The standards are comprehensive and touch all aspects of school leadership, including instructional leadership. For example, the ISLLC standards require that school administrators demonstrate the ability to create a shared vision that promotes student and teacher learning and growth (ISLLC, 2008). The widespread adoption of these standards influences both pre-service and in-service programs for school by emphasizing instructional leadership to promote better teaching (ISLLC, 2008). At the state level, newly adopted principal evaluation standards that began July 1, 2013 have an increased emphasis on instructional leadership and measurable student academic growth. In addition, the Department of Education's Uniform Performance Standards for Teachers that became effective in July 2012, incorporate a parallel emphasis and expectation for student growth outcomes, which comprise 40% of teachers' overall evaluation rating (VDOE, 2012).

Several local factors may also have a contextual influence on The Principal Academy and its outcomes. The Principal Academy is based at a university that has a principal licensure program. For some of the participants who happen to be graduates of the university the culture of the institution and its philosophy are familiar, therefore the program may be perceived as a defacto extension of their certification training. Principals may be required to attend the academy either by the OSI or their superintendent. Neither the evaluator nor program directors have influence over which principals are required by the OSI to attend during the current year. The principals recommended by VDOE OSI and consortium-nominated principals are heterogeneously grouped and are not outwardly identifiable to one another. It is important to note that participating principals operate simultaneously within multiple contexts, which may influence program processes and outcomes. Each principal is a leader within a school context and that school is a component of a school district, which has an organizational context. Each of the participating principals brings a unique combination of contextual influences to the academy.

Program Evaluation Model

Decision-oriented evaluation approaches emphasize the importance of evaluative information in order to make informed decisions (Fitzpatrick, Sanders, & Worthen, 2011). Named for its component parts of context, input, process, and product, the CIPP Model of program evaluation is often utilized in the decision-oriented approach and defines program evaluation "as a process of delineating, obtaining, reporting, and applying descriptive and judgmental information about some object's merit, worth, probity, and significance in order to guide decision-making, support accountability, disseminate effective practices, and increase understanding of the involved phenomena" (Stufflebeam& Shinkfield, 2007, p. 326). The focus of the CIPP Model is on improvement, providing support for continued refinement of a program or, in some cases, the termination of ineffective programs (Stufflebeam & Shinkfield, 2007).

The CIPP Model serves as a framework for conducting formative and/or summative evaluations (Stufflebeam & Shinkfield, 2007). In the CIPP Model, the evaluation may focus on one component or multiple components of a program, be formative, summative, or both, and deployed with projects of all sizes by both internal and external evaluators. Product evaluations "identify and assess outcomes—intended and unintended, short term and long term—to help a staff keep an enterprise focused on achieving important outcomes and ultimately help the broader group of users gauge the effort's success in meeting targeted needs" (Stufflebeam & Shinkfield, 2007, p. 326). The focus of this evaluation study is to gather evidence on mid-term outcomes of the Principal Academy as shown previously in Figure 2. By definition, an evaluation that focuses on outcomes is summative in nature (Fitzpatrick et al., 2011).

Evaluation Questions

- 1. To what extent have principals acquired the instructional leadership knowledge and skills necessary to change their instructional supervision?
- 2. To what extent do principals engage in instructional leadership practices?
- 3. To what extent do principals' instructional leadership behaviors and practices impact teachers' instructional practices?

Definition of Terms

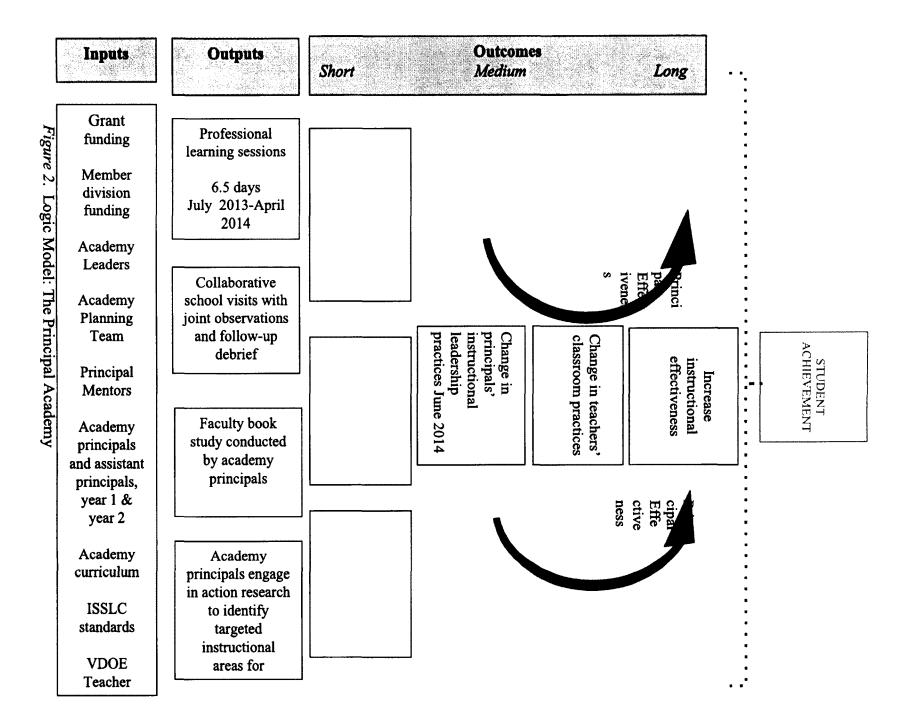
High-yield instructional strategies- Instructional strategies identified in John Hattie's

(2008) meta-analysis as having a higher than average impact on student achievement.

- Instructional leadership-A type of leadership specific to school leaders focused on the processes of teaching and learning.
- Logic model-A visual representation of a program, its components and objectives, often used in program planning and evaluation.

Professional development- A planned set of intentional processes designed to increase the knowledge, skills, and dispositions of participants designed to change their professional behavior in order to increase their effectiveness (Guskey, 2003). This term is often used interchangeably with professional learning.

Supervision of instruction: "the collaborative and informal process between principals and teachers aimed at improving teaching and learning in the classroom" (DiPaola & Hoy, 2008, p. 65).



Chapter 2

Literature Review

In the field of education, it is generally believed that high-quality professional development will improve instruction (Goldring, Huff, Spillane, & Barnes, 2009). Although education research has typically focused on teacher professional development to improve instructional practices and student outcomes, "professional development is most effective when there are strong leaders" (Moore, Kochan, Kraska, & Reames, 2011, p. 75). School leaders who focus on the processes of teaching and learning, referred to as instructional leaders, positively impact student outcomes via teacher classroom practices (Sheppard, 1996; Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2005; Supovitz et al., 2009). Following this theory of action, principals' instructional leadership expertise can be improved through high-quality professional development specifically designed for school leaders.

Instructional Leadership

A review of the literature uncovered two relevant strands of instructional leadership research. The first strand of research identifies models of instructional leadership that attempt to define, clarify, and it some cases, measure the construct and dimensions of instructional leadership itself (Hallinger & Murphy, 1985; Murphy, 1990; Weber, 1996; Alig-Mielcarek & Hoy, 2005). A second strand of research seeks to clarify effective instructional leadership practices that school leaders employ, as well as the impact of those practices on student and teacher outcomes (Blasé & Blasé, 1999; Hallinger & Heck, 1996; Leithwood et al., 2004; Marzano et al., 2005; May & Supovitz, 2011; Robinson et al, 2008; Sheppard, 1996; Supotvitz & Buckley, 2005; Supovitz et al., 2010). Although there is no universal, formal definition of instructional leadership, several leading models of instructional leadership have emerged that are constructed on a foundation of leadership-for-learning. Simply defined by Hallinger (2011), instructional leadership is leadership in a school context requiring a special focus on teaching, learning, and student outcomes.

The literature suggests further that the key to increasing student achievement is improving the instructional effectiveness of classroom teachers; a principal's impact on student outcomes, however, is indirect through teachers' instructional practices and behaviors (Blasé & Blasé, 1999; Hallinger & Heck, 1996, Leithwood et al., 2004; Sheppard, 1996; Supovitz & Buckley, 2005; May & Supovitz, 2011). The essence of instructional leadership itself suggests that the more focused a principal's work is on the processes of teaching and learning, then the more positive the influence on student outcomes (Robinson et al., 2008). Instructional leadership, therefore, is the *process* by which principals promote teacher instructional improvement and effectiveness (Supovitz & Buckley, 2008).

Models of Instructional Leadership

There is an abundance of literature on instructional leadership, yet no universal definition, model, or measurement tools exist. Several models have emerged that demonstrate more prominence due not only to their abundant use within educational research, but also because of the more valid and reliable outcome measures that have resulted.

Based on an examination of elementary school principals' instructional management behaviors, Hallinger and Murphy (1985) developed an instructional leadership model and associated measurement instrument—the Principal Instructional Management Rating Scale (PIMRS)—that outlines three dimensions of instructional leadership: defining the school mission, managing the instructional program, and promoting school climate. These three dimensions of instructional leadership each contain subcategories such as communicating school goals, supervising and evaluating instruction, and protecting instructional time (Hallinger & Murphy, 1985).

Since its development, the PIMRS instrument has been used to measure principal leadership in more than 110 empirical studies on instructional leadership from 1983-2005 and results of this research demonstrate that the main components of the initial 1985 model remained largely unchanged. The longevity and widespread use of this model in subsequent studies establishes its significance in the field of educational leadership (Hallinger, 2005).

Murphy (1990) was intrigued by the discrepancy between the instructional leadership research and the actual observed practices of school principals.

"Probably the most obvious conclusion that one reaches in reading the instructional research literature is that there is a considerable contrast between descriptions of the preferred role for school principals in the areas of curriculum and instruction and

chronicles of how these executives actually behave" (Murphy, 1990, p. 164).

This discrepancy was the catalyst for his review of the studies from nine related areas ranging from school effectiveness to school reform and he sought to use the research results to further develop the Hallinger and Murphy model (Murphy, 1990). Essentially, Murphy (1990) refined the dimension of "promoting school climate" by separating it into two categories: student-learning climate and work climate. The four dimensions are further divided into sixteen major functions, such as framing and communicating school goals, maintaining high visibility, and promoting collaboration (Murphy, 1990).

Similar to the first two models, James Weber (1996) describes five essential behaviors of instructional leaders: "defining the school's mission, managing curriculum and instruction, promoting a positive learning climate, observing and giving feedback to teachers, and assessing the instructional program" (p. 192). Weber's work emphasized school and community contexts as important influences on instructional leadership behaviors of principals. Both internal and external factors of the school and community influence instructional leadership behaviors; the leader influences the instructional environment of the school just as the leader is influenced by the school context (Weber, 1996).

Using their synthesis of the three leading models of instructional leadership, Alig-Mielcarek and Hoy (2005) consolidated the responsibilities of an instructional leader into three primary dimensions, as previously summarized in Chapter 1, Table 1. Their study aimed to develop, test, and revise their model and a measurement instrument of instructional leadership (Alig-Mielcarek & Hoy, 2005). Essentially, effective instructional leaders create a school culture focused on high quality teaching and learning and ensure that teachers have the support to effectively meet the needs of students (Alig-Mielcarek & Hoy, 2005).

The Alig-Mielcarek & Hoy (2005) Instructional Leadership Inventory (ILI) contains 23 three items, described on a Likert scale from 0 (not at all) to 4 (frequently if not always). The ILI was piloted, revised, and tested to ensure validity and reliability. Ultimately, the ILI sample study included 146 elementary schools and more than 4,000 teachers and yielded high reliabilities among the factors, with alphas ranging from .88-.97 (Alig-Mielcarek & Hoy, 2005). The extensive sample testing used to develop the instrument and its high validity and reliability make it a good choice for measuring instructional leadership.

Instructional Leadership Practices

Instructional leadership is a set of deliberate behaviors and practices that are tightly aligned to student outcomes (Alig-Mielcarek & Hoy, 2005; Robinson et al., 2008). Instructional leadership requires leadership content knowledge described by Stein and Nelson (2003) as "that knowledge of subjects and how students learn them that is used by administrators when they function as instructional leaders" (p. 445). Instructional leadership requires content and pedagogical knowledge, as well as knowledge and understanding of how teachers learn (Stein & Nelson, 2003).

Defines and communicates shared goals. Effective instructional leaders establish a clear vision or direction for the school and develop specific goals that are *shared and valued* by stakeholders (Alig-Mielcarek & Hoy, 2005; Hallinger & Murphy, 1985; Murphy, 1990; Robinson et al., 2008; Weber, 1996). Robinson and her colleagues (2008) describe this practice as the "determined pursuit of clear goals, which are understood by and attractive to those who pursue them" (p. 666). Instructional leaders must reflect and recognize their own leadership values and the existing values within their school and community before developing a shared vision and goals. Achieving shared goals and vision is based on the collaboration and cooperation of others towards that common goal; therefore, the values must shared among stakeholders (Hallinger, 2011). Instructional leaders must have the ability to analyze and interpret school performance data to ensure goals are relevant, understood, and translated into classroom practices that result in improved student outcomes (Alig-Mielcarek & Hoy, 2005; Robinson, et al., 2008). Goals should be clearly defined, academically focused, challenging, and attainable. Instructional leaders must communicate these goals, monitor progress,

and provide ongoing feedback in order impact daily classroom practices. Weber (1996) describes common school goals as "the glue that binds the system together" (p. 197).

Related to goal setting is the associated management of resources and distractions, which is necessary to reinforce priorities and maintain the focus on the goals (Alig-Mielcarek & Hoy, 2005; Robinson, et al., 2008). The Robinson et al. (2008) meta-analysis (2008) ranks creating a vision and goals as the second most significant instructional leadership skill related to student outcomes. This outcome supports Hallinger's (2011) description of this fundamental instructional leadership skill as the "ability to articulate a learning focused vision that is shared by others and to set clear goals creates a base for all other leadership strategies and actions" (p. 137).

Monitors and provides feedback on the teaching and learning process. Instructional leaders foster an academic school climate focused on teaching and learning, which includes both coordinating and evaluating the curricula and instructional program (Robinson et al., 2008). Instructional leaders must monitor how school goals are translated into classroom instruction (Hallinger & Murphy, 1985; Murphy, 1990).

Hallinger (2011) describes a monitoring the instructional program as a "persistent focus on improving conditions for learning and creating coherence in values and action across classrooms day in and day out" (p. 137). Consistent classroom observations help to ensure a number of essential school performance indicators: lessons and curriculum aligned with state and district standards, as well as district and school-wide vision and goals; the utilization of highquality instructional strategies; and the consistent use of data to guide instruction and monitor student progress (Alig-Mielcarek & Hoy, 2005; Hallinger & Murphy, 1985; Murphy, 1990). The meta-analysis conducted by Robinson and her colleagues (2008) found that leaders in high performing schools "work directly with teachers to plan, coordinate, and evaluate teachers and teaching" (p. 663). As a result, teachers are more likely to value and use this feedback to inform and improve their instruction (Robinson et al., 2010). Supervision of instruction requires more than symbolic classroom observations (Murphy, 1990). Principals must recognize high quality instruction that is research-based and aligned to instructional standards (DiPaola & Hoy, 2008; Stein & Nelson, 2003). Instructional leaders must have the ability to identify, describe, and model high quality instructional strategies which requires a current and in-depth understanding of educational research. For example, Hattie's (2009) synthesis of more than 800 meta-analyses on student learning is a pivotal piece of research for leaders who are responsible for supervising instruction. Instructional strategies, and encourage the skillful and appropriate use of these strategies to positively impact student learning via effective classroom instruction (DiPaola & Hoy, 2008; Hattie, 2009; Stein &

Spillane, 2005).

Promotes school-wide professional development. Instructional leaders are actively involved in professional learning as leaders *and* learners (Hallinger & Murphy, 1985; Robinson et al., 2008; Stein & Nelson, 2003). These behaviors require knowledge of effective instructional strategies, curricula, and observation of instruction (Weber, 1996). In addition, the ability to encourage teachers to use high-yield instructional strategies requires an understanding of adult learning, modeling, and differentiated strategies for a variety of teacher learners (DiPaola & Hoy, 2008; Stein & Nelson, 2003). Promoting and encouraging professional development is not enough; active participation of the school administrators in professional development is necessary in order for them to serve as credible resources and assist teachers in translating the professional learning into classroom practice (Robinson et al., 2008). Robinson and her colleagues (2008) found higher student achievement outcomes in schools where teachers reported that their leaders were active participants in professional learning. Across all seventeen studies, researchers controlled for student socioeconomic status and demonstrated a resulting effect size of .84 between this leadership practice and student outcomes. Such powerful findings have significant implications for school leadership practices (Robinson et al., 2008).

Professional learning should be driven by school goals, instructional needs, and student learning outcomes (Alig-Mielcarek & Hoy, 2005; Hallinger & Murphy, 1985; Murphy, 1990). Leaders must be skilled at identifying needs, procuring and protecting resources, and collaborating with and motivating staff in order to promote professional learning that impacts student performance (Alig-Mielcarek & Hoy, 2005; Hallinger & Murphy, 1985; Murphy, 1990). Creating a school culture focused on continuous improvement through professional learning is a significant component of instructional leadership (Hallinger & Murphy, 1985; Robinson et al., 2008).

Link to Student Outcomes

Several comprehensive literature reviews, or meta-analyses, have attempted to link instructional leadership to student outcomes. Hallinger and Heck (1996) reviewed 43 empirical studies of the impact of school principals on school effectiveness. The study concluded that the impact of the principal is measurable, albeit *indirect* by means of school climate, culture, and organization (Hallinger & Heck, 1996). School mission and goals, high academic expectations, and other school factors are instructional leadership behaviors that impact student outcomes via teachers' classroom instruction (Hallinger & Heck, 1996).

Leithwood, Seashore, Louis, Anderson, and Wahlstrom (2004) completed a holistic review of the educational research literature on school leadership and student outcomes and concluded; "leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school" (p. 5). The study revealed that leadership impact is generally underestimated and the combination of direct and indirect effects accounts for approximately 25% of total school effectiveness (Leithwood et al., 2004).

The Marzano, Waters, and McNulty (2005) meta-analysis concluded that school leadership has a significant impact on student achievement. An analysis of more than 70 published and unpublished studies that included 2,894 U.S. schools, 14,000 teachers, and 1.1 million students found the relationship between school leadership and student achievement is .25 (average correlation). The meta-analysis identified 21 key leadership practices that correlated with student achievement, such as: Focus, or establishing "clear goals & keeps those goals in the forefront of the school's attention;" Monitors/evaluates, "the effectiveness of school practices & their impact on student learning;" and culture, or fostering "shared beliefs & a sense of community and cooperation" (Marzano et al., 2004, p. 4). Essentially, a one standard deviation improvement in these school leadership practices is associated with a ten-percentile gain in student achievement, which is statistically significant (Marzano et al., 2004).

Taking a different approach to their study of leadership and its impact on student outcomes, Robinson et al. (2008) grouped survey or measurement items to reflect common leadership practices. From 27 studies published between 1978 and 2006, five leadership dimensions emerged and effect sizes calculated. The leadership dimensions and effect sizes are displayed in Table 2.

Table 2

The Impact of Leadership Dimensions on Student Outcomes

Leadership Dimension	Effect Sizes
Establishing goals and expectations	.42
Strategic resourcing	.31
Planning, coordinating, and evaluating teaching and the curriculum	.42
Promoting and participating in teacher learning and development	.84
Ensuring an orderly and supportive environment	.27

Note. Effect sizes from the meta-analysis conducted by Robinson et al. (2008)

These five leadership dimensions are arguably dimensions of instructional leadership behaviors and demonstrate the impact of these behaviors on student outcomes. In particular, practices associated with establishing school goals, supervision of instruction, and professional learning are highly impactful (Robinson et al., 2008). Instructional leadership has three to four times the impact on student outcomes than transformational leadership, suggesting that "the more leaders focus their relationships, their work, and their learning on the core business of teaching and learning, the greater their influence on student outcomes" (Robinson et al., p. 636).

Principals as Instructional Leaders

The principal is ultimately responsible for creating a climate and conditions that are focused on student learning outcomes (Hoy, 2012; Hoy & Miskel, 2013; Hallinger, 2010). The

meta-analyses on school leadership practices discussed previously demonstrate that school leadership—and specifically instructional leadership—positively impacts student achievement; principals clearly play an essential role in improved student learning (Hallinger & Heck, 1996; Leithwood et al., 2004; Marzano et al., 2005; Robinson et al., 2008). Principals who can focus their work in specific areas and enable and encourage professional learning are more likely to make a difference in student achievement.

Although the Alig-Mielcarek and Hoy model (2005) simplified instructional leadership dimensions, the knowledge and skills necessary to be an instructional leader are far from simple and cannot be reduced to a single checklist that will be effective in every school context (Hallinger, 2011). Principals need not only the knowledge but also the expertise to apply that knowledge in a variety of situations (Hallinger, 2011; Goldring et al., 2009).

Instructional Leadership That Impacts Teachers' Instructional Practices

Principals who endeavor to improve student achievement recognize that their impact on teachers' attitudes and behaviors makes a difference. High-quality, focused principal-teacher interactions about specific instructional strategies and behaviors have a demonstrated and significant impact on student outcomes (May & Supovitz, 2011; Robinson et al., 2008; Supovitz et al., 2009). Indeed, multiple educational studies in the last fifteen years have demonstrated the significance of principals' instructional leadership behaviors through their interactions with teachers (Sheppard, 1996; Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2005; Supovitz et al., 2009).

Sheppard (1996) concluded there is a positive relationship between the instructional leadership behaviors of the principal and teacher innovation, creativity, professionalism, and commitment to school and colleagues. Blasé & Blasé (1999) uncovered two significant themes from the teachers' perspective that impacted their motivation, creativity, efficacy, and their varied use of instructional strategies. First, the authors found that when principals engaged in discussions *with* teachers about instruction, the dialogue promoted teacher reflection. Second, they found that when principals supported collaboration among teachers to study teaching and learning, as well as opportunities for teachers to plan and facilitate quality professional learning aligned with adult learning principles, the reflective attitudes and behaviors of classroom teachers improved significantly (Blasé & Blasé, 1999).

Supovitz & Buckley (2005) suggested that high-leverage instructional leadership that provides evidence-based classroom feedback facilitates teachers' examination of instructional practices for improvement and is more likely to evoke a change in classroom instruction. Instructional leadership behaviors that are focused on individual or a small group of teachers are more likely to evoke a change in classroom practice (May & Supovitz, 2011). Peer influence facilitated by a principal's instructional leadership behaviors is positively linked to a change in instructional practices. (Supovitz et al., 2009). Principal leadership influences teacher practices by cultivating and promoting teacher collaboration that focuses on teaching and student learning (Supovitz et al., 2010).

High-leverage feedback. Feedback is described as "information provided by an agent (e.g. teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding" (Hattie & Timperley, 2007, p. 81). Through the supervision of instruction principals identify areas of instructional focus and engage in dialogue with teachers to improve their instruction by "providing high-leverage feedback" (Supovtiz & Buckley, 2008, p. 5). *High-leverage* feedback is described as "carefully chosen feedback that is delivered in such as way that makes recipients more likely to be responsive to change" (Supovitz & Buckley, 2008, p. 5).

Feedback is most effective when it is detailed, non-judgmental, low risk, and based on specific classroom behaviors (Blasé & Blasé, 1999; Hattie & Timperley, 2007). In short, both the content of the feedback and the method of feedback delivery are important (Kluger & DeNisi, 1996).

Effective feedback for teachers increases their motivation, innovation, commitment, and the variety of instructional strategies they employ in the classroom (Blasé & Blasé, 1999; Sheppard, 1996). Supovitz and Buckley (2005) refer to these feedback behaviors as "highleverage instructional leadership: evidence-based feedback given by principals that induces teachers to examine their instruction in order to improve the effectiveness of their practice" (p. 5). Essentially, the purpose of feedback is to facilitate a change in others (Hall & Hord, 1987; Hattie & Temperley, 2007).

Scope of principals' instructional leadership. Principals' instructional leadership behaviors can range from very broad actions such as whole-faculty discussions to more specific, targeted activities with individual teachers. This range of instructional leadership is referred to as *scope* (May & Supovitz, 2011). Broad instructional leadership activities, such as school-wide goal setting, are important but have less of a measurable impact on individual teacher instructional practices; targeted instructional leadership activities, such providing feedback on an observed lesson, are more likely to change an individual teacher's practices (May & Supovitz, 2011). Teachers who reported the highest frequency of principal interactions also reported the largest scale of instructional changes (May &Supovitz, 2011). These results strongly suggest that a principal's influence on instructional improvement is significantly related to their interactions with individual teachers. In general, the time a principal specifically allocates to instructional leadership activities is a predictor for classroom instructional change. The results of the study suggest that the most effective principals balance broad and targeted instructional leadership activities to improve student outcomes (May & Supovitz, 2011).

Peer Influence. Hallinger (2011) reframed instructional leadership as *leadership for learning* and broadened the context beyond the role of the principal to include others. Hallinger (2011) stated: "The principal is important, but s/he can only achieve success through the cooperation of others" (p. 137). Sharing instructional leadership responsibilities empowers and motivates teachers, increases commitment to school vision and goals, and facilitates a work environment that is conducive to improvement (Supovitz et al., 2009).

Principal leadership practices and peer influences are related to improved instructional practices; principals who foster collaboration among teachers that is focused on teaching and learning broaden their influence. In some content areas, peer influence has twice the impact as principal practices on changing teacher practice, which suggests that building a collaborative network of teachers is a significant role for instructional leaders (Supovitz et al., 2010).

The knowledge, skills, and expertise necessary to build relationships must be integrated successfully into instructional leadership in order to positively impact teachers' practices. Robinson and her colleagues (2008) elaborate: "effective leaders do not get the relationships right and then tackle the educational challenges—they incorporate both sets of constraints into their problem solving" (2008, p. 659). Both of these challenges must be addressed together to be most impactful. Heck and Hallinger (2010) describe leadership as a reciprocal process of mutual influence. The principal's impact on student achievement is facilitated indirectly through teachers and the process of teaching and learning; therefore, the principal's focus should be to build capacity among the instructional staff (Robinson et al., 2008). Elmore (2000) framed the focus of effective school leaders,

"Why not focus leadership on instructional improvement, and define everything else as instrumental to it? The skills and knowledge that matter in leadership, under this definition, are those that can be connected to, or lead directly to, the improvement of instruction and student performance (....) It makes leadership instrumental to improvement." (p. 14)

Professional Development

There is strong research support connecting effective school leadership to student outcomes; however, specific professional development activities for school administrators, that demonstrate the direct impact of principals' professional practices on student outcomes, is scarce (Bickmore, 2012; Darling-Hammond et al., 2007). This indirect relationship between professional development for administrators and student achievement is complex, and gathering empirical evidence to support this connection is challenging. Through professional learning experiences, however, "teachers and school leaders acquire new knowledge and skills that enable them to practice in new, hopefully improved, ways that in turn contribute to improvements in student learning" (Spillane, et al., 2009, p. 407). In order to influence teacher behaviors, principals must engage in activities that enable them to acquire specific instructional leadership knowledge and skills, and then apply these skills in their individual school contexts (Bickmore, 2012). Therefore, the study of effective principal professional development begins with an understanding of effective teacher professional development (Darling-Hammond et al., 2007; Elmore 2004; Spillane et al., 2009).

Effective Teacher Professional Development. Research literature on high-quality teacher professional development emphasizes three basic strands that have been shown to impact teachers' instructional practices: content, processes, and context (Bickmore, 2012; Garet et al.,

2001; Hill, 2007). In order to be most effective, the content of professional development should be aligned with instructional standards and also should aim to increase teacher content knowledge and pedagogical skills in a specific content area (Cohen & Hill, 2002; Desimone, Porter, Garet, Yoon, & Birman, 2002; Garet et al., 2001; Hill, 2007; Joyce & Flowers, 2002). During professional development, teachers should engage actively with content to deepen their understanding of how students access and acquire content, develop strategies to identify and rectify common student misconceptions, and refine instructional strategies associated with helping students achieve intended learning outcomes (Bickmore, 2012; Desimone et al., 2002; Garet et al, 2001). Professional development that is sustained over time allows for teacher collaboration, discussion, feedback, and problem solving, which have been shown to have a stronger and more positive impact on teacher practices (Desimone et al., 2002; Garet et al, 2001). Joyce & Flowers, 2002).

Learning Forward, formerly known as The National Staff Development Council (NSDC), established Standards for Professional Learning in 1994. Since their inception, the standards have been utilized to define effective high-quality professional development in schools across the country (Killion & Crow, 2011). Learning Forward revised the Standards for Professional Learning in 2011 to reflect current educational trends and current professional development research. The revised Standards for Professional Learning are summarized in Table 3.

Table 3

Standard Core Elements Effective professional learning for teachers occurs in a learning community--- a group of educators with collective Learning Communities responsibility for student learning. Learning communities meet regularly to engage in ongoing professional learning that is focused on improved student outcomes related to school goals. School and district leaders must advocate for and support professional learning, as well recognize their own need for professional growth in order to build capacity. Leaders Leadership organize school structures and systems that support professional learning and continuous improvement. Effective professional learning requires purposeful and strategic resource allocation, tracking, and coordination to ensure Resources resources are aligned to learning goals. A variety of data sources should be utilized to plan, monitor, Data and evaluate professional learning and its impact on instructional practices and student achievement. Professional learning planning and processes should align with Learning Designs research-based best practices to increase effectiveness, i.e. jobembedded, active learning modalities In order for professional development to effectively change teacher practices, implementation must be align with research Implementation on the change process, be sustained over a period of time, and provide opportunity for teachers to receive formative feedback. Professional development goals must align with educator performance data and student standards to build coherence and Outcomes ensure high expectations for teachers and students.

Standards for Professional Learning

Note. Adapted from the Learning Forward Standards for Professional Learning (Killion & Crow, 2011)

Instructional Leaders and Professional Development. In order to effectively implement the Standards for Professional Learning, school leaders must be purposeful and intentional with instructional leadership behaviors. Many aspects of the standards align with the key dimensions of instructional leadership: instructional leaders support, promote, and actively engage teachers in professional learning by organizing school structures, such as professional learning communities, to support collaborative work among teachers (Killion & Crow, 2011). In order to do so, clear school-wide goals that are shared by stakeholders who are collectively accountable for meeting those goals must exist. In addition, instructional leaders are responsible for allocating resources to support goals, monitor progress and outcomes, and provide feedback on teaching and learning (Alig-Mielcarek & Hoy, 2005).

A study of effective principals in successful, high-poverty schools school indicated that these successful school leaders implemented professional development in their building that was more tightly aligned to the *Standards for Professional Learning* than their counterparts in less successful schools (Moore et al., 2011). Clearly, successful implementation of the *Standards for Professional Learning* to improve teaching and learning requires effective instructional leadership, yet how principals gain and develop the skills necessary to operate as instructional leaders is less clear (Darling-Hammond et al., 2010; Moore et al., 2011).

Leadership expectations for school principals are also guided by standards. The Interstate School Leaders Licensure Consortium (ISSLC) standards have been adopted in 45 states in the U.S. (ISSLC, 2008). The ISSLC standards articulate the knowledge, skills, and dispositions necessary for school administrators to be effective leaders. The standards are comprehensive and touch all aspects of school leadership, including instructional leadership (ISSLC, 2008). For example, ISLLC standard 1 requires school administrators to demonstrate the ability to create a shared vision that promotes student and teacher learning and growth (ISLLC, 2008). Standard 2 heavily targets instructional leadership with such functions as "supervise instruction" and "monitor and evaluate the impact of the instructional program" (ISSLC, 2008, p. 14). The widespread adoption of these standards across the United States is another demonstration of the importance of school leaders operating as instructional leaders who promote better teaching (ISLLC, 2008).

Effective Professional Development for Principals

Traditional principal professional development. Two types of principal professional development emerged in the 1980s as byproducts of the school reform movement at the national level, but with little cohesion in content or goals. In one type, professional development run by a state department of education, or an associated university, was typically enacted for improvement and driven by state determined goals and content. Participants were mandated to attend to "fix" failing schools (Hallinger & Wimpelberg, 1992). In contrast, groups of principals began working together in a more organic, grassroots approach to professional development based on internal needs such as school goals or curricula (Hallinger & Wimpelberg, 1992).

In the 1990s, professional development "points" or "hours" gained popularity as a requirement but did little to build a cohesive approach to principal professional learning that resulted in outcomes that impacted student learning (Nicholson et al., 2005). As is often the case in traditional teacher professional development, principal professional development routinely consists of "one-shot" workshops on a specific topic which is based on one-sized fits all "group growth" approach to professional learning (Barth, 2001; Nicholson et al., 2005). Evans and Mohr (1999) suggest "principals' learning is personal, yet takes place most effectively while

working in groups" (p. 531). Principals need to connect with other principals to continue their professional growth (Evans & Mohr, 1999).

More current research demonstrates alignment with teacher professional development research (Bickmore, 2012). Principals benefit from wrestling with problems of practice alongside their colleagues, reflecting upon their own professional contexts, experiences, and learning, and then applying that learning to concrete and relevant examples (Peterson, 2002). This type of learning is referred to as "situated," when learning is specific to a context that is similar to the context where the skill will be implemented. Concepts become fully integrated and understood through experiences and feedback. Principals interacting with other principals, who in some cases are more experienced in a specific concept or skill set, positively impacts professional learning (Leithwood et al., 2004).

Emerging trends: Principal in-service professional development. The largest comprehensive study on principal professional development was commissioned by the Wallace Foundation and completed by Linda Darling-Hammond et al. (2007). The study examined eight "exemplary" principal professional development programs, four of which were in-service programs. Programs that demonstrated clear evidence of strong outcomes for participants and graduates were chosen for further study.

The four in-service principal professional development programs were located in Hartford School District, Connecticut; Jefferson County Public Schools, Kentucky; Region 1, New York City; and San Diego Unified Schools, California. The research team reviewed program documents, observed workshops and meetings, and interviewed program participants, graduates, faculty, administrators, and school district personnel. Program participants and graduates completed surveys related to their attitudes, practices, and preparation. Graduates were surveyed, interviewed, and observed about their "on-the-job" work as principals. In addition, teachers were surveyed and school achievement data was collected and analyzed in the buildings in which the graduates were currently serving as principals.

The principal professional development in-service programs in the study shared several key elements: the programs were cohesive, sustained, job-embedded learning opportunities for principals that included a variety of support systems and experiential learning centered around a clear model of leadership (Darling-Hammond et al., 2007, 2010). Program components were constructed around specific professional practices aligned with the leadership model and blending theory and practice. Programs focused on specific skill development and professional practices, such as: developing a shared, school-wide vision and goals; using data for improvement; observing instruction and providing feedback to teachers; planning professional development; and managing change (Darling-Hammond et al., 2007, 2010) All of these practices are associated with dimensions of instructional leadership outlined by Alig-Mielcarek & Hoy (2005).

Professional development experiences were cohesive and focused on the analysis of classroom practices, supervision of instruction, and associated teacher professional development designed to positively impact instruction. Classroom practices were analyzed using a variety of methods from videos to collaborative school visits. The study found that program graduates were twice as likely as their peers in a national random sample to have participated in peer observations, school visits, and high quality professional development within the previous year (Darling-Hammond et al., 2010). In addition, principals in the program rated these professional development experiences as more important and useful than the comparison group of principals. Teachers rated program graduates as more likely to encourage staff to participate in professional

development, collaborate, and use data to inform their instruction as compared to the control group of principals (Darling-Hammond et al., 2010). These principals demonstrated practices that are associated with effective instructional leadership and they reported participating in instructional leadership practices at higher rates than the control group (Darling-Hammond et al., 2010).

The Darling-Hammond et al. (2010) results are consistent with a correlational study in which principals who participated in formal professional development activities were more likely to demonstrate effective instructional leadership behaviors (Bickmore, 2012). Barnes et al. (2012) also found incremental positive changes in principals' instructional leadership behaviors after engaging in a yearlong district-developed professional development program, suggesting that incremental changes are more realistic than transformational changes within a shorter time frame. This outcome aligns with other research regarding principals' instructional leadership development occurring along a continuum, which was found in the four exemplary programs (Barnes et al., 2010; Darling-Hammond et al., 2008).

All four exemplary programs were developed around the premise that principals move along a continuum of instructional leadership development over an extended period of time. Moreover, their professional learning is enhanced by collaboration with colleagues. The programs work systematically and comprehensively from pre-service to induction, throughout leadership careers, and even include retired principals. Additional support systems such as professional networks, communities of practice, peer coaching, study groups, and mentorships were embedded within each program. Principals in the program were twice as likely to participate in peer observations and mentoring and principals with mentors had more positive attitudes and beliefs about their work and the principalship in general (Darling-Hammond et al., 2010).

Using mentors to support principals has been a topic in educational leadership literature for several years, but never has been more important than in the current climate of accountability (Daresh, 1986). The National Association of Elementary Principals (NAESP) developed mentorship guidelines and a national certification program to support the mentoring of principals (NAESP, 2013). Communities of practice or professional networks provide opportunities for principals to actively engage in relevant issues, problem solving, and reflection surrounding their work (Barnes et al., 2010; Honig, 2008; Printy, 2008). Given the developing trends in the professional development research, it is not surprising that the four exemplary programs utilized a diverse support system to improve the instructional leadership practices of participating principals.

It is important to note that these four school districts had several conditions that facilitated the success of their programs: consistent leadership, program champions, strategic partnerships, and resources. All four districts had superintendents whose longevity far exceeded the national average, perhaps a contributing factor for providing sustained support systems for their principals. Each program had clear "champions" or teams who garnered and coordinated resources, tirelessly planned and implemented program elements and provided leadership support to principals.

Meredith Honig's (2012) highlights the importance of central office leadership to enhance principals' instructional leadership. She conducted an in-depth comparative case study using three urban school districts in California, New York, and Georgia. She focused on central office administrators, instructional leadership directors (ILD) with specific responsibilities for supporting and enhancing instructional leadership behaviors of principals. She conducted multiple interviews, observations, and analyzed a variety of documents, including the calendars of principals and ILDs. Her findings indicated that the more ILDs engage in supportive (and not directive) behaviors, the more the principals engaged in effective instructional leadership behaviors. Although not causal, Honig's (2012) comprehensive analysis and qualitative methods highlight the importance of key central office leaders who support, differentiate, buffer, and broker resources and tools to promote instructional leadership growth in principals, highlighting the importance of leadership and support for effective principal professional development programs (Honig, 2012).

In addition, the districts in the study built partnerships with universities and engaged in collaboration across the two organizations (Darling-Hammond et al., 2007, 2010). Available financial and human resources were key components of program success and were particularly important for the success of pre-service programs. Furthermore, state and district policies also have been shown to impact program success; in each of the four represented states, policy supports enabled these programs to sustain further program development, recruitment, and create localized infrastructures (Darling-Hammond et al., 2007).

Need for Instructional Leadership Development

Although indirect, the established relationship between instructional leadership behaviors and student achievement highlights the importance of the principal's instructional leadership skills (Hallinger & Heck, 1996; Leithwood et al., 2004; Marzano et al., 2005; Robinson et al., 2008). School leaders need to support teachers, who in turn support students (Darling-Hammond et al., 2007). The principal's ability to focus stakeholders and resources on the tasks of teaching and learning is paramount to a school culture that values and encourages academic excellence (Grissom & Harrington, 2010; Hoy, 2013; Hoy & Miskel, 2013). Principals clearly play an essential role in improved student learning by impacting teachers' classroom practices (Blasé & Blasé, 1999; May & Supovitz, 2010; Sheppard, 1996; Supovitz & Buckley, 2008; Supotvitz et al., 2010).

Principals enter their professional roles with required certifications, but with limited jobembedded support to further develop and refine instructional leadership skills and practices (Darling-Hammond et al., 2010). NCLB accountability expectations make no accommodations for school leadership experience; novice principals in their first year of practice are held to the same expectations for school performance as more experienced principals. Several recent studies on professional learning for principals suggest that instructional leadership is fully developed *in practice*, over time, and integrated into daily work (Honig, 2012; Gallucci & Swanson, 2008). Sustained, job-embedded, focused professional learning for principals designed to improve their instructional leadership practices should be a priority for school districts looking to improve student outcomes (Darling-Hammond et al., 2010).

Summary

In the current educational climate of school accountability, the principal's role of exercising effective instructional leadership focused on improving teaching, learning, and student outcomes has never been more important. Accountability requirements for schools continue to increase and add to the already complex set of responsibilities and challenges that school leaders face. In addition, student growth measures now are becoming more significant for school accountability, as well as teacher and principal evaluation. For example, Virginia's revised performance evaluation system designates that 40% of a school principal's evaluation be based on student growth outcomes (VDOE, 2012).

School districts and program developers with limited resources must consider the emerging research on effective program elements in order to purposefully develop a program that includes components with demonstrated outcomes. A comprehensive principal support program includes research-based methods and strategies, a clear model of instructional leadership, a support network, and enabling organizational structures in order to gain the most positive outcomes for principals, teacher, and students. Developing strong instructional leadership skills requires ongoing professional learning and support for principals (Honig, 2012; Gallucci & Swanson, 2008). The myriad of responsibilities, contextual understandings, and leadership skills necessary to impact student outcomes easily can overwhelm school leaders. Moreover, with high-quality principals in short supply, school organizations must provide strong and targeted support for principals to fully develop their instructional leadership potential. In summary, "educational leadership influences instructional practices, which changes student performance" (Supovitz et al., 2010, p. 45); therefore an investment in leadership should result in better student outcomes.

CHAPTER 3

Methodology

High quality professional development is designed to increase the knowledge and skills of participants to impact the effectiveness of job performance (Guskey, 2000; Spillane et al., 2009). As instructional leaders, principals endeavor to positively influence classroom practices of teachers by providing formative feedback and data related to their instructional practices (Alig-Mielcarek & Hoy, 2005; Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2008; Supovitz et al., 2010). The Principal Academy is designed to improve the instructional leadership knowledge and skills of participating school leaders. Program outcomes include increasing principals' knowledge of high-yield instructional strategies and skills for supervision of instruction to increase the effectiveness of their teachers' instructional practices.

Evaluation Questions

The following evaluation questions were designed to elicit essential information in order to provide an evaluation report focused on mid-range program outcomes in this summative, mixed-methods evaluation:

- 1. To what extent have principals acquired the instructional leadership knowledge and skills necessary to change their instructional supervision?
- 2. To what extent do principals engage in instructional leadership practices?
- 3. To what extent do principals' instructional leadership behaviors and practices impact teachers' instructional practices?

Method

Outcome-focused evaluations generally are summative in nature and concerned primarily with "describing, exploring, or determining changes that occur in program recipients, secondary audiences [...], or communities" (Fitzpatrick et al., 2011, p. 26); however, information collected from an outcome study also may be used formatively to improve a continuing program (Fitzpatrick et al., 2011). The purpose of this evaluation study was to collect evidence regarding mid-term outcomes of the Principal Academy as shown previously in Figure 2.

The CIPP model is a flexible framework for conducting program evaluations focused on one or more components of a program—either formative, summative, or both—and deployed across projects of all sizes by internal or external evaluators (Stufflebeam & Shinkfield, 2007). The CIPP Model of program evaluation is often utilized in the decision-oriented approach and defines the program evaluation process as "delineating, obtaining, reporting, and applying descriptive and judgmental information" in order to draw conclusions about a program's merit (Stufflebeam & Shinkfield, 2007, p. 326). Decision-oriented evaluation allows program leaders to judge the worth of a program retroactively and engage in program improvement (Stufflebeam & Shinkfield, 2007).

The CIPP Model has several advantages when applied to a decision-oriented evaluation. First, the CIPP model involves multiple program stakeholder groups to ensure representation of a variety of perspectives. Second, both quantitative and qualitative methods are employed to gather a range of data. Finally, the evaluation model is based on the professional standards and guiding principles of program evaluation (Stufflebeam and Shinkfield, 2007).

Standards of Program Evaluation

The Principal Academy evaluation study aimed to reveal relevant and credible information to program leaders without burdening academy participants with additional obligations beyond their professional responsibilities and other Academy expectations. The evaluation plan of the Academy was designed to adhere to the Standards for Educational Evaluations (2011). Furthermore, the professional standards of program evaluation, developed by the Joint Committee on Standards for Educational Evaluations (2011), provide assurances and criteria for judging the quality of evaluations. The program evaluation standards are organized around five categories: utility, feasibility, propriety, accuracy, and evaluation accountability (Stufflebeam & Shinkfield, 2007).

Utility standards ensure that the evaluation procedures and products are timely, useful, and meet stakeholder needs. Feasibility standards reflect practical and reasonable evaluation processes regarding human resources, time allocations, and costs within the context of the program. Propriety standards require that stakeholders and other human subjects are treated with fairness, honesty, and equity. Accuracy standards ensure that evaluation findings are objective, valid, reliable, and supported with evidence. Evaluation accountability standards refer to the review of evaluation processes of the study (Stufflebeam & Shinkfield, 2007). The 30 program evaluation standards are described in detail in Appendix A.

Guiding Principles for Evaluators

The guiding principles of the American Evaluation Association (AEA) are a "code of professional behavior" for program evaluators (Stufflebeam & Shinkfield, 2007, p. 93). The AEA guiding principles for evaluators include:

• Systematic inquiry—conduct systematic, data-based inquiries,

- Competence—provide competent performance to stakeholders,
- Integrity/Honesty—model integrity and honest behavior and strive to ensure it is demonstrated in evaluative processes,
- Respect for people—respect confidentiality and dignity of all clients, stakeholders, and participants, and
- Responsibilities for the general and public welfare—take into account cultural and public differences (AEA, 2004).

Participants

The CIPP model is based on a foundation of equity; therefore, the inclusion of key stakeholder groups in the evaluation process ensures that those who might be affected by the program are represented within the evaluation process. The inclusion of multiple stakeholder groups is a noted advantage of the CIPP model (Stufflebeam & Shinkfield, 2007).

Academy leadership team. The Principal Academy leadership team members were invited to participate in a focus group interview. The focus group protocol was designed to elicit details and specific examples of principals demonstrating an increase in their knowledge and skills associated with the program goals. The Principal Academy leadership team is comprised of two members of the university faculty, two consultants, four school district assistant superintendents, and one principal mentor. The team plans, coordinates, and monitors the professional learning and grant activities of academy participants. In addition, the leadership team members conduct site visits to participants' schools and participate in collaborative observations. Program leaders maintain consistent communication with principals who reach out for additional guidance and problem solving, as well as with the OSI and consortium superintendents. The district level administrators and principal on the leadership team also serve as mentors within the program and work with a small group of participants at the same school level (elementary, middle, or high), participate in collaborative observations, and maintain ongoing communication within the small group to facilitate the development of a professional network. Six members were invited to participate in a focus group on October 22nd, 2013. Several members of the leadership team were not able to participate on the scheduled date, but consented to a one-on-one interview that utilized the same protocol. The focus group transcript and interview transcripts were combined for analysis. The Program Director, Program Coordinator, and coach were not included in the focus group, but were scheduled for separate follow-up interviews.

Academy participants. School principals and assistant principals were the academy participants and originated from three sources. First, the 27 consortium school districts each had the opportunity to select one school administrator with two years of experience or less to participate in the academy. The member school district superintendents could recommend their year-one participant to continue for a second year or select a new participant. Second, principals from low-achieving schools, as defined by the Virginia Department of Education's Office of School Improvement (OSI), were mandated by the OSI to attend. Collectively, there were 33 year-one school administrators and 17 school administrators continuing as year-two participants. Among the 33 first-year participants were four assistant principals, a dean of students, and 28 principals. Three of the year-two participants were assistant principals and 14 were principals.

The third source of participants included principals who have been recruited each year to participate as mentors. School district leaders identified these mentors as demonstrating noteworthy instructional leadership skills. The mentor principals participated fully in all activities as learners but also brought an additional level of experience and expertise that assisted the facilitation within small groups. There were six year-one and four year-two participants identified as mentors, additionally four members of the leadership team also served as informal mentors.

Teachers. Academy participants were asked by program leaders to select 20 teachers to participate in an action research project during the school year. Those 20 teachers received targeted instructional supervision as the academy participants applied the program knowledge and skills in their individual school settings. Principals shared their action research findings with academy colleagues. Academy participants selected any 20 teachers within their school. The identified 20 teachers from each building were asked to complete the electronic confidential teacher survey in January 2014.

Data Sources

A mixed-methods approach utilized both quantitative and qualitative data analysis in order to answer the three proposed evaluation questions. The mixed-methods approach provided opportunities for triangulation of data points from a variety of sources, thus increasing the validity (Fitzpatrick et al., 2011).

Teacher survey. Surveys typically are designed to collect information from a large number of people in a timely and cost-effective manner (Gall, Gall, & Borg, 2007). The 28-item teacher survey utilized in this evaluation study contained a combination of openform and closed-form items in four sections (Gall et al, 2007). Open form items allow the respondent to choose or create their own answers. Closed-form items require the respondents to select from specified responses. (Gall et al., 2007). Demographic data, such as school level and level of experience, was also included to allow for more detailed analysis. Section 1 of the teacher survey consisted of 18 closed-ended items utilized in a previous study designed to examine the scope of principals' instructional leadership practices to improve classroom instruction (May & Supovitz, 2010). Items were developed from a combination of previous work by the researchers, the ISLLC standards, and instructional leadership research. The first five items asked teachers to report how often they worked with their principal on typical teaching and learning tasks during this school year (May & Supovitz, 2010). Example items included:

- 1. The principal and the teacher discussed the teacher's instruction
- 2. The principal observed the teacher instructing a class
- 3. The principal provided feedback after observing the teacher's instruction

All items were answered using a five item scale: (1) never (2) a few times a year (3) a few times a month (4) 1-2 days per week or (5) more than two days a week (May & Supovitz, 2010). Teachers who were supervised by the same principal responded to a second set of identical prompts based on their interactions with the same principal during the previous school year.

The next eight items were designed to measure the extent to which teachers changed aspects of their instruction. Categories included:

- 1. The types of formative assessments you use
- 2. Student grouping
- 3. The Instructional strategies you use
- 4. The kinds of questions you ask students

Teachers responded to the categories using a seven-point scale from (1) not at all to (7) a great deal, for two separate scales, English language arts and mathematics. The reliabilities were .94 and .95 respectively for English language arts and mathematics (May & Supovitz, 2010).

Section 3 of the teacher survey was comprised of the four items from the Principal Support Scale (PSS) appraisal section (DiPaola, 2012). Appraisal items are designed to measure teacher perceptions of principal support that improves teacher performance. Appraisal support is demonstrated by providing feedback that encourages teacher reflection and improved classroom practices, which arguably demonstrates instructional leadership (DiPaola, 2012).

Teachers were asked to respond to the following items, using a 6-point Likert scale from (1) strongly disagree to (6) strongly agree:

- 1. My principal offers constructive feedback after observing my teaching.
- 2. My principal provides frequent feedback about my performance.
- 3. My principal helps me evaluate my needs.
- 4. My principal provides suggestions for me to improve instruction.

Littrell's 40-item Principal Support Questionnaire (PSQ) was the foundation for the Principal Support Scale. DiPaola (2012) piloted the PSQ and items were deleted or revised based on statistical analysis. The revised instrument was named the PSS. The appraisal support items had a Cronbach's Alpha of .93, indicating a high level of reliability among the items (DiPaola, 2012). The refined 16-item PSS was then utilized in a larger study of 1,276 teachers across 34 high schools and the appraisal items again yielded high Cronbach's Alpha reliability measures of .955 (DiPaola, 2012). The complete listing of all close-ended items in the teacher survey can be reviewed in Appendix C.

Section 4 of the proposed survey, The Inventory of Strategies Used by Principals to Influence Classroom Teaching (ISUPICT), consists of five open-ended items designed for a study of instructional leadership characteristics that impact the classroom practices of teachers from the perspective of teachers (Blasé & Blasé, 1999). Items are designed to elicit detailed descriptions of impactful instructional leadership practices. Example items from the ISUPICT ask teachers to:

- 1. Describe and give a detailed example of a positive characteristic (overt or covert, formal or informal) that your instructional supervisor uses frequently to influence what you think or do that directly improves something about your classroom teaching.
- 2. Describe and give a real-life example of the effects (impacts) that the characteristic has on your thoughts (related to teaching) and behavior (related to teaching).

The initial ISUPICT was developed in collaboration with professors and five full-time teachers. The ISUPICT was piloted with 30 full-time teachers who also were current graduate students at a large University in the Southeastern United States (Blasé & Blasé, 1999). Feedback and suggestions from the pilot study participants were used to revise and develop the final version of the ISUPICT. The instrument was designed so that the questions were repeated twice: one set for teachers to describe a principal who had a positive impact and the second set to describe a principal with a negative impact on their classroom teaching (Blasé & Blasé, 1999). Seventeen professors from three different universities administered the survey to 809 full-time teachers who were also graduate students. Consistent with the guidelines for qualitative studies, the researchers used inductive coding for the development of themes and subthemes (Blasé & Blasé, 1999; Creswell, 2013). Two researchers conducted the coding; however, professors, teachers, and graduate students were regularly consulted to provide clarification when needed.

Codes were then compared against the research base on instructional leadership; the inter-rater reliability amongst the coders was .90 (Blasé & Blasé, 1999).

Focus group and interviews. Focus groups are similar to face-to-face interviews but obtain information in a group format rather than individually (Fitzpatrick et al., 2011). Focus groups are designed to elicit rich data as the discussions often take place among the participants themselves rather than simply between an interviewer and interviewee. The role of the focus group facilitator is to introduce topics, elaborate on the process, and follow up with periodic questions and probes (Fitzpatrick et al., 2011). Below is one example of a focus group question used in this study:

- What evidence, if any, have you observed of principals applying instructional leadership skills?
 - a. Please share specific examples you may have observed in the field.

b. How does that evidence reflect the principal's instructional leadership? Using qualitative coding methods described in detail in the subsequent data analysis section, the researcher sought to reveal themes evidenced in the discussion relative to the evaluation questions. The focus group protocol is provided in Appendix C.

Data Collection

Academy leadership team. Academy leadership team members were invited via email to participate in a focus group interview. Participants were provided detailed information pertaining to the process and purpose of the focus group. Verbal directions at the start of the focus group reiterated the purpose of the interview, confidentiality, and group norms; these directions are included in the protocol provided in Appendix C. Academy participants. All academy participants, with the exception of the leadership team, were invited to participate in the study during a regularly scheduled Principal Academy session in November 2013. Subsequent email correspondence from Academy leaders introduced the purpose of the study and the data collection plan. Academy participants were advised of their voluntary involvement, the right to withdraw at any time without penalty, and the assurance of confidentiality.

Teachers. As part of their required Academy work, principals selected 20 teachers as the focus of their supervision and data collection observations. In order to maximize the survey response rate, academy participants received an initial notification of the survey release to share with participating teachers (Gall et al., 2007). Twenty-four hours later, the identified teachers received an electronic invitation from the researcher that introduced and described the purpose of the study and data collection process. Teachers were advised of their voluntary participation, the right to withdraw at any time without penalty, and the assurance of strict confidentiality. An optout provision was provided in the introductory email sent January 8, 2014. Data were analyzed at the school and group level; any personally identifiable information, such as individual names or school names, were removed by the researcher. Signed informed consent was obtained for each teacher electronically during the introduction of the survey instrument. A reminder email was sent one week later, January 15, 2014 to teachers who had not yet completed the survey. The researcher utilized standard survey protocol for maximizing the response rate: precontacting the sample, a cover-letter invitation, and follow-up with non-respondents (Gall et al., 2007).

Data Analysis

A mixed methods program evaluation incorporates both qualitative and quantitative statistical analysis procedures and provides substantive data relevant to the evaluation questions (Gall et al., 2007). An overview of the evaluation questions, data sources, and proposed data analysis are outlined in Table 4.

Focus group and interviews. Utilizing appropriate qualitative analysis methods includes "preparing and organizing the data for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables, or a discussion" (Creswell, 2013, p. 180). Creswell's methods provided a framework for this evaluation's qualitative data preparation and analysis.

The focus group transcripts were recorded and transcribed into Microsoft Word[©] documents. The researcher reviewed the transcripts against the audio recordings to ensure accuracy. Any names or identifiers were removed from the transcript and replaced with pseudonyms.

A code list was prepared based on significant instructional leadership themes represented in the program theory and Alig-Mielcarek and Hoy's (2005) model of instructional leadership. The initial codes provided an organized method for initial analysis. Qualitative coding software, DeDoose[©], was utilized to organize and analyze transcripts. Dedoose[©] is a tool that standardizes the coding process to increase the overall validity and reliability of the process. The transcripts underwent several coding procedures. First, the segments were read and the researcher made notes in the margins related to initial findings. This process is referred to as "memoing" and is used to gain an overall perspective of the data as whole prior to a more detailed analysis (Creswell, 2013). These initial findings and memos were employed to streamline the existing a priori codes for what Creswell refers to as "lean coding" (2013, p. 184). An additional round of open coding allowed the researcher to capture emerging codes. Transcripts were analyzed a third time utilizing the updated a priori codes and emerging codes (Creswell, 2013). The data generated from the focus group interviews were organized and analyzed to closely examine the patterns and themes related to principals' instructional leadership knowledge and skills.

Observation database. Data were exported from the academy observation database at two points during the program, November 2, 2013 and February 6, 2014. An average observation rate was calculated for each academy participant by taking the number of observations conducted and dividing it by the number of teachers, 20, which represented an average number of observations per teacher required by the academy. This observation rate allowed for a general comparison of observation frequency from fall to spring.

Teacher survey. The teacher survey was administered via Qualtrics[©] and data exported into Microsoft Excel[©] for initial organization. The teacher survey was analyzed in discrete quantitative and qualitative sections. Descriptive statistics such as school level, school size, and teacher experience allowed for data disaggregation within each survey section.

Frequency of interactions. A mean frequency of interaction score was calculated for each subject based on their total responses to the five prompts describing how often they worked with the principal (May & Supovitz, 2010). Subjects were grouped into three frequency categories based on their reported interactions. The first group was labeled "No Contact" and described teachers who reported no interactions in any of the five categories. The second group, "Some Contact," included teachers who reported interacting with their principal a few times each year in at least one of the five categories. The last group, "High Contact," described those teachers who reported interacting with their principals at least a few times each month in any of the five categories (May & Supovitz, 2010). A previous year mean score and frequency group also were calculated for subjects reporting previous year data.

Instructional change. Mean instructional change scores were derived from the responses to the instructional change items in Section 2 of the survey (May & Supovitz, 2010). These mean scores were the basis for correlational analysis to determine if there was a positive relationship between teachers' perceptions of principal support and teachers' change in instructional practices, as well as an analysis of mean variances (ANOVA) between frequency groups.

Principal support of teaching performance. The PSS appraisal items in Section 3 of the survey were utilized to calculate a mean score that represented a teacher's perception of the principal's support of teaching performance (DiPaola, 2012). These mean scores were utilized for correlation analysis between support and instructional change described above, as well as for the analysis of mean variance (ANOVA) between frequency groups.

ISUPICT. Section 4 was analyzed using qualitative, inductive coding methods for emerging patterns and themes related to the evaluation questions. Teacher responses to Section 4 provided a rich source of data to explore the impact of specific instructional leadership practices. To increase validity and reliability of the qualitative coding process, Dedoose[©] was utilized for the coding and analysis of the teacher supply response items. In addition, an expert in the field of instructional leadership reviewed codes and any unclear teacher statements. The four separate, but significant, components of the teacher survey provided a variety of rich data sources for both qualitative and quantitative analyses related to the evaluation study questions.

Ethical Considerations

The evaluation plan was submitted to The College of William & Mary's Education Institutional Review Board (IRB) and determined to be exempt from formal review. Upon 54

completion, the Principal Academy leadership team will be provided with evaluation findings if requested. All evaluation participants were provided with informed consent forms prior to their participation and offered opt-out provisions. The researcher adhered to both the Standards of Program Evaluation (2011) and the Guiding Principles for Evaluators (AEA). To avoid any potential researcher bias, an expert who is external to the academy reviewed the evaluation plan prior to its implementation.

Limitations, Delimitations, and Assumptions

A program evaluation focused on outcomes reveals information that can be utilized in a summative manner for decision-makers (Fitzpatrick et al., 2011). Program evaluations are designed around a specific program that operates within a defined context (Fitzpatrick et al., 2011). Therefore, limitations of this study included:

- 1. The results of program evaluations are not generalizable.
- Participating principals and assistant principals either were selected by the OSI or nominated by the superintendent of consortium school districts. Not all consortium school districts choose to participate in the program.
- The study reflects data from teachers who were selected for the school level cohort by their principal; therefore, participant data may not be representative of an entire school or school district.
- 4. School sizes vary across the participants; the teacher sample may include the entire instructional faculty in smaller schools but only a small percentage of the instructional faculty in the largest schools.
- 5. Although attendance and participation in all program activities is an expectation, not all principals completed every component of the program.

Delimitations of the study included evaluator choices that ultimately may limit the study; delimitations of this study included:

- 1. The limited timeframe of the data collection may not fully reveal a principal's overall impact on the development of instructional leadership practices in a school.
- 2. The data collection relies heavily upon existing program elements and obligations due to the already complex leadership responsibilities of program participants.
- 3. The length of time participants have served as school principals and/or been leaders within their current school is variable.

Assumptions of this study included:

- Principal mentors have a working knowledge of high yield instructional strategies, the ability to identify those strategies in the classroom, and can recognize when participants have gained those knowledge and skills.
- 2. Academy leaders work to correctly identify high-yield instructional strategies.
- 3. Principals are recording their classroom observations in the Principal Academy database.

Table 4

Evaluation Questions, Data, and Analysis

4

	Evaluation Question	Data Sources	Data Analysis
1.	To what extent have principals acquired the instructional leadership knowledge and skills necessary to change their instructional supervision?	Focus group Observation data base	Qualitative analysis Descriptive statistics
2.	To what extent do principals engage in instructional leadership practices?	Observation data base Teacher Survey	Descriptive statistics Triangulation: web log, observation database, observer logs and teacher survey.
3.	To what extent do principals' instructional leadership behaviors and practices impact teachers' instructional practices?	Teacher Survey	Qualitative analysis Descriptive statistics Correlations

CHAPTER 4

Results

The purpose of this study was to elicit information on program outcomes utilizing a summative, mixed-methods evaluation design and prepare an evaluation of a leadership academy program. Multiple data sources, including a focus group interview, individual interviews, an observation database, and teacher surveys, were examined to explore the extent to which principals acquired instructional leadership knowledge and skills, engagement in instructional leadership practices, and the resulting impact of the knowledge, skills, and practices on teacher instruction. The triangulation of data, or the "use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence," (Creswell, 2013, p. 251) was effective for confirming the validity of various data sources.

Focus Group and Interviews

Individual interviews and a focus group interview with Principal Academy leadership team members, as well as an interview with the Academy Director and Academy Coordinator provided data related to the acquisition of participants' instructional leadership knowledge and skills, specifically the accurate and appropriate identification of high-yield instructional strategies (Hattie, 2009). Interview questions were designed to elicit specific evidence of Academy principals demonstrating an increase in instructional leadership knowledge, skills, and practices, while still allowing for discussion and emerging themes. The interview with the Academy Director and

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Coordinator utilized the same protocol but included probes and follow-up questions based on emerging themes from the analysis of the leadership team transcripts. The focus group and interviews were the primary data source for evaluation question one: *To what extent have principals acquired the instructional leadership knowledge and skills necessary to change their instructional supervision?*

Observation Data Base

The Principal Academy observation database provided information on the number of observations each principal completed using the Academy observation protocols from October 2013 to February 2014. An observation rate was calculated in November and again in February as an indicator of the frequency of classroom observations and data feedback provided to teachers; both of these are associated with effective instructional leadership practices (Alig-Mielcarek & Hoy, 2005). Analysis of the observation database was a primary source of information for evaluation question two: *To what extent do principals engage in instructional leadership practices*? The observation database also provided an important triangulation point among indicators related to the three of the evaluation questions.

Teacher Survey

The Principal Academy teacher survey was used to collect both quantitative and qualitative data. The survey was completed electronically and included demographic information such as school level (elementary, middle, and high) and teacher experience (less than three years, four or more years). Of the 898 identified teachers, 360 responded to the electronic survey, including opt-outs, for an overall response rate of 40.1%. Demographic information is provided in Table 5.

Table 5

		Frequency	Percent
Level	Elementary	124	40.0
	Middle	98	31.6
	High	88	28.4
	Total	310	100.0
Experience	3 years or less	51	16.5
	4 or more years	259	83.5
	Total	310	100.0

Level and Experience of Survey Respondents

Descriptive statistics were utilized to gather data pertaining to the frequency that teachers reported instructional leadership interactions with their principals, self-reported instructional change, and perceptions of principal support. Qualitative analysis was utilized for ISUPICT, the supply response section of the survey; 216 of the 310 respondents completed the supply response section. The teacher survey provided data for the third evaluation question, *To what extent do principals' instructional leadership behaviors and practices impact teachers' instructional practices*? Survey data also provided a triangulation point for survey data associated with evaluation question two. **Question 1: To what extent have principals acquired the instructional leadership**

knowledge and skills necessary to change their instructional supervision?

Indicators for this question included participants' accurate and appropriate identification of high-yield instructional strategies during classroom instruction, as well as the number of classroom observations entered into the electronic database that were completed with Academy observation tools. **Observation database**. The observation count included the number of classroom observations completed at two points within the program: November 2013 and February 2014. Counts were aggregated for the two primary observation tools that Academy members were trained to use. The summary of completed observations is provided in Table 6. In November, the observation counts ranged from 0-39 with a mean of 13.6; in February, the range was 0-68 with a mean of 26.4. Three principals logged zero observations in both November and February. Elementary principals had the highest group mean of the three school levels. Amongst the two cohorts, Cohort 1, in their second year of the academy, had a slightly higher mean than Cohort 2 principals, while Mentors and consortium principals had higher group means than OSI principals.

Table 6

		Observation Counts		
		11/7/13	2/6/14	Mean
School Level	n			
Elementary	21	382	670	31.90
Middle	15	134	355	25.36
High	14	165	294	19.6
Total	50	681	1319	
Cohort Group		- <u> </u>		
Cohort 2	33	426	888	25.35
Cohort 1	17	255	431	26.91
Entry Point				.,
OSI	12	109	223	18.58
Consortium	28	436	769	27.46
Mentors	10	136	327	32.7

Observation Count by School Level, Cohort, Entry Point

Focus group and interviews. Qualitative analysis of focus group and interview data revealed multiple examples of principals acquiring instructional leadership skills related to program goals. Examples fell primarily within three main categories:

- Academy sessions to "unpack" high-yield instructional strategies, such as indicators of student engagement;
- collaborative observations with colleagues and inter-district networking; and
- principals in their home schools leading or facilitating professional development related to high-yield instructional strategies.

During each of the interviews, participants shared examples of principals' building an understanding of high-yield instructional strategies, such as the indicators of student engagement. Principals deepened their understanding of student engagement through rich conversations with one another during multiple Academy sessions. Principals "really broke it [student engagement] down" and had "deep discussions about what it truly looks like" and came to a "common understanding." Participants described watching videos, collecting data using the electronic observation protocols, and discussing their findings, which built an initial understanding prior to observing in classrooms. During discussions, participants described observations protocols as "tools" and "tools matter...tools help people make sense of difficult work." Academy leaders stated that they monitored the observation database and analyzed data for emerging trends, evidence of mastery, and any remaining gaps in participants' knowledge. The data analysis was the basis for subsequent professional development with the participants. This "tuning" process and trend analysis was utilized to refine understanding and application of high-yield instructional strategies in classrooms.

Collaborative observations were consistently identified as a means to increase inter-rater reliability through the development of a common definition of student engagement among the academy participants. Collaborative observations were defined as principals observing classes together at various schools, then debriefing on "How we as leaders are defining those strategies. What does it mean to see writing? What does it mean to see reading? Did you count that as reading?" Many interviewees described this as the most powerful element of the learning. Academy leaders described this phenomenon as a "tuning process" where the academy participants made a continuous and determined effort to visit classrooms, focus on high quality instruction, and provide feedback to teachers while continuing to refine their own understanding. In addition to observing with one another, year-two participants also enlisted teacher leaders in their schools to conduct collaborative peer observations. The results were described as, "the whole idea of looking for evidence of student learning doesn't really just belong with the principal; that whole idea belongs to the school...[...]...this is really everybody's business."

Additionally, there were multiple examples of principals extending their learning by leading or facilitating professional development sessions focused on student engagement with teachers in their schools. Building a common understanding with shared vocabulary was described as a "powerful" foundational component necessary for the principals, but also for teachers to understand principals' expectations related to highyield instructional strategies. One interviewee described the role of the principal in the following way: "the instructional leader is the professional developer of the building." Academy leaders indicated that their sessions were designed to model high-quality professional learning and support principals with resources and tools so they could confidently lead professional learning.

The combination of quantitative and qualitative indicators provided a diverse view of Academy principals' acquisition of instructional leadership knowledge, skills, and change in practices. The observation database provided evidence of principals conducting classroom observations, and accurately and appropriately identifying instructional indicators "unpacked" at the Academy. The focus group and individual interviews with the Academy Leadership team and Directors highlighted specific examples that included both Academy events and events in the field that demonstrated Academy participants development of instructional leadership knowledge and skills.

Question 2: To what extent do principals engage in instructional leadership practices?

Indicators of principals engaging in instructional leadership practices included the observation rate per person calculated from the observation database and frequency of instructional leadership interactions reported on the teacher survey. Academy participants were asked to identify 20 teachers as the focus of their instructional leadership work in the Academy for the duration of the school year. Using the number of observations submitted in the database, an observation rate was calculated for each principal based on the 20-teacher requirement. For example, a principal who completed 25 observations in November would have an observation rate of 1.25 observations per teacher at the first data collection point. The observations completed. Table 7 outlines the observation rates of Academy participants in November and February and net

changes in these rates. Although slower to start, the high school principals demonstrated a significant increase in the rate of observations by February matching the observation rate of their elementary colleagues.

Table 7

	Ob	Observation Rate	
	November	February	Net Change
School Level			
Elementary	.91	1.60	+.69
Middle	.55	.98	+.43
High	.48	1.60	+.79
Cohort Group			
Cohort 2	.75	1.27	+.70
Cohort 1	.65	1.35	+.52
Entry Point			
OSI	.45	.93	+.48
Consortium	.78	1.37	+.59
Mentors	.68	1.64	+.96

Observation Rates by School Level, Cohort, and Entry Point

Note. Observation rate is calculated by dividing the number of observations by 20 to represent an observation rate for each principal.

Teachers were grouped based upon their reported interactions with their principals. Teachers reported frequencies as (1) never (2) a few times a year (3) a few times a month (4) 1-2 days per week or (5) more than two days a week in each of the following five categories:

- 1. The principal and the teacher discussed the teacher's instruction.
- 2. The principal observed the teacher instructing a class.
- 3. The teacher observed the principal instructing a class.
- 4. The principal provided feedback after observing the teacher's instruction.

5. The principal reviewed the work produced by a teacher's students.

Teachers who reported no interactions in *all* of the five categories were placed in the "no contact" group. The "some contact" group included teachers who reported interacting with their principal a few times each year in *at least one* of the five categories. The "high contact" group reported interacting with their principals at least a few times each month, or more, in *any of the five* categories. Of those who responded, 3.9% reported they had no contact with their principal this school year in any of the five categories; 40.3% reported some contact in at least one of the categories during this school year, and 55.8% of teachers reported high contact with their principal in one or more categories this school year.

Table 8

Level		Frequency	Percent
Elementary School	No contact	1	.8
	Some contact	28	22.6
	High contact	95	76.6
	Total	124	100.0
Middle School	No contact	2	2.0
	Some contact	44	44.9
	High contact	52	53.1
	Total	98	100.0
High School	No contact	9	10.2
	Some contact	53	60.2
	High contact	26	29.5
	Total	88	100.0

Frequency of Interaction Groups by Level

Of the 310 teachers who responded to the survey, 167 indicated that their same principal observed them during the previous school year. The previous year responses were also grouped into three frequency groups: no contact, some contact, and high contact, using the same criteria previously described. Table 9 summarizes the change in frequency groups for the previous year's frequency of interaction reports by school level.

Table 9

Level		Previous Year	Current Year
Elementary School	No contact	0	0
	Some contact	30	15
	High contact	37	52
	Total	67	67
Middle School	No contact	0	0
	Some contact	34	27
	High contact	25	32
	Total	59	59
High School	No contact	3	3
	Some contact	31	28
	High contact	7	10
	Total	41	41
		167	167

Change in Frequency Group by Level

A case-by-case analysis revealed that 25 of the 167 teachers who reported having the same principal in the prior year changed frequency groups: five teachers moved from no contact to some contact and 20 teachers moved from some contact to high contact. Conversely, 10 of the 167 teachers reported a decrease in frequency of principal interactions this year; three teachers moved from high contact to some contact while seven teachers decreased from some contact to no contact. This small percentage of teachers reporting no contact with their principals was also reflected in the supply response section of the survey. Of the 216 teachers who completed that section, only one teacher commented that he or she had not been observed or had not received any feedback this school year.

Multiple indicators from a variety of data sources were indicators of Academy principals engaging in instructional leadership. The observation database was the source of data utilized to calculate the fall and spring observation rates, which demonstrated an increase in observation rate for all levels, cohorts, and entry points. The teachers reported their frequency of interactions with their principal in five categories related to instruction. Each teacher was placed into a frequency group based on these reported interactions. Teachers evaluated by the same principal during the previous year, also reported the frequency of interactions during the previous year and were placed in a previous year frequency group. Overall, 25 teachers moved into a higher frequency of interaction group during this school year. There was a statistically significant increase in the mean frequency of interaction scores during this school year. The triangulation of these data indicated the extent that Academy principals engaged in instructional leadership practices.

Question 3: To what extent do principals' instructional leadership behaviors and practices impact teachers' instructional practices?

Indicators of instructional leadership practices that impact teachers' instructional practices include the frequency of principal interactions with teachers, teacher report of instructional change, and teacher perceptions of principal support related to instructional practices. Teacher perspectives on impactful instructional leadership behaviors are indicators reported in the Inventory of Strategies Used by Principals to Influence Classroom Teaching (ISUPICT), the supply response section of the teacher survey.

Frequency of instructional leadership interactions. In addition to frequency groups, an average frequency score was calculated to allow for an additional comparison between current and previous year frequency of interaction scores. A previous year mean score and frequency group were calculated for subjects reporting previous year data. The mean of current year frequency interactions rating was 2.12, while the previous year mean frequency of interaction rating was 1.97. A two-tailed, paired sample t-test was run to test for significance in the mean scores. Results indicated t (166)= 4.40 which was significant at the .01 level, N=167.

Instructional change. Mean instructional change scores were derived from the responses to the seven instructional change items in the survey. On a scale from (1) not at all to (7) a great deal, the mean instructional change was 4.51, with a standard deviation of 1.34. Mean instructional change scores were the basis as an analysis of mean variances (ANOVA) between frequency groups.

Table 10

Frequency Group	N	Mean	Std. Deviation
No contact	12	3.98	1.83
Some contact	125	4.19	1.38
High contact	173	4.78	1.22
Total	310	4.51	1.34

Mean Instructional Change Scores and Frequency Group

An analysis of variance (ANOVA) was utilized to determine if the mean differences in instructional change scores between the frequency groups was significant. The ANOVA resulted in F (2,309) = 8.337, which was significant at the .05 level. Post hoc comparisons using the least significant difference (LSD) test indicated a significantly higher level of instructional change in the high contact frequency group as compared to the no contact and some contact frequency groups. There was no significant difference in instructional change found between the no contact and some contact frequency groups.

Table 11

Frequency Group		Mean Difference	Std. Error	Sig.
No contact	Some contact	211	.396	.855
	High contact	800*	.391	.104
Some Contact	No contact	.211	.396	.855
	High contact	589*	.154	.000
High Contact	No contact	.800*	.391	.104
-	Some contact	.589*	.154	.000

LSD Post Hoc Comparisons

* The mean difference is significant at the .05 level.

Principal support of teaching performance. A mean score of the PSS appraisal items represented a teacher's perception of the principal's support of teaching performance. An analysis of variance (ANOVA) was run to determine if there was a significant difference in means between the frequency groups.

Table 12

Mean PSS Scores	by Frequer	ncy Group
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	N	Mean	Std. Deviation	Std. Error
No contact	12	1.6458	.90113	.26013
Some contact	125	3.4680	1.39699	.12495
High contact	173	4.6965	1.14073	.08673
Total	310	4.0831	1.45973	.08291

An ANOVA was utilized to determine if the mean differences in PSS scores between the frequency groups was significant. The ANOVA resulted in F (2, 309) = 59.388, which was significant at the .05 level. Post hoc comparisons using the least significant difference (LSD) test indicated that teachers in the high contact group perceived a significantly higher level of principal support for instruction than teachers in the some contact and no contact groups. Teachers in the some contact group also had significantly higher perceptions of principal support than those teachers in the no contact group.

Table 13

Frequency Group		Mean Difference	Std. Error	Sig.
No contact	Some contact	-1.82	.376	.000
	High contact	-3.05*	.371	.000
Some contact	No contact	1.82*	.376	.000
	High contact	-1.23*	.146	.000
High contact	No contact	3.05*	.371	.000
-	Some contact	1.22*	.146	.000

LSD Post Hoc Comparisons

•The mean difference is significant at the 0.05 level.

Qualitative analysis of the supply response questions in the teacher survey provided additional information related to principals' instructional leadership behaviors that impact classroom instruction. Table 14 provides the frequencies of the most reported positive characteristics, as well as brief explanations of each code. Code descriptions were developed from the detailed examples teachers provided in response to Question 1:

Describe and give a detailed example of a positive characteristic that your principal uses frequently to influence what you think or do that directly improves something about your classroom teaching.

Table 14

Frequency	Code	Description
83	Provides Feedback	The principal provided written or verbal feedback on the teacher's classroom instruction, student work or behavior that clarified expectations and goals.
59	Supportive	The principal supported teachers' instruction, provided resources, and encouraged risk-taking while providing a safe, non-threatening environment for adult learning.
47	Modeling	The principal was knowledgeable and modeled instructional strategies, professional expectations, or other behaviors related to school goals, including, but not limited to, leading/facilitating professional learning.
27	Engaged	The principal was visible in classrooms and around the school, observing instruction, interacting with students, teachers and parents, actively engaged in meetings and workshops, and accessible.

Positive Characteristics that Teachers Report Influence Classroom Teaching

Feedback. Providing feedback was the most frequently cited positive characteristic that teachers reported as impacting their instruction. Teachers described principal feedback in a variety of ways, but almost always related to classroom observations. Feedback was verbal or written, face-to-face or electronic, formal or informal, but described as timely, specific, and constructive. The quotes below represent the general themes related to feedback:

"After observations we discussed the content, intent and methods used in instruction. The principal inquired about any reflective changes that resulted from the instruction. The principal stressed the positives of the observation while offering several critiques of things that might be improved."

"My principal always offers strategies and insights to the lessons that I teach. He tells me what I did well and in what areas I could improve"

"She did a great job of providing constructive feedback in a non-threatening way."

"He focuses on what students are doing and how they are responding. Feedback on instruction focuses on making sure goals are aligned with strategies being used and student engagement."

"She provides solutions and suggestions in a way that is always helpful and constructive. The fact that I have this level of comfort is priceless to me as a classroom teacher."

"Without feedback, one can go an entire year with little improvement because there's no clarity in the intended goal. With feedback, it makes it easy to adjust instruction accordingly." According to the teacher survey, feedback had a mean effectiveness rating of 5.26, with a rating of six being the most effective. Feedback, even though it may not always be complimentary, was perceived as "useful" and "motivating" if it was provided in a non-threatening, constructive manner. Teachers explained that feedback is a means for "clarifying expectations" and important for their understanding to improve instruction and meet expectations. As a result of feedback, teachers described feeling "motivated" to make instructional changes and improve their practice because they were more "confident" in their ability to meet expectations. One participant summary of feedback highlights this theme; "If I know what specifically will be observed, I can ensure that I include these behaviors regularly in class."

Supportive. The second most reported positive characteristic that impacts classroom instruction was a supportive principal. Principals who were described as supportive often encouraged their teachers to try new strategies, were non-judgmental, responsive, and "pitched in" wherever and whenever there was a need within the school community. Support was defined in a variety of forms; teachers explained specific examples of principals who were engaged in classroom projects, student activities, and new initiatives by providing tools, resources, and opportunities. These principals also were described as offering reassurance and emotional support for teachers as professionals and encouraging teachers to take risks without fear of repercussions. Supportive principals were often described as good listeners, receptive to others' ideas, and they included teachers in the decision-making process.

"Knowing that I have a principal who is willing to take risks and allow me to take risks in the classroom to benefit student achievement has made me adapt my teaching style to a wider audience. His support is encouraging."

"I don't feel like I will be completely penalized in some way if I fail when trying something new in the classroom."

"My principal provides opportunities for professional development and supports me when I want to try something new in my classroom."

"He is open to discussion and listens with sincerity. Our goal is for students to show academic growth in a positive learning environment."

"She is always helpful anytime I come to her about any type of situation. She wants me to succeed as a teacher and person."

Teachers who described their principals as supportive felt their principal genuinely wanted them to be successful in the classroom; therefore, the teachers reported feeling positive, comfortable taking professional risks, and inspired, confident, and "better able to support students." The mean effectiveness rating of supportive principal behaviors was 4.97 out of a possible 6.0. Teachers shared the following when asked how having a supportive principal made them feel:

"I know she supports me, so I can support students."

"The more supportive that she is, the more confident that I am knowing that she 'has my back'. This gives me the confidence to try new and different teaching techniques."

"She wants the best for her staff members and she will do the things necessary things to get that accomplished."

Modeling. The third most frequent characteristic impacting classroom instruction was modeling. Modeling had a mean effectiveness rating of 5.10 out of 6. Teachers described principals as consistently modeling "positive attitudes" and demonstrating "positive interactions" in variety of circumstances with students, parents, and staff members. These consistent positive interactions "set the tone" of the school and created a "positive climate" for students and staff members. The principal was often labeled as a "role model" who set the expectations in the building. Teachers described being "more patient" and "more positive" with their "challenging" students and forming "better relationships" because of the consistently positive interactions the principal modeled in complex situations.

"My principal leads by example, she often models what she expects from us as teachers and sets the bar for expectations..."

"This has directly affected my relationship with my students, as well as with colleagues."

"Her positive attitude helps push me to maintain a positive attitude in the classroom."

Principals also modeled instructional strategies related to research or school goals during professional development, staff meetings, and teacher conferences. Multiple teachers cited specific examples of a "Hattie book study" which included the principal demonstrating instructional strategies. Principals who used modeling were described as "knowledgeable" and "experienced." Principals provided "concrete examples" based on their classroom experiences, which teachers termed "relevant" and "inspiring." As a result, teachers reported having a "clear understanding" how to implement strategies into their lessons. Teachers felt "more comfortable" and "encouraged" to try new strategies and "motivated" to step out of their "comfort zone" when the principal "illustrates what it is that he expects."

"I know what the lesson is supposed to look like and can therefore demonstrate the lesson."

"The goal of modeling these effective teaching strategies is for the teachers to see first hand how to implement a strategy the most effective way in the classroom.... It makes you truly reflect on how you teach."

"I feel comfortable taking the strategies she has modeled for us back to my students. By doing the strategies I have great insight into how they will work in my classroom."

"I know I learn better by doing something... as opposed to being told, much like my students."

"By using modeling, Dr. ...teaches an instructional strategy by using an instructional strategy, an invaluable method for "killing two birds with one stone".

"Just like our students, examples and modeling provide us with more clear-cut expectations as to how to meet and exceed expectations."

Engaged. Teachers described engaged principals as "dedicated" and "involved" in <u>all</u> aspects of the school. Principals were portrayed as "active participants" in meetings, professional development, classrooms, "visible" throughout the school, and more accessible to both students and faculty.

"My principal is very involved with every aspect of the school day. From walking to halls helping students open lockers/quickly get off the bus to their correct location, to observing classroom activities and giving input after doing so, to helping students to the bus. Everything that is done in the building, the principal has a part in it - no matter how small that thing may seem."

Engaged principals often "inspired" and "motivated" teachers to be more involved at school. As a result of principals being visible, teachers described being motivated to "consistently provide high quality instruction" and feeling "in tune" with the principal's expectations. Being engaged had a mean effectiveness rating of 5.11.

"I think it makes me want to be more involved myself."

"It encourages me to continue to provide engaging powerful lessons so students continue to want to show off what they have done or learned.

"If you know that the principal is going to be involved, you keep yourself and your students constantly performing at their best - not just performing well on days that you know you will be observed or so forth. Knowing that at any moment the principal could walk in the cafeteria to help out with lunch duty or into your classroom to assist/observe a project being presented by a group of students, keeps both the staff and students aware that an administrator is always there."

Instructional leadership practices that impact teachers' instructional practices were measured by multiple quantitative indicators: the frequency of principal interactions with teachers, teacher report of instructional change, and teacher perceptions of principal support related to instructional practices. Initial findings indicated teachers' reported instructional change was significantly higher for teachers in the high contact frequency group. Teachers' perceptions of principal support were statistically significant between all three of the frequency of interaction groups. Qualitative data analysis revealed teacher perspectives on impactful instructional leadership behaviors are indicators reported in the Inventory of Strategies Used by Principals to Influence Classroom Teaching (ISUPICT), which is the supply response section of the teacher survey. The most frequently reported principal characteristics that impacted classroom instruction included principals providing feedback, support, modeling, and being engaged. In general, these positive characteristics resulted in teachers who felt motivated, encouraged, and confident in their ability to incorporate new instructional strategies in the classroom.

Summary

A range of quantitative and qualitative data provided multiple indicators related to the three evaluation questions. These data provide the foundation for a deeper understanding of the instructional leadership knowledge, skills, and practices that academy principals have acquired, as well as the resulting impact on teachers' classroom instruction. Chapter 5 will discuss these findings.

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CHAPTER 5

Conclusions

As instructional leaders, principals are responsible for creating a school organizational culture that promotes student success by supporting teachers and effective teaching behaviors (Alig-Mielcarek & Hoy, 2005; McGuigan & Hoy 2006). Principals who operate as instructional leaders positively impact the instructional effectiveness within their schools through interactions with teachers in a formative process of instructional supervision (Alig-Mielcarek & Hoy, 2005; Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2008; Supovitz, Sirinides, & May, 2010). A significant component of the Principal Academy was to provide participants with tools and protocols to strengthen their supervision of instruction and to provide teachers with objective, data-driven feedback designed to improve their instructional practices (Alig-Mielcarek & Hoy, 2005; DiPaola & Hoy, 2008). The principal's ability to focus stakeholders and resources on the tasks of teaching and learning is paramount to a school culture focused on academic excellence (Grissom & Harrington, 2010; Hoy, 2012; Hoy & Miskel, 2013).

Discussion of Results

The premise of any high quality professional development effort is the acquisition of new knowledge and skills in order to increase effectiveness (Guskey, 2000; Spillane, Healey, & Mesler-Parise, 2009). Over time, as teachers modify their classroom practices and become more effective, principals refine their leadership focus and adjust feedback (Blasé & Blasé, 1999; May & Supovitz, 2011; Supovitz & Buckley, 2008; Supovitz et al., 2010). In accordance with the program theory described in Chapter 1, *Figure 1*, principals in the Principal Academy learned to provide high-leverage feedback (i.e. purposeful, classroom evidence-based) on classroom performance designed to initiate reflection, identify areas for improvement, and facilitate changes in teachers' instructional practices with an ultimate goal of impacting student achievement (Supovitz & Buckley, 2008).

The combination of quantitative and qualitative indicators provided a rich and diverse view of Academy principals' acquisition of instructional leadership knowledge and skills, as well as changes in their leadership practices that led to changes in teachers' instructional practices. The observation database provided evidence that principals conducted classroom observations and accurately and appropriately identified instructional indicators that had been "unpacked" and learned by participants during the Academy. The focus group and individual interviews with the Academy leadership team and Academy directors highlighted specific examples, including events both in the Academy and in the field, that demonstrated development of instructional leadership knowledge and skills among Academy participants.

Indicators of principals' engagement in instructional leadership practices included the observation rate per person calculated from the observation database and frequency of instructional leadership interactions reported on the teacher survey. Teachers who had the same principal-as-evaluator in the previous year reported statistically significant increases in frequency of instructional leadership interactions with the same principals in the current year. Furthermore, the measures of higher frequency of interaction with principals were consistent with higher levels of teachers' perceptions of principal support related to instruction.

Analysis of the supply-response section of the teacher survey revealed the most frequently reported characteristics of principals that impacted classroom instruction: principal feedback, principal support, modeling, and engagement in school. In general, these positive characteristics resulted in teachers who reported feeling more motivated, encouraged, and confident in their ability to incorporate new instructional strategies in the classroom. The results related to the program theory outlined in Chapter 4 are discussed in their entirety in this chapter.

Acquisition of the instructional leadership knowledge and skills. Indicators for this question included participants' accurate and appropriate identification of high-yield instructional strategies during classroom instruction, as well as the number of classroom observations entered into the electronic database that were completed with Academy observation tools.

Frequency of classroom observations. The classroom observation database was a substantial data source related to the frequency of classroom observations and the accurate and appropriate identification of high-yield instructional strategies. These data reflected an increase in participants' instructional leadership knowledge and skills related to supervision of instruction. Based on the data within the observation database, it was evident that principals were utilizing the observation tools in the field with increasing accuracy. From November to February, mean observations doubled from 13.6 to 26.4, demonstrating that principals continued to observe classrooms and collect data with the observation tools as the Academy program progressed. Although this increase cannot be

attributed solely to Academy participation, it is possible that principals' involvement in the Academy increased their motivation and/or confidence to conduct classroom observations as their knowledge and skill levels increased. Analyses of interview transcripts clearly demonstrated that principals were "renewed and rejuvenated by the focus on instruction" evidenced in statements such as, "I've been in more classes this year than I have in years."

School level. When compared to observational data from secondary schools, the mean number of classroom observations was higher in elementary schools; high school principals generated the lowest mean values. With a sample of this size, it was difficult to attribute this trend to any one factor; however, previous research suggests that instructional leadership practices typically are tied to individual leaders' practices rather than general school characteristics such as school size or level (Marks & Printy, 2003; Sheppard, 1996).

Cautions. Findings related to the observation database should be interpreted with caution due to three issues. First, two of the participating OSI principals recorded no entries in the observation database during the collection period. Although Academy leaders were unable to provide a concrete explanation, they believed that all principals were conducting observations. For example, a principal may be required to utilize a division approved electronic database to log their observations. As a result, this evaluation cannot determine definitively whether these two principals conducted classroom observations during the data collection period. If the zero data for the two principals were removed from the database, the OSI mean increased from 15.58 to 22.3 observations, and the overall group mean increased from 26.4 to 27.5 observations.

Further disaggregation of the observation database is reported in the discussion of evaluation question 2.

Second, participating OSI principals and their schools have operated under additional organizational constraints associated with a "school improvement" designation from the State Department of Education. Academy leaders expressed concerns about these principals feeling "overwhelmed" and experiencing "intervention overload" with the Academy expectations in addition to Department of Education requirements. Multiple participants suggested eliminating competing priorities by combining requirements, particularly if the OSI mandated principal attendance in the Academy. These competing priorities may have impacted the OSI principals' ability to log observations in the database or otherwise complete specific Academy requirements.

Third, the different focus of Cohort 1 may have impacted the observation database. During their second year of Academy participation, Cohort 1 principals focused efforts on distributing instructional leadership through collaborative observations with teacher-leaders in their schools. The teachers recorded multiple observations in their Cohort 1 schools and Academy leaders indicated that teacher-leaders completed many of those observations as a component of the year-two Academy work. These instructional leadership practices are not reflected in the observation count for Academy principals; however, they are indicators of increased instructional leadership practices in the Cohort 1 schools.

Program elements. The Program Director and Coordinators' consistent monitoring of the observation database to gauge participant learning and plan follow-up sessions was an indicator of the program's commitment to building participants' knowledge and skills throughout their Academy participation. Evident within every interview transcript was the emphasis on this constant "tuning process" as a means for increasing knowledge and skills associated with instructional leadership practices. The Academy provided "tools" to assist principals with their work as instructional leaders. The electronic observation protocols allowed principals to collect objective data related to high-yield instructional strategies (Hattie, 2009) and provide timely and objective feedback to teachers. The impact of these "tools" is clearly evident in the teachers' responses to leadership practices that positively impact their classroom instruction.

Collaborative observations, during both Academy sessions and school visits, were the primary means to build depth of understanding. Every member of the leadership team described participant learning either through these relationships or through the learning community within the Academy. Each interview transcript exhibited a heavy emphasis on relationships that were formed during the Principal Academy; the respondents noted that these relationships were a primary means for participants' learning and skill development.

The Dedoose[©] qualitative coding tool also indicated connections between codes according to the code co-occurrence matrix. Participants described the impact of interdistrict networking 16 times within four interviews. This high level of co-occurrence demonstrated the significance of building a learning community among school principals across school districts as a means for professional learning. Principals benefitted from wrestling with problems of practice alongside their colleagues, reflected upon their own professional contexts, experiences, and learning, and applied that learning to concrete and relevant examples (Peterson, 2002). This type of "situated" learning occurs when specific learning is similar to the context where the skill will be implemented. Concepts become fully integrated and understood through experiences and feedback (Leithwood et al., 2004). The Principal Academy provided this "situated" learning experience through a community of practice that facilitated interactions among participants who possessed and shared a variety of professional skills and experiences, which positively impacted their professional learning.

Multiple data sources portrayed principals who provided professional development to their staff on student engagement, which was a high-yield instructional strategy emphasized in the Principal Academy. This promulgation of school-wide professional development was a primary instructional leadership behavior (Alig-Mielcarek & Hoy, 2005). To actively facilitate professional teacher learning associated with research on student engagement, the principals needed knowledge of the instructional strategy, curricula, and observation of instruction (Weber, 1996). The interview code co-occurrence matrix supported this theme. The interview participants discussed their own learning through their emphasis on school-wide professional development—a concept discussed 47 times within the four interviews. The validity of this indicator also was supported by the supply response data in the teacher survey; multiple teacher responses described their principals leading a "Hattie book study," facilitating workshops on "student engagement indicators," or modeling "high-yield instructional strategies" during professional development sessions.

Principals must have the ability to identify, describe, and model high quality instructional strategies, which requires an in-depth understanding of education research (DiPaola & Hoy, 2008; Stein & Spillane, 2005). Teacher responses served as an additional indication of the acquisition of the instructional leadership knowledge and skills necessary to change professional practice. While there was no specific data to assess the extent of <u>individual</u> participant learning, there was ample evidence suggesting in general that Academy principals increased their instructional leadership knowledge and skills and demonstrated their learning in a variety of ways.

Principal engagement in instructional leadership practices. Academy principals were engaging in instructional leadership behaviors as evidenced in multiple sources of data, including the change in their rates of observation, frequency of instructional leadership interactions, and teacher descriptions in the supply-response section of the survey.

Observation rates. Principals observed classroom instruction utilizing observation protocols from the Academy database with increasing rates, which was supported by the teacher survey. Survey responses revealed that only 3.9% of teachers reported "no contact" with their principal in any of the five categories related to instructional supervision. The high observation rate of elementary principals was validated by 77% of elementary teachers falling in the "high contact" group and only 0.8% in the no contact group. Among middle school teachers, 53% reported "high contact" and 2% "no contact." As discussed in question one, there was a clear discrepancy across school levels in frequency of interactions related to instruction. Participating high school principals recorded an average observation rate equal to elementary principals; however, only 29.5% of high school teachers were in the "high contact" group and 60.2% in the "some contact" group. The percentage of high school teachers in the "no contact" group, 10.2%, was the highest percentage among all school levels.

There are several possible explanations for the discrepancy between mean high school principals' observation rate and teachers' reported frequency of interactions. For example, some interactions with principals may not have been perceived as meaningful and therefore not impactful enough to be recalled or reported by teachers. Another possible explanation is that high school principals were completing observations, yet did not provide feedback to teachers or opportunities for reflection or discussion about observed instruction. Nonetheless, it was confounding that a higher percentage of high school teachers reported "no contact" with their principal, especially considering that principals were aware of the Academy expectations and even selected the teachers to participate.

The observation rates of Cohort 2 and Cohort 1 were similar, although the overall increase in the observation rate for Cohort 1 was smaller. Cohort 1 participants were in their second year of the Principal Academy; therefore, their focus was distributing instructional leadership. There was clear evidence in the observation database of teacher-leaders completing observations; as such, this increase in Cohort 1 data may help to explain a lower net change for Cohort 1 than Cohort 2. As previously discussed in question one, the OSI principals faced many additional constraints and obligations within their schools, which likely impacted their rate observation rates during the months of the study.

Frequency groups. Overall, the general the number of teachers that moved to a higher frequency of interaction group suggests that principals were engaged in instructional leadership practices in their schools. This increase in instructional leadership practices is supported by the statistically significant mean frequency score

difference reported by teachers who were evaluated by the same principal during the previous school year, measured at the .01 level of significance. The disaggregation of the frequency indicators provided further analysis and understanding of the principals' frequency of instructional interactions with teachers. The question analysis revealed the two most frequently reported interactions were: "the principal and the teacher discussed the teacher's instruction" and "the principal provided feedback after observing the teacher's instruction." Table 15 outlines the percentage of teachers reporting the frequency of discussion vs. feedback. The teacher survey responses related to principal feedback revealed that feedback was provided by principals in a variety of forms ranging from sticky notes to more formal post-observation conferences. The survey responses indicated that 43.5% of the teachers engaged in discussions with their principal a minimum of several times each month. This is a significant indication of principals engaging in instructional leadership practices. Regarding the receipt of feedback on their instruction, 27.4% of the teachers reported receiving feedback a few times a month or *more.* It is unclear whether teachers distinguished between instructional discussions that may have included feedback, and the receipt of feedback without discussion. This lack of clarification in the survey prompt may have impacted the teachers' responses; however, even without this distinction, these two questions demonstrate significant interactions between principals and teachers focused on instruction, an outcome clearly aligned with Principal Academy goals.

Table 15

	The principal and the teacher discussed the teacher's instruction	The principal provided feedback after observing the teacher's instruction
Valid n	309	306
Never	8.4	8.7
A few times a year	47.7	58.1
A few times a month	31.3	25.5
1-2 days per week	8.7	3.9
More than two days a week	3.5	1.0
Total	100.0	100.0

Percentage of teachers reporting frequency of discussion vs. feedback

Principals monitoring instruction requires a "persistent focus on improving conditions for learning and creating coherence in values and action across classrooms day in and day out" (Hallinger, 2011, p. 137). The efforts of principals in the Academy to conduct classroom observations consistently should help to ensure number of essential school performance indicators, including lesson and curriculum alignment with schoolwide vision and goals and the utilization of high-quality instructional strategies (Alig-Mielcarek & Hoy, 2005; Hallinger & Murphy, 1985; Murphy, 1990).

Teacher survey. The supply-response section of the teacher survey further validated that principals were consistently observing classroom instruction and providing

feedback. When teachers were asked to identify a positive characteristic that their principal used to impact classroom instruction, the most frequently reported positive characteristic was "provides feedback." Robinson (2008) found that teachers were more likely to value and use feedback to improve their instruction when the principal worked directly with teachers on instructional planning and evaluation. A more detailed examination of the supply-response survey items, including feedback, appears in the discussion of evaluation question three.

Principals' instructional leadership impact on teachers' instructional practices. The abundance of quantitative and qualitative data provides ample indicators and descriptors related to principals' instructional leadership behaviors that teachers reported as impacting their instructional practices.

Instructional change and frequency of interactions. The ANOVA to determine the mean instructional change differences between frequency groups revealed a higher degree of instructional change for teachers in the "high contact" group. These findings substantiated data from an earlier study (May & Supovitz, 2011) that found targeted instructional leadership behaviors were more likely to change an individual teacher's practices. The teachers who reported the highest frequency of principal interactions also reported the highest degree of instructional change. The absence of any statistical difference between the "no contact" and "some contact" groups indicated that a high level of principal interactions, quantified as a few times a month or more, was necessary for teachers to change their instructional practices to a greater degree. This type of principal-teacher interaction is referred to as "targeted" instructional leadership (May & Supovitz, 2011). There was a statistically significant increase, at the .01 level, in the frequency of instructional interactions as reported by teachers who were evaluated by the same principal during the previous school year. This finding reveals that principals were engaged in more targeted instructional leadership during their Academy participation. Consequently, these actions positively impacted the degree of instructional change reported by teachers (May & Supovitz, 2011).

Principal support and frequency of interactions. Appraisal items from the PSS are associated with a principal's support of instruction (DiPaola, 2012). The ANOVA of principal support by frequency groups revealed a statistical significance, at the .05 level, between the three frequency of interaction groups. These results indicated that even if a principal moderately increased his/her frequency of interactions with teachers, it positively impacted teachers' perceptions of principal support related to instruction and resulted in a positive effect on teacher performance (DiPaola, 2012).

To further investigate the relationship between principal support and teacher instructional performance, a correlational analysis was used to determine whether there was a statistically significant relationship between teachers' perceptions of principal support and teachers' change in instructional practices. The results of the Pearson correlation indicated there was a positive relationship (r = .344) between a teacher's perception of principal support and the degree of instructional change. However, a shared variance of 11.8% may limit the meaningfulness of this correlation.

Table 16

		Mean Change	Mean PSS
Mean Change	Pearson Correlation	1	.344**
	Sig. (1-tailed)		.000
	N	310	310
Mean PSS	Pearson Correlation	.344**	1
	Sig. (1-tailed)	.000	
	N	310	310

Correlation Between PSS and Degree of Instructional Change

** Correlation is significant at the 0.01 level (1-tailed).

Teacher feedback on impactful principal behaviors. The qualitative analysis of the teachers' ISUPICT items revealed multiple principal characteristics that positively impacted teacher instruction. The most frequently reported characteristic was "providing feedback," which clearly was emphasized during the Principal Academy. The feedback that teachers described as impactful closely mirrored the "formative evaluation of teachers" described by Hattie (2009, p. 181). This formative process was based on providing feedback to teachers, in the form of data, related to a specific instructional strategy (Hattie, 2009). For principals supervising instruction, this included the identification of an instructional focus, such as student engagement and engaging in dialogue with teachers to improve their instruction. Support and Buckley (2008) described these conversations based on evidence as "high-leverage," or "carefully chosen feedback that is delivered in such as way that makes recipients more likely to be responsive to change" (Supovitz & Buckley, 2008, p. 5). Teachers who responded to the survey described their principals' feedback as "non-threatening" and "constructive" and supported the premise that the most effective feedback is detailed, non-judgmental, low

risk, and based on specific classroom behaviors (Blasé & Blasé, 1999; Hattie & Timperley, 2007). The use of the electronic observation database enabled Academy principals to provide their teachers with this timely, objective feedback.

The purpose of feedback is to facilitate a change in others (Hord & Hall, 1987; Hattie & Timperley, 2007). This evaluation study yielded clear evidence that Academy principals employed high-leverage feedback as a means for effective instructional improvement. As a result, teachers reported feeling "motivated" and "confident" in their ability to meet instructional expectations because the feedback was a means for clarifying goals and expectations. These results are supported by previous work that described effective feedback for teachers as increasing their motivation, innovation, and the variety of instructional strategies they employ in the classroom (Blasé & Blasé, 1999; Sheppard, 1996). Supovitz and Buckley (2005) referred to these feedback behaviors as "highleverage instructional leadership: evidence-based feedback given by principals that induces teachers to examine their instruction in order to improve the effectiveness of their practice" (2005, p. 5).

The second most frequent positive characteristic of principals was "supportive" by providing resources for instruction and encouraging teacher risk-taking by employing new instructional strategies. Supportive principals created a positive, non-threatening school climate. These descriptions of Academy principals were consistent with prior studies on effective instructional leadership behaviors, including the promotion of schoolwide professional development that facilitates teachers as learners by providing opportunities and resources associated with instruction (Alig-Mielcarek & Hoy, 2005). Although some of these specific instructional leadership behaviors were not overtly emphasized in the program design of the Principal Academy, they nonetheless were foundational instructional leadership behaviors indicative of the Academy principals' engagement in instructional leadership practices. In particular, a significant Academy element was the emphasis for principals to support teacher learning and development; this instructional leadership behavior also has been shown positively to impact instruction and student outcomes (Robinson et al., 2008).

Instructional leaders recognize their impact on teacher attitudes and behaviors (May & Supovitz, 2011; Robinson et al., 2008; Supovitz et al., 2009). This theme also emerged in the teacher survey responses in this evaluation. Teachers in the Academy survey explained two types of modeling that impacted their classroom practices. First, principals modeled positive interactions with students, teachers, and parents, which essentially set the expectations for the school. Teachers described feeling "more patient" and forming "better relationships" with their students due to the positive interactions that their principal consistently modeled. Second, the modeling of instructional strategies was heavily emphasized in the Principal Academy and evidenced by program leaders who modeled high-quality professional learning and provided associated resources for Academy principals to replicate the professional learning in their schools. Data from the teacher survey responses suggested that Academy principals were utilizing the tools and resources to model high-yield instructional strategies. Multiple teachers described book studies and professional development sessions to unpack indicators of student engagement. Throughout these descriptions, the principal was described as modeling effective teaching strategies that enabled teachers to integrate these strategies into their own instruction more confidently. Providing these opportunities for teachers to engage in professional learning demonstrated positive impact on teacher behaviors and practices (Blasé & Blasé, 1999). Principals who establish school goals and expectations around high-yield instructional strategies by modeling are representative of multiple dimensions of instructional leadership (Alig-Mielcarek & Hoy, 2005; Robinson et al., 2005).

The third characteristic of principals that positively impacted teacher instruction was "engaged," whereby the principal was visible in the school building, dedicated, and involved in all aspects of the school as an "active participant." Although not a formal component of the Academy, "engaged" principals also represented dimensions of instructional leadership by being visible in classrooms to monitor instruction and participating in professional development as learners (Alig-Mielcarek & Hoy, 2005).

This study provided an abundance of clear evidence that Principal Academy participants demonstrated instructional leadership behaviors and practices that impacted teachers' instructional practices. Ultimately, the goal was improved instructional practices that resulted in improved student outcomes.

Implications for Practice

School district leaders, program developers, and school administrators must consider the elements of effective professional development when designing activities and experiences to engage principals and teachers in purposeful, high quality professional growth. To assist school principals and develop their capacity for instructional leadership, school district leaders should support and encourage professional learning experiences such as those provided by the Principal Academy, whose participants engaged in learning communities with colleagues from across school districts and deepened their understanding of Hattie's (2010) high-yield instructional strategies through observation protocols in schools. Programs should provide principals with "tools" to help them "make sense of difficult work," such as the electronic observation protocols. These researchbased best practices, as well as other expectations for Academy participants, were consistent with the Standards for Professional Learning (Killion & Crow, 2011); principals benefitted from discussing their professional experiences and problems of practice alongside their colleagues (Peterson, 2002).

Building a community of practice that is easily accessible to principals may be particularly challenging for smaller school districts with fewer schools. Collaboration between neighboring districts, with the support of district leaders, may be necessary to facilitate networking among school leaders. The analysis of interview transcripts from this evaluation consistently revealed that this practice was "highly beneficial" for the Academy. Moreover, interviewees referred to the principalship as "isolating" and "a lonely place to be" and described the Academy's cross-district networking as "more comfortable and somewhat anonymous" and a means to eliminate "uncomfortable competition" that may occur when problem-solving with district colleagues. School districts of all sizes should acknowledge that principals often work alone and therefore should encourage within- and cross-district collaboration to assist and support professional learning opportunities and, as one interviewee described, to "share struggles in a non-threatening" environment.

Given the positive impact of principal feedback and modeling on teachers' instructional practices, district leaders can model similar impactful leadership behaviors when working with and supporting principals (Blasé & Blasé, 1999; Hattie, 2009; Hattie & Timperley, 2007). For example, in addition to annual or semi-annual discussions of student achievement results, district leaders should partner regularly with principals to jointly review, reflect, and critique specific observational data that principals provide to teachers in an effort to improve the instructional feedback process and foster teachers' self-reflection and professional growth. To be sure, district leaders must be mindful of their own roles as instructional leaders and they should model leadership practices and behaviors that have the potential to influence positive instructional changes in principals and teachers.

Principals should be aware that different contexts and conditions within schools require different instructional leadership behaviors. For example, whole-faculty interactions or discussions regarding instructional improvement are likely to have only incremental impact; however, more targeted instructional leadership behaviors with a smaller subset of teachers, such as those emphasized in the Principal Academy, have much greater potential to produce a higher degree of instructional changes (May & Supovitz, 2010). Teachers reported the frequency of principal interactions around instruction significantly impacted not only the degree of instructional change, but also teachers' perceptions of a principal's instructional support. Such interactions were necessary to inspire greater instructional changes among teachers, especially when the teachers reported that these interactions occurred regularly or several times each month. Although the results of this evaluation are not generalizable, they are worthy of consideration for principals who wish to target their instructional leadership in order to change teachers' instructional practices.

Data from this evaluation clearly identified the impact of modeling on effective professional growth. During Academy sessions, the Academy leaders articulated explicit learning expectations and modeled many of the elements of effective professional learning in the Academy activities they facilitated. Principals should be mindful of these elements and model similar best practices in their schools to maximize the application and transfer of new instructional strategies for teachers. In keeping with the Standards for High Quality Professional Learning (Killion & Crow, 2011), principals should be reminded that professional learning is an ongoing, job-embedded process for teachers. Similar to the "tuning process" principals experienced in the Academy, a continuous focus on the refinement of high-yield instructional strategies (Hattie, 2009) is necessary for teachers. Supervision of instruction is not an event; rather it is an ongoing process of growth, reflection, and improvement facilitated by teacher interactions with instructional leaders.

Recommendations for the Leadership Academy

The evaluation of the Principal Academy was focused on three evaluation questions designed to reveal the impact on principals' instructional leadership knowledge, skills, and practices and the subsequent impact on classroom instruction. Data from the evaluation study demonstrated that the Academy clearly impacted participants' knowledge, skills, and practices. In addition, the design and delivery of the Academy adhered to the Standards of Professional Learning (Killion & Crow, 2011). To assess additional outcome effectiveness, the Academy should consider data collection at the individual participant level. The majority of data collected for this evaluation were at the group level, which provided useful guidance to Academy leaders for design of Academy activities; however, there was little assessment of impact on individual learning. In future endeavors, the Academy should consider measuring impact on individuals' skills and dispositions for further differentiation of professional learning.

The data revealed a discrepancy in the frequency of interactions between principals and teachers at various school-grade levels; specifically, high school teachers were much less likely to report "high contact" with their principals. The Academy should recognize this discrepancy and consider additional differentiated activities to improve or increase principal interactions at the high school level. Another consideration may be to include the entire administrative team, principals and assistant principals, at the high school level. The Academy also should consider supporting an expansion of the samelevel collaborative principal teams and incorporate a vertical dimension that includes elementary, middle, and high school leaders. These opportunities for reflective practice would permit participants from each level to better recognize broader K-12 connections and apply continuity of instructional leadership best practices across all grade configurations.

Recommendations for Future Evaluation and Research

The evaluation of the Principal Academy provides insight into opportunities for further study:

- The intent of instructional leadership is to improve classroom instruction and thereby student outcomes; therefore, future research on instructional leadership best practices should measure the impact on teachers as the intended "recipients" of leaders' newly-acquired knowledge, skills, and dispositions.
- 2. District leaders and principals will benefit from additional research that examines the optimal frequency of targeted and broad instructional leadership activities, as

well as assessing teachers' receptivity to instructional change. (May & Supovitz, 2010).

- Data from the Principal Support Scale (PSS) suggests that further research is needed to investigate the relationship between principals' support of instruction and the degree of teachers' instructional change.
- 4. Principal-teacher relationships are complex and influenced heavily by a myriad of contextual factors. More focused research, such as case studies, may provide a deeper understanding of the conditions that impact effective principal-teacher interactions.
- 5. Evaluation of professional development programs for school principals is necessary to design and differentiate the most effective professional learning that is linked to positive teacher and student outcomes.
- 6. Ideally, a longitudinal study of the impact of principals' instructional leadership practices on teachers' instructional change would yield more substantive data to guide the work of professional developers, school district leaders, and school principals.

Although results of a program evaluation are not generalizable, the findings of this study are consistent with the review of the literature and worthy of consideration for program directors, school division leaders, and school principals. Principals in this evaluation participated in high quality professional development that focused on supervision of instruction and high-yield instructional strategies gained knowledge and skills, which positively which positively impacted teachers' classroom instruction (Hattie, 2009). Clearly, the Principal Academy's approach to engage principals in professional learning as an avenue for improving classroom instruction for students is supported by the findings of this evaluation.

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Appendix A

Program Evaluation Standards Joint Committee on Standards for Education Evaluations (2011)

Utility Standards

The utility standards are intended to increase the extent to which program stakeholders find evaluation processes and products valuable in meeting their needs.

- U1 Evaluator Credibility Evaluations should be conducted by qualified people who establish and maintain credibility in the evaluation context.
- U2 Attention to Stakeholders Evaluations should devote attention to the full range of individuals and groups invested in the program and affected by its evaluation.
- U3 Negotiated Purposes Evaluation purposes should be identified and continually negotiated based on the needs of stakeholders.
- U4 Explicit Values Evaluations should clarify and specify the individual and cultural values underpinning purposes, processes, and judgments.
- U5 Relevant Information Evaluation information should serve the identified and emergent needs of stakeholders.
- U6 Meaningful Processes and Products Evaluations should construct activities, descriptions, and judgments in ways that encourage participants to rediscover, reinterpret, or revise their understandings and behaviors.
- U7 Timely and Appropriate Communicating and Reporting Evaluations should attend to the continuing information needs of their multiple audiences.
- U8 Concern for Consequences and Influence Evaluations should promote responsible

and adaptive use while guarding against unintended negative consequences and misuse.

Feasibility Standards

The feasibility standards are intended to increase evaluation effectiveness and efficiency.

- F1 Project Management Evaluations should use effective project management strategies.
- F2 Practical Procedures Evaluation procedures should be practical and responsive to the way the program operates.
- F3 Contextual Viability Evaluations should recognize, monitor, and balance the cultural and political interests and needs of individuals and groups.
- F4 Resource Use Evaluations should use resources effectively and efficiently.

Propriety Standards

The propriety standards support what is proper, fair, legal, right and just in evaluations.

- P1 Responsive and Inclusive Orientation Evaluations should be responsive to stakeholders and their communities.
- P2 Formal Agreements Evaluation agreements should be negotiated to make obligations explicit and take into account the needs, expectations, and cultural contexts of clients and other stakeholders.
- P3 Human Rights and Respect Evaluations should be designed and conducted to protect human and legal rights and maintain the dignity of participants and other stakeholders.
- P4 Clarity and Fairness Evaluations should be understandable and fair in addressing

stakeholder needs and purposes.

- P5 Transparency and Disclosure Evaluations should provide complete descriptions of findings, limitations, and conclusions to all stakeholders, unless doing so would violate legal and propriety obligations.
- P6 Conflicts of Interests Evaluations should openly and honestly identify and address real or perceived conflicts of interests that may compromise the evaluation.
- P7 Fiscal Responsibility Evaluations should account for all expended resources and comply with sound fiscal procedures and processes.

Accuracy Standards

The accuracy standards are intended to increase the dependability and truthfulness of evaluation representations, propositions, and findings, especially those that support interpretations and judgments about quality.

- A1 Justified Conclusions and Decisions Evaluation conclusions and decisions should be explicitly justified in the cultures and contexts where they have consequences.
- A2 Valid Information Evaluation information should serve the intended purposes and support valid interpretations.
- A3 Reliable Information Evaluation procedures should yield sufficiently dependable and consistent information for the intended uses.
- A4 Explicit Program and Context Descriptions Evaluations should document programs and their contexts with appropriate detail and scope for the evaluation purposes.
- A5 Information Management Evaluations should employ systematic information collection, review, verification, and storage methods.
- A6 Sound Designs and Analyses Evaluations should employ technically adequate

designs and analyses that are appropriate for the evaluation purposes.

- A7 Explicit Evaluation Reasoning Evaluation reasoning leading from information and analyses to findings, interpretations, conclusions, and judgments should be clearly and completely documented.
- A8 Communication and Reporting Evaluation communications should have adequate scope and guard against misconceptions, biases, distortions, and errors.

Evaluation Accountability Standards

The evaluation accountability standards encourage adequate documentation of evaluations and a metaevaluative perspective focused on improvement and accountability for evaluation processes and products.

- E1 Evaluation Documentation Evaluations should fully document their negotiated purposes and implemented designs, procedures, data, and outcomes.
- E2 Internal Metaevaluation Evaluators should use these and other applicable standards to examine the accountability of the evaluation design, procedures employed, information collected, and outcomes.
- E3 External Metaevaluation Program evaluation sponsors, clients, evaluators, and other stakeholders should encourage the conduct of external metaevaluations using these and other applicable standards.

Appendix B Teacher Survey

The College of William & Mary Informed Consent

I agree to participate in the survey as part of a "Program Evaluation of a Leadership Academy for School Principals." The Principal Academy is a professional development program for school administrators. The purpose of this study is to evaluate the effectiveness of the professional development program. The information collected from this survey may be used to evaluate program outcomes and/or improve program components, *not* to evaluate school administrators or teachers.

I understand that as a teacher who works with a school administrator participating in the Principal Academy, I am being asked to complete a survey as part of the program evaluation study. The survey has four sections and requires no more than 10 minutes to complete.

I understand there are no known personal risks involved with this research and I am free to withdraw from the survey at any point without penalty. Only the researcher will know my personal information and will maintain the strictest confidentiality; my name or school name will not be associated with the data or appear in the research reports. The data collected will be aggregated for analysis across multiple school sites across the state of Virginia and will not be connected to any specific school, principal, or teacher.

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2013-11-01 AND EXPIRES ON 2014-11-01.

If you have any questions or concerns about this study or its procedures, please notify Dr. Ward, chair of the EDIRC, at 757-221-2358 (EDIRC-L@wm.edu) and Dr. Kirkpatrick, Chair of the PHSC at 757-221-3997 (phsc-chair@wm.edu).

My electronic signature below signifies my voluntary participation in this evaluation project and that I have received a copy of this consent form.

Enter your email address as your electronic signature. Please use the email address that received the invitation to this survey.

Please indicate which level best represents your grade/school teaching assignment

- O Elementary (K-5) (1)
- O Middle/Jr. High (6-8, 7-9) (2)
- High School (9-12) (3)

Please indicate how your years of teaching experience.

- O 0 to 3 years (1)
- O 4 or more years (2)

In the survey questions that follow, the term principal refers to the school administrator that is participating in the professional development program and invited you to participate in this survey.

Section 1

The following questions are about your experience(s) working with your principal during this school year. Please indicate the extent of your interactions along a scale from NEVER (1) to MORE THAN TWO DAYS A WEEK (5).

	Never (1)	A few times a year (2)	A few times a month (3)	1-2 days per week (4)	More than two days a week (5)
1. The principal and the teacher discussed the teacher's instruction	O	0	0	0	o
2. The principal observed the teacher instructing a class	O	o	o	O	о
3. The teacher observed the principal instructing a class	O	o	O	O	O
4. The principal provided feedback after observing the teacher's instruction	•	0	0	0	О
5. The principal reviewed the work produced by a teacher's students	0	0	•	0	О

Did the same principal supervise you last year?

- O Yes. (Completed Section 1A)
- No. (Moved to Section 2)

Section 1A

Because you worked with the same principal the previous year, the following questions are about your experience(s) working with your principal during the previous school year. Please indicate the extent of your interactions along a scale from NEVER (1) to MORE THAN TWO DAYS A WE (5).

(5).	Never (1)	A few times a year (2)	A few times a month (3)	1-2 days per week (4)	More than two days a week (5)
1. The principal and the teacher discussed the teacher's instruction	0	0	o	o	o
2. The principal observed the teacher instructing a class	0	0	O	0	О
3. The teacher observed the principal instructing a class	0	O	O	O	о
4. The principal provided feedback after observing the teacher's instruction	•	Ο	0	О	о
5. The principal reviewed the work produced by a teacher's students	0	0	0	0	о

Section 2

The following categories ask you to reflect and report changes, if any, in your instructional practices during this school year. Please indicate the extent to which you may have changed instructional practices in each category along a scale from NOT AT ALL (1) to A GREAT DEAL (7).

	NOT AT ALL				A GREAT DEAL		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. The types of formative assessments you use	0	0	0	0	•	0	o
2. Student grouping	0	0	0	0	0	0	o
3. Strategies to actively engage students in their learning	0	0	0	0	0	0	o
4. The kinds of work you have students do	0	0	o	0	0	0	o
5. The kinds of questions you ask students	0	0	o	0	0	0	0
6. Your understanding of the needs of individual students in your class	0	0	0	0	0	O	•
7. The instructional strategies you use	•	0	•	•	0	0	0

Section 3

The following statements are about your perceptions of supportive behaviors given by your principal during this school year. Please indicate the extent to which you agree with each of the following items along a scale from STRONGLY DISAGREE (1) to STRONGLY AGREE (6) by filling in the appropriate circle.

STRON	IGLY DISAGR	EE	STRONGLY AGREE			
	(1)	(2)	(3)	(4)	(5)	(6)
1. My principal offers constructive feedback after observing my teaching.	0	0	0	0	0	O
2. My principal provides frequent feedback about my performance.	0	0	0	O	O	•
3. My principal helps me evaluate my needs.	0	0	o	o	0	о
4. My principal provides suggestions for me to improve instruction.	0	0	0	0	0	•

Section 4

- 1. Describe and give a detailed example of a positive characteristic (over or covert, formal or informal) that your instructional supervisor uses frequently to influence what you think or do that directly improves something about your classroom teaching.
- 2. Describe and give a real-life example of the effects (impacts) that the characteristic has on your thoughts (related to teaching) and behavior (related to teaching).
- 3. Describe and illustrate your instructional supervisor's goals associated with the characteristic you identified above.
- 4. How effective is the characteristic in getting you to think or do what the instructional supervisor intends?

	Very ineffective (1)	Ineffective (2)	Somewhat ineffective (3)	Somewhat effective (4)	Effective (5)	Very effective (6)
How effective is the characteristic in getting you to think or do what the principal intends?	0	0	0	0	0	o

Please explain why.

5. What feelings do you have about the instructional supervisor's characteristic?

Appendix C Focus Group Protocol

Thank you for taking the time today to speak with me about the Principal Academy. The primary goal of the academy is to increase the instructional leadership knowledge and skills of participants. Today, I would like to ask you questions about your work and observations in the Principal Academy. Your responses will become part of my doctoral research of program outcomes. Our conversation today should take no more than one hour. I am audio-recording our session for transcription and analysis. All of your responses will remain confidential and identifying information will be redacted in the transcript. You may withdraw from this interview at any time without penalty.

Before we begin, I'd like you to maintain several group norms:

- Respect everyone's point of view. There are no right or wrong answers.
- Please do not identify other people by name. You may refer to them instead as "a principal" or "a teacher."
- Due to the audio recording, I need only one person at a time to speak.
- In order to maintain our group confidentiality, please do not share or discuss specific ideas or information shared in this session with others.
- 1) Please introduce yourself and your role in the Principal Academy.
- 2) The primary goal of the academy is to increase the instructional leadership knowledge

and skills of participating principals.

a. From your perspective, how does the Academy define instructional

leadership?

- b. What specific instructional leadership knowledge and skills do you expect participants to gain from their participation in the academy sessions?
- 3) What impact, if any, may have you observed pertaining to the knowledge of

participating principals related to their instructional leadership?

- a. Please share specific examples you may have observed that demonstrate that principals have increased their knowledge of instructional leadership?
- b. How does that evidence reflect the principal's instructional leadership?

- 4) What evidence, if any, have you observed of principals applying instructional leadership skills?
 - a. Please share specific examples you may have observed in the field.
 - b. How does that evidence reflect the principal's instructional leadership?
- 5) Have you observed any unexpected outcomes, positive or negative, on the principals who are participating in the academy?