Principals' Perceptions of Instructional Leadership Behaviors and Student Achievement in Kansas Secondary Schools

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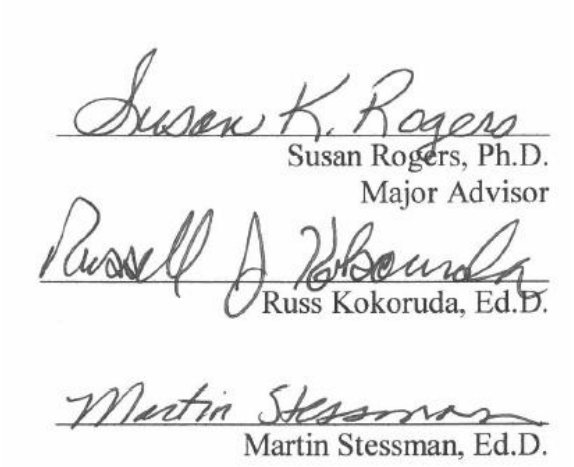

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Abstract

The purpose of this study was to determine the strength of relationships between principals' perceptions of their implementation of Marzano, Waters, and McNulty's (2005) 21 instructional leadership behaviors and student achievement on the Kansas English language arts (ELA) and mathematics assessments. The participants in this study were Kansas public and private high school principals. An online survey was sent to 380 principals, yielding 27 viable responses. As a result of the small sample size appearing to have affected the results, a Kendall's Tau non-parametric index was used to follow up the hypothesis testing involving Pearson product moment correlation coefficients. The findings of this study provided evidence for positive, statistically significant relationships between the instructional leadership behaviors of communication and discipline and student achievement on the Kansas mathematics assessment. Additionally, the results of this study indicated positive, statistically significant relationships between the behaviors of communication, discipline, outreach, and relationship and student achievement on the Kansas ELA assessment. The data obtained from this study could be used by building principals to improve student achievement through engaging in self-reflection and participating in professional development focused on these instructional behaviors that Marzano et al. (2005) claimed could enhance student achievement. Additional research could be conducted during a time when principals are not in the middle of a global pandemic. Research could also be completed to determine if there is a relationship between elementary and middle school principals' self-perception of implemented instructional leadership behaviors and student achievement within the state of Kansas. Further research could also be conducted using a survey based on the instructional

leadership behaviors revised and relabeled by Roleau (2021) as leadership responsibilities.

Dedication

This dissertation is dedicated to my incredible and supportive wife, Morgan, and our phenomenally amazing children, Braxton, Nolan, and Hadley – always, always know you are believed in more than you could ever be told. Also, this dissertation is dedicated to my grandfather – the original professor, the doctor, and the reason I knew I could and eventually would finish this journey. Thank you, all.

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I would not have been able to complete the coursework, field experiences, or dissertation without the love and support of my amazing family and incredible friends. Thank you to my colleagues at Shawnee Heights, Archbishop O'Hara, Westlake, Topeka High, and Seaman. Thank you to those who have reminded me that I could, encouraged me through the obstacles, and helped me to earn this degree – you gave a struggling student the confidence to do what many said was impossible.

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Chapter 1

Introduction

Rigor, relevance, and relationships are common themes found in the mission statements of school districts and high schools across the United States. Although well intended, the words in these mission statements have minimal impact on student academic achievement outcomes. Scoring below average in mathematics and nearing average in reading, students from the United States are outperformed by their same-age peers worldwide (Organisation for Economic Co-Operation and Development [OECD], 2015). According to the Programme for International Student Assessment data (PISA, 2015) collected on achievement in 70 OECD countries, the United States ranked 31st overall, 39th in mathematics, and 24th in reading. As a result of these findings, student academic performance and achievement in the United States has become increasingly scrutinized. The increased focus on academic performance has caused educational leaders to reflect on programmatic considerations to address the need to increase academic achievement.

Effective instructional leaders are intensely involved in curricular and instructional issues that directly affect student achievement (Cotton, 2003). To enhance school leadership and identify effective practices, Marzano, Waters, and McNulty (2005) identified 21 behaviors of instructional leaders. These behaviors have been found in multiple studies across the United States and Canada to have an effect on student achievement across multiple grade levels (Larsen, 1984; Alig-Mielcarek, 2003; Johnson, 2004; Mees, 2008; Schindler, 2012; Pettigrew, 2013; and Warner, 2014). The researcher conducted this study to identify to what extent a relationship exists between secondary

principals' perceptions of instructional leadership practices and student achievement on the Kansas Mathematics and English Language Arts (ELA) assessments.

Background

According to the Kansas State Department of Education (KSDE, 2019), Kansas was home to more than 150,000 students in grades nine through 12 during the 2018-2019 academic year. Student population was a dynamic figure as it represented student counts at data collection dates throughout the year and did not take into account students relocating into or out of the state. Additionally, student population numbers were representative of the collection of all attendance centers and virtual academies, including public and non-public institutions, as well as general comprehensive, special education, and alternative sites. At the time of the study, the student population was comprised of 51% male-identifying students and 49% female-identifying students (KSDE, 2019). During the 2018-2019 school year, approximately 62,500 students (42% of the secondary student population) qualified for free or reduced lunch (KSDE, 2019). During the same time, 18,250 students (12.16% of the total population of high school students) qualified for some form of Individualized Education Plan (IEP), including those students qualifying for academic enrichment or gifted services (KSDE, 2019). The racial demographics of Kansas high school students during the 2018-2019 school year are found in Table 1.

Table 1

2018–2019 Kansas Student Population Race Distribution

Race	Percentage
Asian	3
American Indian/Alaska Native	1
Black	7
Hispanic	19
Multi-Ethnic	5
White	65

Note. Adapted from "State Attendance Rate by Type and Gender All Schools," by KSDE, 2019. Retrieved from Kansas K-12 Report Generator - Data Central (ksde.org)

There were 24 accredited, non-public high schools in Kansas (KSDE, 2019). These included schools of religious affiliation, reservation schools, and private mental health facilities. The total enrollment of non-public high schools was 9,273 students, representing 6.2% of total students enrolled in grades nine through 12 during the 2018-2019 school year (KSDE, 2019). There were 286 unified public school districts of varying sizes, both in enrollment and physical space. All public and non-public high schools in the state of Kansas have the opportunity to join the state activities association, which organizes these schools into classes according to enrollment. The Kansas State High School Activities Association (KSHSAA) was comprised of 356 public and private high schools at the time of the study. Based upon enrollment numbers, each high school was placed into one of six classes, identified by a numerical value of one through six, and the letter 'A.' Table 2 includes the 2018-2019 KSHSAA member school classification

distribution. The classification, number of schools, enrollment ranges, and percentage of the total schools are provided.

Table 2

2018-2019 KSHSAA Member School Classification Distribution

Classification	Number of Schools	Enrollment Range	Percentage
6A	37	1,320-2,462	10
5A	36	748-1,313	10
4A	36	317-679	10
3A	64	174-315	18
2A	64	105-172	18
1A	119	14-104	34

Note. Adapted from "2018-2019 Classifications and Enrollments," by KSHSAA, 2018. Retrieved from www.kshsaa.org/Public/General/Classifications.cfm

According to KSDE, during the 2018-2019 academic year, the largest high school was Wichita East High School, with a 9-12 enrollment of 2,462 students. In comparison, the smallest high school, Healy High School, in Healy, Kansas, had a 9-12 enrollment of 14 students.

Statement of the Problem

Much data exists to support that U.S. students are underperforming on academic performance assessments compared to their typical peers worldwide (PISA, 2012). Principals must find ways to increase student achievement in conjunction with all the managerial responsibilities of a building leader. According to Schindler (2012), data exists to support that the instructional leadership behaviors identified by Marzano et al. (2005), when implemented by building principals, increased the levels of student

academic achievement in districts across the state of Texas. The individual data trends for student achievement in Kansas mirror that of the United States, signifying that students are underperforming compared to their same-aged peers worldwide. At the time the researcher was conducting this study, no other studies had been conducted to identify the extent principals' perceptions of instructional leadership behaviors, implemented at the building level, have a relationship with student performance on the Kansas mathematics and English Language Arts (ELA) assessments.

Purpose of the Study

To maximize student achievement, building principals must have a solid understanding of the impact their leadership behaviors have on student achievement. The first purpose of this study was to determine the extent to which there is a relationship between principals' perceptions of their instructional leadership behaviors and levels of student academic achievement at the building level, as measured by the Kansas mathematics assessment. The second purpose of this study was to determine the extent there is a relationship between principals' perceptions of their instructional leadership behaviors and levels of student academic achievement as measured by the Kansas ELA assessments.

Significance of the Study

The research was conducted to determine if there is a relationship between the self-perceived instructional leadership behaviors of high school principals and the level of performance on Kansas Mathematics and ELA assessments. Based on survey data gleaned from principals' self-perceptions of demonstrated leadership behaviors, recommendations could be made to enhance professional development for administrators

in meaningful ways to increase student achievement on state assessments. Accordingly, student academic achievement throughout the state of Kansas, and potentially across the country, might be increased through the building principal's implementation of Marzano et al.'s (2005) 21 behaviors of instructional leadership.

Delimitations

In accordance with Lunenburg and Irby (2008), "Delimitations are self-imposed boundaries set by the researcher on the purpose and the scope of the study" (p. 134). The delimitations of this study included:

1. The sample was limited to Kansas public and private high school principals.
2. Survey data were collected online using Google Forms.
3. Data were collected over a two-month window during the spring of 2020.
4. State assessment and school classification data were collected from the 2018-2019 school year.
5. Principals were requested to self-report assessment data.

Assumptions

This study required building principals to reflect on their own leadership behavior. It was assumed that principals would enter with base-level knowledge of Marzano et al.'s (2005) theory on instructional leadership behaviors, and accurately reflect their current level of engagement with those behaviors. It was also assumed that building principals would complete the survey and accurately self-report state assessment data on Kansas mathematics and ELA Assessments.

Research Questions

To establish the extent to which a relationship exists between self-perceived instructional leadership behaviors among Kansas high school principals and student academic achievement, the following research questions were developed:

RQ1. To what extent is there a relationship between principals' perceptions of demonstrated instructional leadership behaviors and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement, as measured by the Kansas mathematics assessment?

RQ2. To what extent is there a relationship between principals' perceptions of demonstrated instructional leadership behaviors and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement, as measured by the Kansas ELA assessment?

Definition of Terms

The following section contains definitions for essential terms included in this study. The researcher identified six key terms that were critical to the interpretation of the results established.

Instructional leadership behaviors. Marzano et al. (2005) identified 21 instructional leadership behaviors (see Table 3), labeled as personal characteristics exhibited by building principals intended to improve student achievement outcomes. These behaviors were self-assessed and self-reported by participants in the current study.

Kansas Assessment Program. The Kansas Assessment Program (KAP) is a standards-based evaluation program developed by the University of Kansas Achievement and Assessment Institute (KU AAI). KAP offers general assessments, alternative

assessments (Dynamic Learning Maps [DLM]), English fluency exams, and career pathway assessments. There are three areas assessed by KAP: ELA, science, and mathematics.

ELA assessment. KU AAI designed the ELA assessment for KSDE to assess student mastery of Kansas ELA standards at the tenth grade. The assessment was divided into two machine-scored sections, each lasting 45 to 60 minutes in length, covering English, reading, and writing. Students were granted access to accommodations as prescribed in their own IEP. Students needing to access a modified assessment due to their cognitive deficits were administered the DLM. Scoring for this assessment was measured by numerical values ranging from level 1 to level 5.

Kansas mathematics assessment. The Kansas Mathematics Assessment, also written by KU AAI for KSDE, was designed to assess student mastery of Kansas mathematics standards. Administered to students in the tenth grade, this assessment aimed to identify a student's performance level. This test was divided into two sections; the first section covers the skills and concepts associated with the ninth-grade mathematics standards, and the second section assesses strategic thinking and reasoning abilities to problem-solve and communicate their conclusions. Students were granted access to accommodations as prescribed in their own IEP. Students needing to access a modified assessment due to their cognitive deficits were administered the DLM. Scoring for this assessment was measured by numerical values ranging from level 1 to level 4.

Student academic achievement. The building average provided by KSDE to, and reported by, each responding principal for both the mathematics and ELA assessments was defined as student academic achievement. Each building principal was

asked to self-report the percentage of students performing at the proficient (level 3) and advanced (level 4) levels.

School size. Each building principal was asked to identify the size of her or his building by attendance as reported during the September 2019 count date for the Kansas High School Activities Association (KSHSAA) and was categorized by their corresponding class ranging from 1A to 6A.

Organization of the Study

This study included five chapters. Chapter 1 included the background, problem statement, purpose, significance, delimitations, assumptions, research questions, and the definition of terms. Presented in Chapter 2 is the literature related to instructional leadership, principals' instructional leadership behaviors, principals' perceptions of their own instructional leadership behaviors, and student achievement linked to principal behaviors. Chapter 3 contains the methodology utilized in the study, which includes the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and the limitations of the study. The descriptive statistics and the results of the hypotheses testing are reported in Chapter 4. Chapter 5 includes a study summary, findings related to the literature, and the conclusions.

Chapter 2

Review of the Literature

As noted by Marzano et al. (2005), one of the most consistently popular themes in education leadership has been instructional leadership. In their review of contemporary literature on leadership, Leithwood, Jantzi, and Steinbach (1999) note that "instructional leadership is one of the most frequently mentioned in educational leadership concepts in North America" (p. 18). It was important to determine the extent to which a relationship exists between instructional leadership behaviors and student achievement. This chapter includes a history and definition of instructional leadership, principals' instructional leadership behaviors, principals' perceptions of their own instructional leadership behaviors, and student achievement linked to principal behaviors.

Instructional Leadership: A History and Definition

For as long as formalized education has been in existence, movements have aimed to improve the intended outcomes of secondary education. Many of these movements focused on providing equal opportunities to students regardless of barriers. Few of those focused on the influence of the administrator in improving student outcomes, like that of the 1983 work of the National Commission on Excellence in Educational (NCEE). *A Nation at Risk, The Imperative for Educational Reform*, the resulting product of the two-year NCEE study, provided valuable insight that identified the role the building principal should play in improving the education students receive. These findings facilitated a response from school systems, which was received in April of 1984 and began to lay the groundwork for what would become instructional leadership. The response from NCEE highlighted the responsibilities of the building principal, as it called for the need to

recognize diversity, create individualized learning, provide recognition and celebration of all learning, create productive and safe learning environments, refine discipline, conduct evaluations for improvement purposes, and be actively involved in the pursuit of excellence. These recommendations were put to action by Hallinger and Murphy (1987), who developed the Principal Instructional Management Rating Scale (PIMRS). In developing this survey, Hallinger measured building principals' capacity to lead the institution beyond the general managerial roles and functions that had been traditionally accepted.

Instructional leadership is defined as "the shared work and commitments that provide direction for instructional improvement, and that engage the efforts and energy of teachers and others in pursuit of powerful, equitable interactions among teachers, learners, and content, in response to environmental demands" (Knapp, Honig, Plecki, Portin, & Copland, 2014, p. 30). DeVries (2017) purported that a building leader's responsibilities have evolved from managerial in nature. At one time, principals were budget balancers, disciplinarians, cafeteria managers, and transportation organizers; now, principals are also responsible for establishing a vision, assessing curricular programs, evaluating teachers, and monitoring student progress.

As the role of the building leader has evolved, the importance of the principal as a building's instructional leader has continued to emerge. According to Marzano et al. (2005), several educational theorists have contributed to the modern description of instructional leadership. Per the Southwest Educational Development Laboratory (2005), "Effective school leadership today must combine the traditional school leadership duties such as teacher evaluation, budgeting, scheduling, and facilities maintenance, with a deep

involvement with specific aspects of teaching and learning" (p. 1). As the research was conducted, several defining characteristics and themes of instructional leadership emerged. The most highly noted definition comes from Smith and Andrews (1989), who recognized 10 behaviors that were critical for building principals to be instructional leaders. To be an effective instructional leader Smith and Andrews (1989) stated that one must place priority on curriculum and instruction; be dedicated to the goals of the school and the district; have the ability to rally and mobilize resources; be capable of creating an environment of high expectations; be involved in instructional policy; continuously monitor student achievement; have a clear vision, and be capable of communicating that while eliciting investment; have the ability to engage all stakeholders; recognize that time is a scarce resource and be committed to protecting that for teachers. These characteristics varied slightly from those developed by Blaśe and Blaśe (1999), who determined that instructional leadership is built upon six central tenets: the study of teaching and learning, collaboration, coaching, action research, resources, and adult education. They went on to state, "instructional leaders' characteristics profoundly impacted teachers' classroom behavior, leading to powerful cognitive, affective, and behavioral effects on teachers" (Blaśe and Blaśe, 1999). The data gleaned from the work of Blaśe and Blaśe (1999) and Glickman, Gordon, and Ross-Gordon (1995) was combined with the research of Stringfield and Teddlie (1991) by Marzano et al. (2005) to develop the 21 responsibilities of the school leader.

There are easily as many definitions of instructional leadership as there are theorists contributing to the greater body of knowledge on the topic. To formalize a definition of what instructional leadership looks like in action, Vogel (2018) conducted a

qualitative study that included 50 principals in Colorado. Vogel's purpose was to determine what components of a building leader's duties were perceived as part of the role as an instructional leader. Vogel analyzed the narrative responses and established trends in principal responses. To identify the characteristics essential to instructional leadership and recognize prior experiences that were most helpful in performing their duties as an instructional leader, Vogel concluded that the areas of teacher supervision and evaluation, the use of technology to support student learning, and the use of data to inform instructional strategies were the most impactful in increasing student achievement. Additionally, Vogel sought to identify the relationship between instructional and transformational leadership. Transformational leadership is a style in which a leader encourages followers to meet their fullest potential by fostering a connection and using that relationship to achieve a goal (Baughman, 2016). Asserting that the two leadership philosophies were difficult to separate, she recognized that even though integrated leadership positively influences student achievement, instructional leadership has been shown to play a vital role in paving a path for teachers to improve student learning outcomes.

Principals' Instructional Leadership Behaviors

Balancing the various responsibilities of a building principal is, without question, an arduous task. In most school buildings, the principal is expected to serve as a facility manager and a leader of learning. "The role of the principal as instructional leader is pivotal to overcoming the many existing problems, enhancing the school capacity, improving teachers' capabilities, and in providing a more conducive environment for teaching and learning" (Maloud, Niqab, Sharma, & Wei, 2014, p. 78). Building

principals must be dynamic and willing to adjust to the constantly evolving demands of running a school building to ensure that students are actively engaged in learning environments that yield positive outcomes. In addition to flexibility, there are several additional personality characteristics that afford principals' success in their role as instructional leaders. Maloud et al. (2014) determined that "In addition to these initial models, a successful leader must possess some significant personal traits and considerable interpersonal skills, which play a vital role in developing the performance of the principal/leader" (p. 75). Murphy et al. (2007) established that leadership behaviors are built on four distinguishing characteristics: experience, knowledge, personal characteristics, and values and beliefs. Murphy claimed these characteristics had a significant impact on students' achievement and school performance.

Webb (2012) studied the perceptions of Wisconsin high school principals to determine how they interpreted their role as "instructional leaders who affected classroom instruction and raised student achievement" (p. 8). According to Webb, the previous research results are mixed related to the impact of principals' instructional leadership on student achievement. To provide clarity for Wisconsin principals on the correlation between student achievement and principal instructional leadership behaviors, Webb surveyed 26 principals from schools ranging in enrollment from 326 to 598 students. The survey listed the 21 instructional leadership behaviors identified by Marzano et al. (2005) and asked the participants to rank order the behaviors according to their perceived impact on student achievement. Using ACT scores to distinguish schools as high and low achieving, the researcher coded the responses to disaggregate the data to determine if the principals at higher-achieving and lower-achieving schools rated the

behaviors differently. The results indicated that the leadership responsibilities of culture and communication had the highest mean score. Webb found focus to be the only leadership responsibility to have a significant relationship between the high and non-high principal responses. Webb further elaborated, "Situational awareness, which was the leadership responsibility Marzano et al. (2005) found to have the strongest correlation to student achievement, had the largest difference in mean score between the principals from high and non-high achieving schools" (p. 63).

The influence of instructional leadership behaviors on student achievement was the focus of Pettiegrew's (2013) research. Utilizing the PIMRS, the researcher surveyed over 1,400 middle school principals throughout Ohio and correlated the principals' perceived instructional leadership behaviors to state to determine if a significant relationship existed between principal self-perceived instructional leadership behavior and student performance. The researcher discovered that that both principals and teachers perceive framing school goals as the most important instructional leadership behavior. Pettiegrew (2013) concluded that "The results of the descriptive analysis for principal self-perceptions of their instructional leadership behaviors indicated that framing school goals and coordinating the curriculum were correlated with higher student achievement" (p. 56). Additionally, Pettiegrew discovered that teachers, and ultimately student achievement, benefitted greatly from increased communication on goals from the building principal. The researcher also noted in his findings that according to Lezotte (as cited in Hoy & Miskel, 2013), "the School Effective Research the principals are one of the important correlates with student achievement" (p. 57). Lezotte elaborated further, stating that "A highly effective principal can increase his or her students' scores up to 10

percentile points on standardized tests in just one year" (p. 57). These findings were in addition to the information attained, which indicated that principals also had a strong impact on other student outcomes, such as reducing suspensions and absences and improving graduation rates.

As found in multiple research studies (Andrews & Soder, 1987; Hallinger, Bickman, & Davis, 1996; Hallinger & Heck, 1996; Leithwood, Day, Sammons, Harris, & Hopkins, 2006; Waters, Marzano, McNulty, 2003), principals have a direct impact on student achievement; however, the degree to which they influence student achievement is not certain. As noted by Mees (2008), principals face increasing pressure from the communities they serve and the state and federal government to improve student achievement outcomes; additionally, principals today have the ethical and moral obligation to support success for all students. Student achievement was primarily used as the dependent variable in studies about the effect of school leadership because achievement is the primary measure of school effectiveness (Hallinger & Heck, 1998).

In an effort to increase student achievement, but analyzing a different type of principal leadership style than that of the current study, Mees (2008) investigated the impact of transformational leadership and school culture and student achievement. Using a similar methodology to the current study, Mees conducted his study using the Principal Leadership Questionnaire (PLQ) to allow teachers and principals to rate instructional leadership behaviors. Mees correlated those ratings to student achievement on the Missouri Assessment Program (MAP) assessments. The central tenet of the PLQ assessed how building leaders influence school culture, which was benchmarked by factors such as providing direction, providing support for the direction, and assessing the

quality of direction. All the factors associated with the PLQ assessed the relationship between the building leader and the various stakeholders within the educational community. Through his research, Mees (2008) discovered that:

> based upon teachers' perceptions of leadership and culture, as principals increased the school's focus on a vision of high expectations for student success while simultaneously providing leadership for a collaborative culture built upon establishing relationships among the individuals of the schools and supporting the efforts of those individuals, student achievement increased. (p. 137)

The challenges faced by building principals to show positive gains in student achievement have forced the modern building leader to analyze his or her leadership style and implement various strategies to increase student achievement.

Since the advent of No Child Left Behind (NCLB), the responsibility of the building principal to be an instructional leader has continuously evolved. Instructional leadership was initially viewed as a "term that described a broad set of principal roles and responsibilities designed to address the workplace needs of successful teachers and to foster improved achievement among students" (DiPaola & Tschannen-Moran, 2003). The significance of the building principal as an instructional leader was illustrated by the passing of NCLB, which requires all principals to possess "the instructional leadership skills to help teachers and students learn" (NCLB, Section 2113, C), thus shifting the primary duty of the principal from a building manager to the leader of learning. Research conducted by LaPointe and Davis (2006) confirmed that "successful school leaders influence student achievement through two important pathways – the support and development of effective teachers, and the implementation of effective organizational

processes" (p. 18). The combination of those two key concepts enables principals to build environments that afford student success.

Marzano et al. (2005) synthesized 20 years of collective research and identified 21 characteristics or behaviors associated with instructional leadership. Table 3 includes the behavior of the building principal and a description indicating what the behavior is.

Table 3

Instructional Leadership Behaviors and Corresponding Descriptions

Behaviors	Descriptions
Affirmation	Recognizes and celebrates accomplishments and acknowledges failures.
Change agent	Willing to challenge and actively challenges status quo.
Communication	Establishes strong lines of communication with/among teachers and students.
Contingent rewards	Recognizes and rewards individual accomplishments.
Culture	Fosters shared beliefs and a sense of community and cooperation.
Involvement in curriculum, instruction and assessment	Is directly involved in the design, implementation of curriculum, instruction, and assessment practices.
Discipline	Protects teachers from issues and influences that detract from teaching time or focus.
Flexibility	Adapts leadership behavior to the needs of the current situation and is comfortable with dissent.
Focus	Establishes clear goals and keeps those goals in the forefront of school's attention.
Ideals/Beliefs	Communicates and operates from strong ideals and beliefs about schooling.
Input	Involves teachers in the design and implementation of important decisions and policies.
Intellectual stimulation	Ensures faculty and staff are aware of most current theories and practices and makes the discussion of these a regular aspect of the school's culture.
Knowledge of curriculum, instruction, and assessment	Is knowledgeable about current curriculum, instruction, and assessment practices.
Monitoring/Evaluating	Monitors the effectiveness of the school's practices and their impact on student learning.
Optimizer	Inspires and leads new and challenging innovations.
Order	Establishes a set of standard operating procedures and routines.
Outreach	Is an advocate and spokesperson for the school to all stakeholders.
Relationships	Demonstrates an awareness of the personal aspects of teachers and staff.
Resources	Provides teachers with materials and processional development necessary for the successful execution of their jobs.
Situational awareness	Is aware of the details and undercurrents in the running of the school and uses that information to address current and potential problems.
Visibility	Has quality contact and interactions with teachers and students.

Note. Adapted from *School Leadership that Works: From Research to Results*, by R. J. Marzano, T. Waters, & B.A. McNulty, 2005. Alexandria, VA: ASCD.

Prompted by Marzano et al.'s (2005) research, which confirmed that student achievement was increased when principals implemented instructional leadership behaviors, Bedessem-Chandler (2005) studied classroom teachers' perceptions of principal leadership, based on the 21 responsibilities of a school leader. The purpose of the study was to gain a concrete understanding of the classroom teachers' perception of effective principals. The researcher chose to utilize a mixed-methods approach, having teachers respond using both Likert scales to rate principal behaviors, as well as open response, which afforded the respondents the opportunity to state the behaviors they perceived as important and non-important. Bedessem-Chandler found that communication, culture, and focus were ranked the highest on the 21-point scale. Additionally, the qualitative data obtained through her research showed that visibility with teachers, and outreach, order, and visibility with students were tied and rated the highest on a 10-point scale. The researcher noted that the three most common free responses given by the classroom teachers related to the 21 behaviors of instructional leaders were relationships, communication, and visibility. Overall, Bedessem-Chandler asserted that teachers perceive the principal as establishing strong lines of communication with staff and students. Because of this assertion, the recommendation was made for district and building leaders to develop new and more effective ways to communicate with all stakeholders to make positive gains in student achievement.

Principals' Perceptions of Their Own Instructional Leadership Behaviors

In a further effort to identify the strength of relationship between instructional leadership behavior and student achievement, Peariso (2011) asserted that "effective high school principals are actively and frequently engaged in all facets of instructional

leadership" (p. 168). In his study, Peariso analyzed the perceptions of 36 secondary principals from California schools considered low socioeconomically with a high population of English learners. Peariso (2011) asserted that his findings were in agreement with previous research because "instructional leadership is firmly entrenched in what effective schools do as reported in previous effective school research" (p. 170). Peariso (2011) determined that effective high school principals are actively and frequently engaged in all facets of instructional leadership. Additionally, he discovered that principals with a longer career history were more likely to have "fostered specific aspects of instructional leadership more than those principals with less experience" (p. 183). Peariso recommended further research in the areas of principals' self-perceptions of instructional leadership behaviors and an in-depth analysis of instructional leadership behaviors of school leaders on campuses that have made progress in going from underperforming to effective.

Similarly, Quinn (2011) assessed the impact of instructional leadership practices implemented by building principals and correlated those self-perceived behaviors to student achievement by analyzing the results of the Georgia state mathematics and English assessments. Quinn stated:

> Principals, regardless of the student population they serve, are solely responsible for student achievement in their schools. With this in mind, principals must thoroughly understand the significance of their role as an instructional leader and recognize the importance of their leadership behavior in creating successful schools. (p. 146)

In addition to determining if instructional leadership contributed to high levels of student achievement, the results of the study were used to determine if instructional leadership behaviors exhibited by principals were beneficial to developing current and future building leaders. The results of Quinn's (2011) study indicated that a significant correlation could be found between instructional leadership practices, and an increase in student achievement. Quinn (2011) asserted that:

> Compared to the first analysis, both predictor variables (instructional leadership behaviors and school status) in the second analysis were positively related to the 2008- 2009 reading/language arts CRCT scores. On the first predictor variable (instructional leadership behaviors), as the frequency of the principal instructional leadership behaviors increased, the 2008-2009 reading/language arts CRCT achievement scores slightly increased by .05 points, which may advance Fullan's (1991) claim that schools led by principals who are strong instructional leaders achieve greater student achievement gains and affirm Sebring and Bryk's (2000) notion that the eminence of instructional leadership behaviors of principals is vital to student achievement. (p. 157)

Additionally, Quinn found that when socioeconomic status was analyzed in isolation, transformational leadership and school culture correlated with increased student academic achievement.

The strength of the relationship between principals' perceptions of their instructional leadership behaviors and student academic achievement was directly analyzed by Schindler (2012). In his research, Schindler investigated the role a principal's own perceived implementation of Marzano et al.'s (2005) 21 characteristics

played in impacting student achievement throughout 75 high schools in central Texas. Schindler created and utilized the School Leadership Behaviors Survey (SLBS) to analyze a principal's impact on student achievement on the 2011 Texas Assessment of Knowledge and Skills (TAKS). The purpose of Schindler's study was to determine whether the 21 instructional leadership behaviors of principals identified by Marzano et al. (2005) had a statistically significant relationship to academic achievement at the secondary level. The results of the study indicated that there were positive correlations between three of the 21 Instructional Leadership behaviors and student achievement – flexibility, input, and outreach, and that one, discipline, led to a negative correlation. The other behaviors did not show statistically significant relationships. Schindler noted that his study yielded mixed results and that more research should be conducted to determine the strength of the relationship between instructional leadership practices and student achievement.

According to Raines (2012), "The quality of leadership by school principals is a major determinant of student performance in the classroom" (p. 2). To this end, she conducted a study aimed at expanding the breadth of knowledge already established by educational experts in the field of instructional leadership. Raines asserted that today's building principal is directly responsible for improving student learning and achievement amid continuously mounting accountability measures. Using a mixed-methods research design, Raines sought to provide additional information about the influence of instructional leadership on student achievement in the following areas: the indirect influence that principals have on student achievement by working indirectly through teachers to have an impact on the quality and effectiveness of instruction; the principals'

commitment to flexibility in promoting student learning, the environmental and school climate conditions that promote student learning, and, how the building principal influences the time and opportunity for students to learn. The participants were teachers and principals in southeastern Virginia, in a district of over 71,000 students. Raines's findings support the greater body of research that principals who regularly engage in behaviors consistent with instructional leadership do have an indirect impact on student achievement by implementing strategies such as communicating and articulating the school's vision and mission; creating a healthy climate and culture; fostering relationships with students, parents, and other stakeholders; as well as building the expertise of the buildings instructional staff. Additionally, Raines concluded that student achievement was higher in schools where the principal focused on building a learning-centered school climate.

Student Achievement Linked to Principal Behaviors

Larsen (1984) studied the correlation between instructional leadership and student achievement on the California Assessment Program mathematics and reading assessments. The purpose of Larsen's study was three-fold: to determine through literature review and expert opinion what specific behaviors are essential for building leaders to implement; to determine the degree to which those behaviors are exhibited by principals; and, to determine to what extent an impact was made on academic achievement. To accomplish these purposes, Larsen established two cohorts, high achieving schools (HAS) and low achieving schools (LAS). Larsen established a comparison band that included the middle 50% of scores of similar districts as defined by socioeconomic index, percent of Aid to Families with Dependent Children, and the

percent of limited English speaking/non-English population. If a school's scores fell in the 25% above the range, the school was deemed a HAS. Correspondingly, those falling in the lower 25% were deemed LAS. Principals and teachers from schools in both cohorts were then surveyed, and the results were correlated to determine to what degree instructional leadership influenced student achievement. Through a thorough review of the literature, Larsen identified 44 behaviors that were associated with instructional leadership. He sent the list of behaviors to 10 educational theorists deemed to be experts at the time and reduced his list of behaviors to 29 based on their feedback. Those behaviors were used to construct the survey the teachers and principals were administered. Larsen reported several conclusions. First, teachers in HAS reported their principals as demonstrating instructional leadership behaviors significantly more often than their LAS counterparts. Second, Larsen's data yielded no difference between mean implementation scores of HAS and LAS principals. Third, the discrepancy between principal and teacher scores was substantially greater in LAS. Fourth, 10 of the 29 instructional leadership behaviors were found to differ significantly in the frequency of implementation between HAS and LAS. These functions corresponded with the following behaviors:

- Ensures that school instructional goals are developed congruent with district policies.
- Ensures that instructional goals are clearly communicated to everyone.
- Communicates high expectations for student academic performance to staff.
- Participates in formal and/or informal discussions concerning instruction as it impacts student achievement.

- Ensures that systematic procedures for monitoring student progress are utilized by staff.
- Assists teachers in securing available resources for program implementation.
- Makes regular visits to classrooms.
- Evaluates curricular programs.
- Observes innovative curricular programs.
- Establishes a safe/orderly school environment with a clear discipline code.

Lastly, six instructional leadership functions were identified and found to be implemented more frequently in HAS than LAS. The six functions identified were: goal setting, school and community relations, supervision and evaluation, school climate, coordination, and staff development.

Alig-Mielcarek (2003) provided an analysis of the data provided by146 Ohio elementary school teachers to identify the relationship between instructional leadership, academic press, and student achievement. The researcher sought to address whether instructional leadership and academic press have direct, independent relationships with student achievement or if academic press was the median in which instructional leadership behaviors and practices worked to influence student achievement. Alig-Mielcarek defined academic press as a climate characteristic centered on high expectations, a concentrated emphasis on academics, orderly and safe learning environment, and clearly articulated goals. Alig-Mielcarek developed a survey to analyze the instructional leadership behaviors of principals. The survey results were then correlated with student achievement in mathematics and reading to determine the strength of the relationship between instructional leadership practices. The findings of the data

analysis indicated that principal behaviors have a direct impact on academic press and an indirect relationship with student achievement. Alig-Mielcarek (2003) stated:

> Although the instructional leadership of the principal was not directly related to student achievement, it did have an indirect positive effect on achievement through the academic press of the school, which had a direct effect on student achievement in both mathematics and reading, controlling for socioeconomic status. Socioeconomic status had both a direct effect and indirect effect, through academic press, on student achievement. (p. iii)

The results of the study also indicated that instructional leadership, through the vehicle of academic press, was determined to be the means in which student achievement was increased through building leadership behavior consistent with developing a climate that is committed to ensuring academic press.

Johnson (2004) conducted a quantitative study analyzing data from 24 Virginia elementary schools to determine the relationship between the frequency with which principals engage in instructional leadership behaviors and student achievement and determine the relationship between principals' perceptions of the relative importance of instructional leadership functions and student achievement. Using schools identified as having the highest percentages of students qualifying for Virginia's free and reduced lunch program, Johnson developed and administered a survey designed to have principals self-assess the rate of frequency in which they demonstrate instructional leadership behaviors and rank their perceptions of the relative importance of six leadership behaviors. The principal's self-evaluation was then correlated with the Virginia Standards of Learning student performance data from the third- and fifth-grade English

tests. The mean scaled pass scores were assigned to represent achievement as the independent variable in the study. Johnson (2004) identified the following seven behaviors of instructional leadership as those most frequently reported: conducting formal classroom observations, conferencing with teachers and providing feedback, maintaining visibility, discussing instructional strategies with teachers, acting as an instructional resource for teachers, monitoring student progress, and supporting and fostering collaboration among teachers. The results of Johnson's data supported that those functions as measured by principals' rankings of importance were: 1) establishing and communicating school goals; 2) using data when making curricular decisions; 3) coordinating, supervising, and evaluating curriculum; 4) promoting the professional development of teachers; 5) communicating high standards for student academic achievement; and 6) protecting instructional time. Data analysis resulted in no statistically significant differences between the principals of buildings that were high performing and those that were not. Johnson further established that even though the correlational data did not show a statically significant relationship:

> Instructional leadership behaviors #6 (monitors student progress) and #4 (discusses instructional strategies with teachers) had varied mean scores. Principals' reported higher mean scores for monitoring student performance in high performing schools (4.83), as opposed to principals in low performing schools (4.33). In high performing schools, principals mean scores indicated a higher frequency (4.67) of discussing instructional strategies with teachers (instructional leadership behavior #4) when compared to the lower performing school (4.00). (pp. 77-78)

As found in other studies, individual behaviors associated with instructional leadership were indirectly associated with increased student achievement. Johnson's data analysis of principals' ranking of the importance of instructional leadership behaviors mirrored the results of his first correlational study. Johnson noted that coordinating, supervising, and evaluating curriculum, promoting the professional development of teachers, and protecting instructional time yielded higher mean rank scores in higher-performing schools than it did in lower-performing schools. The inconsistent results made it difficult for Johnson to establish a strong connection with evidence to support that instructional leadership behaviors were directly correlated to increased student achievement.

To determine whether there was a relationship between a principal's self-perception of instructional leadership behaviors and student achievement, Nason (2011) administered an online survey titled the Instructional Leadership Behaviors of Principals Survey to Idaho middle and high school principals (58 completed the survey). To address continuing stagnation in student achievement and analyze the impact of instructional leadership, Nason developed six research questions centered on comparing the principal-perceived instructional leadership practice's importance to the frequency of those practices. Nason determined that there was not a statistically significant relationship between NCLB ratings and principal practice importance (PPI) or principal practice frequency (PPF). Additionally, the findings indicated that there was no statistically significant relationship between the type of school or the size of the school and increased student achievement based on PPI and PPF. Rather, the research yielded three different conclusions. The first is that principals were more comfortable in the traditional roles of building leadership. The second was that as the years in improvement

status increases, the pressure on the principal to become an instructional leader increases. Third, the size of the school does not have a direct impact on the amount of time a building leader is employing instructional leadership practices.

Rideaux (2011) studied the relationship between principal behaviors and student achievement to identify the leadership behaviors that could have a positive effect on student assessments. Using the Organizational Health Index (OHI) and the Leadership Profile (LP) as the means to collect data on leadership behaviors, Rideaux studied 38 schools in Texas and correlated the principals' perceptions of particular leadership behaviors with student assessment data obtained from the Texas Assessment of Knowledge and Skills (TAKS) state assessment. The results of the data analysis showed a stronger relationship between both OHI and LP to math TAKS than to reading TAKS scores at the 38 schools. Rideaux determined that building principals had an indirect relationship with increasing student achievement. This relationship was primarily attributed to the acceptance of the building leaders' influence on the culture and climate of the school. Rideaux elaborated that both the positive and negative actions of the building leader have an equal impact on student outcomes.

Warner (2014) expanded on the influence of school culture on student achievement by analyzing the influence of principal leadership characteristics on student achievement in Northern Virginia elementary schools. Warner aimed to explore the behaviors of principals and the impact of those behaviors on the Virginial Standards of Learning Language Arts and Reading assessments. Years of stagnated test scores and the demands of NCLB prompted Warner (2014) to evaluate the impact of principal behaviors on student scores by administering the Multifactor Leadership Questionnaire and the

School Culture Survey. Warner concluded that there was no direct relationship between principal behaviors and student achievement. Rather, he asserted that the school climate and culture, both directly influenced by the building principal, had a positive and significant relationship with student achievement. This assertion further confirmed the findings of literature that instructional leadership has an indirect and substantial relationship with student achievement. The findings of the study indicated that there were positive correlations between the leadership characteristic of idealized attributes or idealized influence attributes with student achievement.

Banach (2015) studied the concept of deliberate practice as a function of instructional leadership used by schools to help teachers modify instructional practice to increase student achievement. Banach defined deliberate practice as instruction consisting of four essential components: appropriate level of content, informative feedback, provision of multiple opportunities for repetition, and ability to make corrections to errors. The qualitative study took place in Illinois and focused on public, Pre-Kindergarten to eighth-grade elementary schools that had successfully raised student achievement since the passage of NCLB. From that demographic, the researcher reduced his sample to two schools to conduct the research. These schools were selected based on three additional criteria: the first, schools must have won the Illinois Spotlight Award, or they had earned the 2011 Academic Improvement award; second, school populations must have been comprised a minimum of 50% free and reduced lunch recipients, and 50% of students designated at ethnic minorities; and lastly, the school must have had teachers with National Board certification. Banach's study was based on four research questions. The first addressed the use of deliberate practice by building leaders as a

framework in conversations about professional growth to enable teachers to improve instructional performance. The second and third research questions addressed school leaders' provision of an environment for teachers to implement deliberate practice to enhance the development of expertise in their instructional performance and the differences between the ways that building principals differentiate support within the framework of deliberate practice for teachers at different levels of experience and expertise within their school. The fourth research question addressed the implications for school leaders as they foster instructional practices through professional growth development geared towards deliberate practice to improve student achievement in their schools. Banach conducted several in-person interviews with building principals and teachers with different levels of experience and expertise. Additionally, the researcher developed a survey that was administered to teachers to assess their opinion of the implementation of deliberate practice at the building level. Banach reported three key findings. The first key finding was that school leaders must focus on student learning and what the teachers can do to improve student success rather than attributing a lack of success to factors outside the school's control. The second finding was that building leaders must take a balanced approach for how student data is used since it is often used for both an evaluative measure and a tool for improvement purposes. The last key finding was the principals' ability to have flexibility in how teachers helped students meet those objectives led to increased student achievement that appeared contrary to the impulse of many educational leaders, which Banach (2015) stated was "to tighten control when student scores are not at the desired level" (p. 239). Further, Banach stated:

> The research study highlights the fact that the improvement of student achievement takes time and that there are no quick fixes within the field of education. The changing needs of students, the addition of requirements for schools from the state and federal government, and the shifting needs of a community can complicate the improvement process. (p. 240)

Ultimately, the researcher concluded that deliberate practice actively employed by the principals in both population samples equated to a statistically significant improvement in student achievement.

Summary

A thorough review of the literature related to instructional leadership, principals' instructional leadership behaviors, principals' perceptions of their own instructional leadership behaviors, and student achievement linked to principal behaviors allows the opportunity to understand the impact instructional leadership has on student achievement. By analyzing the research previously conducted, the researcher was able to identify emerging trends in data and make further recommendations based on the results of the current research, and that of others to continue to deepen the body of knowledge on the topic. A comprehensive review of the existing literature afforded the opportunity to analyze the data and identify complementary findings from similar studies conducted. Furthermore, it allowed the researcher to compare the results of the survey conducted in Kansas to building leaders from across the country and the globe. Chapter 3 includes specific information on the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and the limitations.

Chapter 3

Methods

The purpose of this study was to determine the extent to which there is a relationship between principals' perceptions of their own demonstrated instructional leadership behaviors and student academic achievement on both the Kansas mathematics and ELA assessments. Utilizing a research design and survey instrument similar to that of Schindler (2012) and sequentially that of Larson (1985), a secondary purpose of this study was to provide information to schools and districts on actions and behaviors principals could utilize in their daily practices to increase student achievement. The research design, selection of participants, measurement, data collection, data analysis and hypotheses testing, and the limitations are included in this chapter.

Research Design

A quantitative research design was used in this study. Specifically, a correlational research method was employed to analyze the strength of the relationship between perceived instructional leadership behaviors and student achievement on Kansas mathematics and ELA assessments. Two numerical variables were examined, student performance on Kansas State mathematics and ELA assessments and Kansas high school principals' self-perceptions of instructional leadership behaviors. The dependent variable in this research study was the percentage of students performing at the proficient (level 3) and the advanced (level 4) levels of the Kansas mathematics and ELA state assessments, which were hypothesized to be related to the independent variables, principals' self-perceived instructional leadership behaviors.

Selection of Participants

The population for this study was comprised of 380 public, private, and charter high school principals in Kansas. To be selected for participation, principals needed to have been in their current role as building principal during the 2018-2019 and 2019-2020 academic years. Private and public schools, as well as the general and special education buildings, were included in the study. The sample was the principals who chose to complete the survey. In accordance with Lunenburg and Irby (2008), purposive sampling was used to select the sample for data collection, as "the sample was based on the researcher's experience or knowledge of the group to be sampled" (p. 175). The principals were accessible through email addresses found on the KSDE website.

Measurement

Data were collected using a modified version of the SLBS. Permission was obtained from Schindler to use and modify the survey. Schindler (2012) based the survey on the work of Marzano et al. (2005), who identified 21 behavioral characteristics of instructional leaders. Schindler's survey, The SLBS, was comprised of questions that were stated in behavioral terms with statements generated through the analysis of Waters et al.'s (2003) research findings, a comprehensive literature review, and a pilot study conducted by Schindler of principals and teachers completing the instrument that addressed the content validity of the instrument.

Permission was obtained from Schindler (see Appendix A), the survey was modified by replacing the four descriptive and demographic items with information about Kansas state assessments (percentages of students scoring in the proficient [level 3] and advanced [level 4]), tenure in position at the building, and the KSHSAA classification.

Part 2 of the original survey included 63 items that addressed the 21 leadership behaviors. The modifications to the survey did not interfere with the validity or reliability of the original survey instrument, as none of the modifications were to behavior statements.

There were 69 items on the survey (see Appendix B) submitted to Kansas high school principals. The first six questions of the survey addressed the tenure of the building leader, the number of students enrolled full-time on the campus, and the percentages of students scoring at a level 3 and level 4 of the Kansas state mathematics and ELA assessments. The subsequent 63 statements specifically addressed the qualities and behaviors associated with instructional leadership. Each of the behaviors identified by Marzano et al. (2005) were assigned three statements that expanded on the observed behavioral characteristics for each instructional leadership behavior. The 63 behavior statements were directly adapted by Schindler (2012) in the original survey from the Waters et al. (2003) meta-analysis findings. Study participants responded to each statement within each leadership behavior characteristic using a five-point Likert-type scale. Ratings on this scale included *Strongly Disagree* (1), *Disagree* (2), *Neutral* (3), *Agree* (4), and *Strongly Agree* (5).

According to Schindler (2012),

> Internal consistency of the instrument was analyzed to determine the reliability of the SLBS. All completed principal surveys (*N*= 124) and all completed teacher surveys (*N*= 410) were used to test the reliability of the instrument. Reliability was assessed using Cronbach's alpha. For the principal edition of the SLBS, an alpha of .95 was achieved. When statements were grouped by instructional leadership behavior, the lowest reliability coefficient obtained for any leadership

> behavior was .56 on flexibility; the highest was .85 for knowledge of curriculum, instruction, and assessment. (p. 68)

The responses were collected and correlated with the numerical value assigned to the self-reported 2018-2019 state assessment scores for mathematics and ELA to determine the strength of the relationship between instructional leadership behaviors and student achievement. Principals were asked to self-report state assessment performance at their current building. They were asked to report the percentages of students in the building scoring either a "3" that signified proficiency or a "4" that signified advanced understanding. The instructional leadership behaviors and the corresponding survey items are found in Table 4.

Table 4

Instructional Leadership Behaviors and Corresponding Survey Items

Behavior	Survey Items
Affirmation	7-9
Change agent	10-12
Communication	13-15
Contingent rewards	16-18
Culture	19-21
Curriculum, instruction, & assessment	22-24
Discipline	25-27
Flexibility	28-30
Focus	31-33
Ideals/Beliefs	34-36
Input	37-39
Intellectual stimulation	40-42
Knowledge of curriculum, instruction, & assessment	43-45
Monitors/Evaluates	46-48
Optimizer	49-51
Order	52-54
Outreach	55-57
Relationship	58-61
Resources	61-63
Situational awareness	64-66
Visibility	67-69

The Kansas mathematics and ELA assessments were administered at all high schools throughout Kansas in the spring of 2019 by classroom teachers using KITE software statewide and had four objectives as outlined by the State Board of Education. The four objectives of the KAP (2016) as outlined in the *KAP Technical Manual* are:

1. Measure specific claims related to Kansas College and Career Readiness Standards (KCCRS);
2. Provide information for calculating Annual Measurable Objectives for state accreditation;
3. Report individual scores, along with student's performance levels;
4. Provide subscale and total scores that can be used with local assessment scores to assist in improving a building's or district's programs.

Using Cronbach's Alpha, the reliability for the Kansas State mathematics and ELA assessments were reported to be .92 for both on the respective high school assessments (KA, 2016, p. 46). The Kansas assessment is used in a manner that requires the validity of the tests to be measured in four ways – content validity, alignment with Kansas College and Career Readiness Standards (KCCRS), internal structure supports, and cognitive structures. These four measurements are critically and systemically reviewed by the Kansas State Department of Education and the KU AAI.

Data Collection Procedures

Institutional approval to conduct research was submitted through the Baker University Institutional Review Board (IRB) process, and the study was approved by Baker University on February 21, 2020 (see Appendix C). The expedited IRB ruled that the research conducted was approved, indicating that there was no harm to the

participants of the study. On May 4, 2020, a solicitation email was sent to all Kansas high school building principals, with the internet link to the Google survey embedded in the email. Participants were assured that data would be collected anonymously (see Appendix D). Principals were sent three independent reminder emails (see Appendix E) on May 26, 2020, June 9, 2020, and a third on June 20, 2020. The survey was closed on July 1, 2020. The researcher was the primary collector of the data. There were no records of respondents made or kept. The data from the survey were downloaded from Google forms on July 9, 2020 into an Excel spreadsheet and were then uploaded to SPSS. Once the survey was completed, results were automatically entered by Google into a Google sheet that would be exported to a Microsoft Excel spreadsheet to be imported into the SPSS software.

Data Analysis and Hypothesis Testing

The data were organized and analyzed using IMB® SPSS® Statistics Faculty Pack 25 for Windows. Data were used to address each of the research questions and to test each hypothesis. A Pearson Product Moment Correlation Coefficient was calculated for each hypothesis.

RQ1. To what extent is there a relationship between principals' perceptions of demonstrated instructional leadership behaviors and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement, as measured by the Kansas mathematics assessment?

To index the strength and direction of the relationship between principals' self-perception of each of the instructional leadership behaviors, as specified in H1-H21, and student achievement, as measured by the percentage of students scoring at the proficient

or advanced levels on the Kansas mathematics assessment, a Pearson product moment correlation coefficient was calculated for each of the 21 leadership behaviors. One-sample *t* tests were conducted to test for the statistical significance of the correlation coefficients. The level of significance was set at .05. The effect size, as indexed by r^2, is reported when appropriate.

H1. There is a statistically significant relationship between principals' perceptions that they provide affirmation to teachers and students and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H2. There is a statistically significant relationship between principals' perceptions that they are change agents and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H3. There is a statistically significant relationship between principals' perceptions that they are effective communicators and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H4. There is a statistically significant relationship between principals' perceptions that they provide recognition and rewards and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H5. There is a statistically significant relationship between principals' perceptions that they promote a positive culture and the percentage of students scoring at level 3

(proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H6. There is a statistically significant relationship between principals' perceptions that they are involved in curriculum, instruction, and assessment and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H7. There is a statistically significant relationship between principals' perceptions that they are disciplinarians and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H8. There is a statistically significant relationship between principals' perceptions that they are flexible and the percentage of students scoring level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H9. There is a statistically significant relationship between principals' perceptions that they provide a clear focus and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H10. There is a statistically significant relationship between principals' perceptions that they communicate and operate from strong ideals and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H11. There is a statistically significant relationship between principals' perceptions that they allow input of others in the decision-making process and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H12. There is a statistically significant relationship between principals' perceptions that they are informed about and encourage faculty discussion of educational research and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H13. There is a statistically significant relationship between principals' perceptions that they are knowledgeable about curriculum, instruction, and assessment processes and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H14. There is a statistically significant relationship between principals' perceptions that they monitor and evaluate curriculum and instruction and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H15. There is a statistically significant relationship between principals' perceptions that they inspire staff and advocate for new initiatives and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H16. There is a statistically significant relationship between principals' perceptions that they establish a set of standard operating procedures and routines and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H17. There is a statistically significant relationship between principals' perceptions that they are advocates and spokespersons for the school to all stakeholders and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H18. There is a statistically significant relationship between principals' perceptions that they promote positive relationships with faculty and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H19. There is a statistically significant relationship between principals' perceptions that they provide teachers with professional resources and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H20. There is a statistically significant relationship between principals' perceptions that they are situationally aware and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H21. There is a statistically significant relationship between principals' perceptions that they are visible in the school building and the percentage of students

scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

RQ2. To what extent is there a relationship between principals' perceptions of demonstrated instructional leadership behaviors and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement, as measured by the Kansas ELA assessment?

To index the strength and direction of the relationship between principals' self-perceptions of each of the instructional leadership behaviors, as specified in H22-H42, and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas ELA assessment, a Pearson product moment correlation coefficient was calculated for each of the 21 leadership behaviors. One-sample *t* tests were conducted to test for the statistical significance of the correlation coefficients. The level of significance was set at .05. The effect size, as indexed by r^2, is reported when appropriate.

H22. There is a statistically significant relationship between principals' perceptions that they provide affirmation to teachers and students and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H23. There is a statistically significant relationship between principals' perceptions that they are change agents and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H24. There is a statistically significant relationship between principals' perceptions that they are effective communicators and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H25. There is a statistically significant relationship between principals' perceptions that they provide recognition and rewards and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H26. There is a statistically significant relationship between principals' perceptions that they promote a positive culture and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H27. There is a statistically significant relationship between principals' perceptions that they are involved in curriculum, instruction, and assessment processes and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H28. There is a statistically significant relationship between principals' perceptions that they are disciplinarians and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H29. There is a statistically significant relationship between principals' perceptions that they are flexible and the percentage of students scoring at level 3

(proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H30. There is a statistically significant relationship between principals' perceptions that they provide a clear focus and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H31. There is a statistically significant relationship between principals' perceptions that they communicate and operate from strong ideals and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H32. There is a statistically significant relationship between principals' perceptions that they allow input of others in the decision-making process and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H33. There is a statistically significant relationship between principals' perceptions that they are informed about and encourage faculty discussion of educational research and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H34. There is a statistically significant relationship between principals' perceptions that they are knowledgable about curriculum, instruction, and assessment processes and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H35. There is a statistically significant relationship between principals' perceptions that they monitor and evalutate curriculum and instruction and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H36. There is a statistically significant relationship between principals' perceptions that they inspire staff and advocate for new initiatives and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H37. There is a statistically significant relationship between principals' perceptions that they establish a set of standard operating procedures and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H38. There is a statistically significant relationship between principals' perceptions that they are advocates and spokespersons for the school to all stakeholders and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H39. There is a statistically significant relationship between principals' perceptions that they promote positive relationships with faculty and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H40. There is a statistically significant relationship between principals' perceptions that they provide teachers with professional resources and the percentage of

students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H41. There is a statistically significant relationship between principals' perceptions that they are situationally aware and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H42. There is a statistically significant relationship between principals' perceptions that they are visible in the school building and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

Limitations

In accordance with Lunenburg and Irby (2008), "limitations are factors that may have an effect on the interpretation of the findings or on the generalizability of the results" (p. 133). As such, it is imperative that areas of the study in which data or findings could possibly be misinterpreted are identified. The limitations of this study included:

1. Student performance on state assessments may be affected by factors outside the control of the principal, such as home environment and illness.
2. Instructional strategies, testing environment, and test preparation may be inconsistent among the schools sampled.
3. Due to the COVID-19 global pandemic and the increased workload created by the challenges of continuous adjustment to learning scenarios being dealt with by all principals, some principals may have chosen not to complete the survey

or may not have had the time to complete the survey, leading to a lower than anticipated participant number.

Summary

A thorough understanding of the research design, selection of participants, measurement, data collection procedures, data analysis and hypotheses testing, and the limitations allows readers to understand the importance of the study. The intent of the study was to determine if there was a correlation between the self-perceived leadership behaviors of building administrators and student achievement on Kansas mathematics and ELA assessments by using two research questions and 42 hypotheses. Chapter 4 contains the descriptive statistics, the results of the hypothesis testing, and the additional analyses.

Chapter 4

Results

The purpose of this study was to determine the extent to which there is a relationship between principals' perception of their instructional leadership behaviors and levels of student academic achievement at the building level, as measured by the Kansas mathematics and ELA assessments. Chapter 4 is a report of the in-depth analyses of the study conducted. The chapter includes the results of the data analysis conducted to test the study's hypotheses, the descriptive statistics, and the additional analyses performed.

Descriptive Statistics

The Modified School Leadership Behavior Survey (M-SLBS) was sent to 380 high school principals across Kansas. A survey link was distributed via email, with three reminder emails sent to attain a larger sample size. From the 380 surveys sent, 34 responses were received. To ensure the data accurately reflected the potential correlation to student achievement, the first demographic question asked if the respondent was the principal in the building during the testing results window. Five respondents indicated that they were not, and their responses were excluded from the data analyzed prior to the data analysis. After removing those responses that were not usable due to lack of tenure, 29 responses remained. Answering all questions was not mandatory, and subsequently, two additional surveys were incomplete and removed. The total number of surveys used for the analysis in this study was 27, or 7% of solicited building leaders. The small sample size led to additional analysis, explained later. Kansas high schools vary in enrollment which was indicated by the KSHSAA classification provided by the respondents. Table 5 identifies the classification of respondent schools.

Table 5

KSHSAA School Classification for Participant Schools

Classification	Frequency	Percent
1A	5	18.5
2A	1	3.7
3A	3	11.1
4A	2	7.4
5A	10	37.0
6A	5	18.5
Non-member	1	3.7

Hypothesis Testing

Principals were asked to self-report state assessment performance at their current building. The individual responses were gathered and analyzed to determine the strength of the relationship between each of Marzano et al.'s instructional leadership behaviors and student achievement on the Kansas mathematics and ELA assessments. All research questions are listed with the analysis used to test the hypotheses related to the question. Each hypothesis is listed, followed by a research question, analysis paragraph, list of hypotheses, results paragraph, and results table.

RQ1. To what extent is there a relationship between principals' perceptions of demonstrated instructional leadership behaviors and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement, as measured by the Kansas mathematics assessment?

To index the strength and direction of the relationship between principals' self-perception of each of the instructional leadership behaviors, as specified in H1-H21, and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas mathematics assessment, a Pearson product moment correlation coefficient was calculated for each of the 21 leadership behaviors. One-sample *t* tests were conducted to test for the statistical significance of the correlation coefficients. The level of significance was set at .05. The effect size, as indexed by r^2, is reported when appropriate.

H1. There is a statistically significant relationship between principals' perceptions that they provide affirmation to teachers and students and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H2. There is a statistically significant relationship between principals' perceptions that they are change agents and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H3. There is a statistically significant relationship between principals' perceptions that they are effective communicators and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H4. There is a statistically significant relationship between principals' perceptions that they provide recognition and rewards and the percentage of students scoring at level

3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H5. There is a statistically significant relationship between principals' perceptions that they promote a positive culture and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H6. There is a statistically significant relationship between principals' perceptions that they are involved in curriculum, instruction, and assessment and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H7. There is a statistically significant relationship between principals' perceptions that they are disciplinarians and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H8. There is a statistically significant relationship between principals' perceptions that they are flexible and the percentage of students scoring level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H9. There is a statistically significant relationship between principals' perceptions that they provide a clear focus and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H10. There is a statistically significant relationship between principals' perceptions that they communicate and operate from strong ideals and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H11. There is a statistically significant relationship between principals' perceptions that they allow input of others in the decision-making process and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H12. There is a statistically significant relationship between principals' perceptions that they are informed about and encourage faculty discussion of educational research and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H13. There is a statistically significant relationship between principals' perceptions that they are knowledgeable about curriculum, instruction, and assessment processes and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H14. There is a statistically significant relationship between principals' perceptions that they monitor and evaluate curriculum and instruction and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H15. There is a statistically significant relationship between principals' perceptions that they inspire staff and advocate for new initiatives and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H16. There is a statistically significant relationship between principals' perceptions that they establish a set of standard operating procedures and routines and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H17. There is a statistically significant relationship between principals' perceptions that they are advocates and spokespersons for the school to all stakeholders and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H18. There is a statistically significant relationship between principals' perceptions that they promote positive relationships with faculty and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H19. There is a statistically significant relationship between principals' perceptions that they provide teachers with professional resources and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H20. There is a statistically significant relationship between principals' perceptions that they are situationally aware and the percentage of students scoring at

level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

H21. There is a statistically significant relationship between principals' perceptions that they are visible in the school building and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas mathematics assessment.

The results of the calculations of the correlation coefficients were mixed. However, the hypothesis tests for the correlations indicated no statistically significant relationships between principals' self-perception of each of the instructional leadership behaviors, as specified in H1-H21, and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas mathematics assessment (see Table 6). H1-H21 were not supported.

Table 6

Pearson Product Momentary Correlations and Test Statistics for Mathematics H1-H21 (N = 29)

Hypothesis	Behavior	*r*	*p*
1	Affirmation	.091	.637
2	Change agent	-.045	.815
3	Communication	.211	.271
4	Contingent rewards	.141	.465
5	Culture	-.020	.919
6	Curriculum, instruction, & assessment	.141	.464
7	Discipline	.238	.214
8	Flexibility	.087	.655
9	Focus	.138	.477
10	Ideals/Beliefs	.072	.709
11	Input	.009	.963
12	Intellectual stimulation	.106	.583
13	Knowledge of curriculum, instruction, & assessment	.242	.207
14	Monitors/evaluates	-.072	.710
15	Optimizer	.027	.889
16	Order	.162	.401
17	Outreach	.173	.369
18	Relationship	.225	.240
19	Resources	.207	.280
20	Situational awareness	.073	.707
21	Visibility	.052	.789

RQ2. To what extent is there a relationship between principals' perceptions of demonstrated instructional leadership behaviors and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement, as measured by the Kansas ELA assessment?

To index the strength and direction of the relationship between principals' self-perceptions of each of the instructional leadership behaviors, as specified in H22-H42, and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas ELA, a Pearson product moment correlation coefficient was calculated for each of the 21 leadership behaviors. One-sample *t* tests were conducted to test for the statistical significance of the correlation coefficients. The level of significance was set at .05. The effect size, as indexed by r^2, is reported when appropriate.

H22. There is a statistically significant relationship between principals' perceptions that they provide affirmation to teachers and students and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H23. There is a statistically significant relationship between principals' perceptions that they are change agents and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H24. There is a statistically significant relationship between principals' perceptions that they are effective communicators and the percentage of students scoring

at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H25. There is a statistically significant relationship between principals' perceptions that they provide recognition and rewards and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H26. There is a statistically significant relationship between principals' perceptions that they promote a positive culture and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H27. There is a statistically significant relationship between principals' perceptions that they are involved in curriculum, instruction, and assessment processes and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H28. There is a statistically significant relationship between principals' perceptions that they are disciplinarians and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H29. There is a statistically significant relationship between principals' perceptions that they are flexible and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H30. There is a statistically significant relationship between principals' perceptions that they provide a clear focus and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H31. There is a statistically significant relationship between principals' perceptions that they communicate and operate from strong ideals and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H32. There is a statistically significant relationship between principals' perceptions that they allow input of others in the decision-making process and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H33. There is a statistically significant relationship between principals' perceptions that they are informed about and encourage faculty discussion of educational research and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H34. There is a statistically significant relationship between principals' perceptions that they are knowledgeable about curriculum, instruction, and assessment processes and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H35. There is a statistically significant relationship between principals' perceptions that they monitor and evalutate curriculum and instruction and the percentage

of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H36. There is a statistically significant relationship between principals' perceptions that they inspire staff and advocate for new initiatives and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H37. There is a statistically significant relationship between principals' perceptions that they establish a set of standard operating procedures and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H38. There is a statistically significant relationship between principals' perceptions that they are advocates and spokespersons for the school to all stakeholders and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H39. There is a statistically significant relationship between principals' perceptions that they promote positive relationships with faculty and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H40. There is a statistically significant relationship between principals' perceptions that they provide teachers with professional resources and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H41. There is a statistically significant relationship between principals' perceptions that they are situationally aware and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

H42. There is a statistically significant relationship between principals' perceptions that they are visible in the school building and the percentage of students scoring at level 3 (proficient) or level 4 (advanced) of academic achievement as measured by the Kansas ELA assessment.

The results of the calculations of the correlation coefficients were mixed. However, the hypothesis tests for the correlations indicated no statistically significant relationships between principals' self-perception of each of the instructional leadership behaviors, as specified in H22-H42, and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas mathematics assessment (see Table 7). H22-H42 were not supported.

Table 7

Pearson Product Momentary Correlations and Test Statistics for ELA H22-H42 (N = 29)

Hypothesis	Behavior	*r*	*p*
22	Affirmation	.196	.309
23	Change agent	.014	.942
24	Communication	.305	.108
25	Contingent rewards	.218	.257
26	Culture	.056	.772
27	Curriculum, instruction, & assessment	.226	.238
28	Discipline	.350	.063
29	Flexibility	.148	.443
30	Focus	.224	.242
31	Ideals/Beliefs	.146	.451
32	Input	.146	.451
33	Intellectual stimulation	.192	.317
34	Knowledge of curriculum, instruction, & assessment	.271	.155
35	Monitors/Evaluates	.015	.937
36	Optimizer	.115	.551
37	Order	.242	.205
38	Outreach	.250	.191
39	Relationship	.333	.077
40	Resources	.240	.209
41	Situational awareness	.126	.515
42	Visibility	.149	.439

Additional Analyses

Due to the small sample size (N = 29), the Pearson Product Moment Correlations yielded no statistically significant relationships. However, some of the correlations were moderately strong, and there was evidence for marginally significant relationships. Therefore, due to the small sample size and what appeared to be potentially meaningful relationships, non-parametric correlations using Kendall's Tau were calculated to index the relationship between each of the instructional leadership behaviors of building principals and academic achievement. As was true of the hypothesis tests, the results were mixed. The analysis of the relationships between instructional leadership behaviors exhibited by principals and mathematics achievement resulted in statistically significant Kendall's Tau coefficients for the instructional leadership behaviors of communication and discipline. The analysis of the relationships between instructional leadership behaviors exhibited by principals and ELA achievement resulted in statistically significant Kendall's Tau coefficients for the instructional leadership behaviors of communication, discipline, outreach, and relationship. All the statistically significant correlations were moderately strong and positive, indicating that as the principals agreed more strongly that they implemented the leadership behavior, the percentage of students scoring in the proficient (level 3) and advanced (level 4) in mathematics and ELA was higher. The remaining Kendall's Tau coefficients were not statistically significant (see Table 8).

Table 8

Kendall's Tau Correlations and Test Statistics for Additional Analyses (N = 29)

Behavior	Mathematics		ELA	
	τ	p	τ	p
Affirmation	.125	.383	.207	.146
Change agent	-.090	.532	-.042	.770
Communication	.337	.019	.420	.003
Contingent rewards	.199	.163	.224	.116
Culture	-.032	.826	.058	.689
Curriculum, instruction, & assessment	.123	.388	.220	.121
Discipline	.304	.035	.380	.008
Flexibility	.088	.544	.079	.584
Focus	.199	.166	.219	.128
Ideals/Beliefs	.123	.393	.143	.320
Input	-.044	.756	.075	.601
Intellectual stimulation	.148	.292	.177	.207
Knowledge of curriculum, instruction, & assessment	.228	.106	.230	.102
Monitors/Evaluates	-.075	.609	-.009	.953
Optimizer	.067	.641	.119	.404
Order	.231	.102	.236	.094
Outreach	.209	.147	.315	.029
Relationship	.142	.305	.291	.035
Resources	.239	.095	.252	.077
Situational awareness	.144	.319	.118	.414
Visibility	.099	.493	.191	.183

Summary

Due to the small number of usable responses to the survey, using the Pearson model was determined not to be adequate to test the hypotheses in this study. Additional analyses were needed, and a Kendall's Tau correlation was chosen due to the small sample size issue. The additional analyses provided an opportunity for a more thorough examination of what appeared to be meaningful relationships between the instructional leadership behaviors. Chapter 5 provides a comprehensive summary of the study, the findings related to the literature, and the conclusions.

Chapter 5

Interpretation and Recommendations

Building principals need to understand the relationship between their leadership behaviors and student achievement. This chapter provides a summary of the study and the findings related to the literature. Additionally, the conclusions of the study are provided.

Study Summary

As noted in multiple studies included in Chapter 2, the implementation of instructional leadership behaviors by building principals has been found to have varying strengths of correlation to student achievement as measured by state assessments. In alignment with studies previously conducted, the purpose of this study was to identify the strength and direction of the relationship between Marzano et al.'s 21 instructional leadership behaviors and student achievement. This summary includes an overview of the problem, and a review of the purpose statement and research questions, the methodology, and the major findings.

Overview of the problem. There is abundant data to support that students in the United States underperform on standardized assessments compared to their typical-aged peers worldwide (PISA, 2012). Principals are now directly responsible for not only the daily management of the building but also the academic achievement of the students they serve. Principals are trying to find ways to increase academic success through the exhibition of instructional leadership behaviors. Several studies (Alig-Mielcarek, 2003; Johnson, 2004; Larsen, 1984; Mees, 2008; Pettigrew, 2013; Schindler, 2012; and Warner, 2014) have been conducted in other states, but none had been conducted in Kansas to

determine whether principals' perceptions of engagement in instructional leadership behaviors correlated with increased student achievement on state assessments.

Purpose statement and research questions. The first purpose of this study was to determine the extent there is a relationship between principals' perceptions of their instructional leadership behaviors and levels of student academic achievement at the building level, as measured by the Kansas mathematics assessment. The second purpose of this study was to determine the extent there is a relationship between principals' perceptions of their instructional leadership behaviors and levels of student ELA assessments. To address the purposes of this study, two research questions were posed, and 42 hypotheses were tested.

Review of the methodology. This study involved the use of a quantitative research design. Specifically, a correlational research method was employed to analyze the strength of the relationships between perceived instructional leadership behaviors and student achievement on Kansas mathematics and ELA assessments. The variables of interest were student performance on Kansas State mathematics and ELA assessments and Kansas high school principals' self-perceptions of instructional leadership behaviors. Data were collected using a modified version of the SLBS created by Schindler (2012). Permission was obtained from Schindler to use and modify the survey. Schindler (2012) based the survey on the work of Marzano et al. (2005), who identified 21 behavioral characteristics of instructional leaders. Schindler's survey questions were stated in behavioral terms with statements generated through the analysis of Waters et al.'s (2003) research findings, a comprehensive literature review, and a pilot study of principals and teachers completing the instrument conducted by Schindler which addressed the content

validity of the instrument. Schindler's survey was modified for the current research by replacing the four descriptive and demographic items with information about Kansas state assessments, tenure in position at the building, and the KSHSAA classification. To index the strength and direction of the relationship between principals' self-perceptions of each of the instructional leadership behaviors, as specified in H1-H42, and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas mathematics and ELA assessments, a Pearson product moment correlation coefficient was calculated for each of the 21 leadership behaviors. One-sample *t* tests were conducted to test for the statistical significance of the correlation coefficients. Due to the small sample size ($N = 29$), the Pearson Product Moment Correlations yielded no statically significant relationships. However, there were some marginally significant relationships. Therefore, due to the potential effects of the small sample size and what appeared to be meaningful relationships, non-parametric correlations using Kendall's Tau were also calculated to index the relationship between the instructional leadership behaviors of building principals and academic achievement.

Major findings. The hypothesis tests for the Pearson product moment correlations indicated no relationships between principals' self-perception of each of the instructional leadership behaviors and student achievement, as measured by the percentage of students scoring at the proficient or advanced levels on the Kansas mathematics and ELA assessment. However, when Kendall's Tau, a nonparametric index of the relationship that is sensitive to small samples, were calculated and the statistical significance was tested for the analysis, significant, positive relationships were indicated between the instructional leadership behaviors of communication and discipline

and student mathematics achievement. Additionally, Kendall's Tau indicated significant positive relationships between the instructional leadership behaviors of communication, discipline, outreach, and relationship, and ELA student achievement. Kendall's Tau did not indicate meaningful relationships between the other instructional leadership behaviors and student academic achievement in mathematics or ELA.

Findings Related to the Literature

The results of the current research provided evidence that two of the 21 instructional leadership behaviors, communication and discipline, are related to show positive, significantly significant relationships with student achievement on both the Kansas ELA and mathematics assessments when the Kendall's Tau was used to index the strength and direction of the relationships. This finding supported Larsen (1984) and Pettigrew (2013) for the behavior, communication. However, this finding was in contrast to Schindler (2012), who found that the correlation between the instructional leadership behavior of discipline and student achievement was negative, indicating the behavior has a detrimental impact on student achievement. Two other instructional leadership behaviors, outreach and relationships, yielded positive, statistically significant relationships with perceived implementation of the behavior, and student achievement on the Kansas ELA assessments. The findings using Kendall's Tau for outreach were supportive of Schindler's (2012) finding that outreach is correlated to student achievement. The instructional leadership behavior of relationship showed a positive statistically significant correlation with student achievement in the current study, which was a new finding compared to the research available at the time the study was conducted.

Larsen (1984), Alig-Mielcarek (2003), Mees (2008), and Warner (2014) found a positive and significant correlation between the instructional leadership behavior of culture and student achievement, which is in contrast to the findings of the current study that did not indicate evidence for a statistically significant relationship. Similarly, the results of Johnson (2004) and Pettigrew (2013) indicated positive, statistically significant relationships between curriculum, instruction, assessment behaviors and student achievement, which were not found in this study. Four other leadership behaviors were found in other studies to have statistically significant, positive relationships with student achievement, which were not supported by the findings of this study. The unsupported study results included those from Larsen (1984), who found that monitor/evaluate was significantly related to student achievement; Johnson (2004), who found that knowledge of curriculum, instruction, and assessment showed a positive and statistically significant relationship with student achievement; and Schindler (2012), who found that input and flexibility yielded positive and significant relationships with student achievement on Texas state assessments. Eleven instructional leadership behaviors (affirmation, change agent, contingent rewards, focus, ideals/beliefs, intellectual stimulation, optimizer, order, resources, situational awareness, and visibility) yielded non-significant relationships using both Pearson and Kendall's Tau to index strength. This finding was consistent with current research (Alig-Mielcarek, 2003; Johnson, 2004; Larsen, 1984; Mees, 2008; Pettigrew, 2013; Schindler, 2012; and Warner, 2014), as no other researchers found a relationship between the implementation of instructional leadership behaviors and student academic performance.

Conclusions

Understanding a building leader's implementation of instructional leadership behaviors and its influence on the success of students in the school is invaluable for Kansas high school principals. Knowing which leadership behaviors have been found to have a positive and statistically significant relationship with the percentage of students in the building scoring at the proficient (level 3) or advanced (level 4) on Kansas state assessments enables leaders to serve their campuses and leadership preparation programs to better prepare aspiring leaders. The final section of this chapter includes the implications for actions, recommendations for future research, and concluding remarks.

Implications for action. The findings of this study provide potential areas of focus for the implementation of instructional leadership behaviors for Kansas high school principals, district leaders, and university preparation programs. Kansas high school principals could focus on building their capacity to implement the instructional leadership behaviors of communication, discipline, outreach, and relationship to increase student achievement on mathematics and ELA state assessments. Through a dedicated commitment to communicating effectively with staff and faculty, encouraging faculty communication with one another, and being accessible to the school community, a building principal can effectively influence student achievement through communication. By serving as an advocate for teachers when needed, protecting teachers' classroom time from external disruptions, and sheltering teachers from disruptive politics, an instructional leader can transform schools by enabling teachers to master their craft, yielding increased student achievement. District leaders' support of the building principal working to provide a building and classroom environment that is grounded in

discipline enables students to have the opportunity to increase scores on their state assessments. Building and district leadership preparation programs can directly influence student achievement by enabling future practitioners the structured opportunity to learn and practice the skills needed to interact positively with parents in the school district. Additionally, providing explicit opportunities to advocate on behalf of the school in the communities served through integrated field experiences allows building principals to gain skills needed to improve student academic outcomes. Effective coursework on the legal mandates schools are charged with implementing will create success for the aspiring principal as ensuring compliance with all mandates ensures student success, as seen by the positive correlation between instructional leadership behaviors on the Kansas ELA assessment. A shared commitment to developing personal relationships with faculty allows both building principals and district leaders to create an environment where teachers feel supported and students are more successful academically. Staying abreast of the significant personal needs of faculty members allows leaders to sustain the positive gains in student achievement made through relationships. By advocating for and securing the materials and equipment teachers need, a principal, a district, and a leadership preparation program can directly influence student achievement.

Recommendations for future research. This study was conducted during the beginning of the Covid-19 global pandemic. The existing survey was sent during a time when buildings were closed, and building principals were trying to pivot from traditional in-person education to online learning. The challenges that a building principal was facing during the time the survey was administered may have had a negative effect on the sample size collected. A primary recommendation for future research would be to

resurvey Kansas high school principals during a non-pandemic year, hopefully yielding an increase in the number of respondents to the survey. The addition of more respondents may enable the analysis using the Pearson correlations to provide more usable results.

Another recommendation for future research on this topic is expanding the survey recipients to include middle school/junior high and elementary principals. The extension of principals surveyed would allow for a comprehensive understanding of the impact that a building leaders' perceptions of the implementation of instructional leadership strategies across the continuum of services provided by schools. Expanding the research by including all levels of Kansas' schools would allow the findings to be disaggregated by building level.

An additional area for future research would be to disaggregate the responses received by the population demographics of the school, such as size of school, type of school (public v. private), and socioeconomic status of the school. This study would enable the researcher to look at the impact that the size of the student population had on the influence of the principal's leadership behavior. Analyzing the impact of a school's socioeconomic condition and its potential influence on principal leadership behavior could allow building leaders to close any existing achievement gap more rapidly between higher and lower economically advantaged schools.

This study could also be expanded to include the perspective of teachers and parents. As seen in other related studies conducted across the United States, teachers and parents have been surveyed on their perceptions of building principals' instructional leadership behaviors. By doing so, both districts and principals can gain valuable insight

into how stakeholders view their role and its impact on student achievement. Additionally, a future study could ask for years in the profession as an administrator to analyze the effect of experience on the implementation of instructional leadership behaviors and its influence on student achievement.

Since completing the current research study, Roleau (2021) revised the 21 instructional leadership behaviors of Marzano et al. (2005). Roleau updated the behavior names for 10 of the 21 behaviors (affirmation; flexibility; outreach; contingent rewards; culture, curriculum, instruction, and assessment; discipline; and order) and referenced them as responsibilities instead of behaviors. Future research could be conducted using these revised 21 leadership responsibilities to broaden the scope of research on increasing student academic success by implementing the instructional leadership responsibilities.

Concluding remarks. Today's building leader is tasked with a growing list of responsibilities that have increased a principal's job from building manager to instructional leader. As noted by Schindler (2012), "The effective schools movement highlighted the role transformation of the school principal from one as a manager to an instructional leader" (p. 87). As identified in this study, principals' perceived use of Marzano et al.'s (2005) instructional leadership behaviors of communication, discipline, outreach, and relationship are correlated with student academic achievement in Kansas. Zepeda (2007) defined instructional leadership as "excellence and equity in education and entails projecting, promoting and holding steadfast to the vision; garnering and allocating resources; communicating progress; and supporting the people, programs, services, and activities implemented to achieve the school's vision" (p. 4). Tasked with ensuring that students are academically successful, it is imperative that building leaders

have a clear understanding of the impact that their leadership behaviors have on student achievement.

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Appendices

Appendix A: Permission to Use Survey

From: "Kerry Schindler" <kschindler@rangercollege.edu>
Subject: RE: SLBS Survey
Date: May 19, 2016 at 11:32:13 AM CDT
To: "'Cody K Whitney'" <CodyKWhitney@stu.bakeru.edu>

That's fantastic...you working on your doctorate! You are more than welcome to use the instrument and edit as necessary. I just ask that you cite me as the original author of the instrument and share your results with me when complete. Also, any reliability and validity data for the instrument was presented in my dissertation.

If you have any other questions, then please do not hesitate to contact me.

Best wishes,

KS

Kerry Schindler, Ed.D.
Vice President
Ranger College - Erath County Center
1835 W. Lingleville Rd., Stephenville, TX 76401
254.918.7232 (RCEC)
254.968.1085 office
254.965.8855 fax
kschindler@rangercollege.edu

-----Original Message-----
From: Cody K Whitney [mailto:CodyKWhitney@stu.bakeru.edu]
Sent: Wednesday, May 18, 2016 9:23 PM
To: kschindler@rangercollege.edu
Cc: Susan.Rogers@bakeru.edu
Subject: SLBS Survey

Hello.

My name is Cody Whitney. I am a doctoral candidate in Educational Leadership from Baker University in Baldwin City, Kansas.

I am extremely interested in the correlation between the behaviors associated with instructional leadership and the impact on student achievement. I am looking at this as the topic for my dissertation, with a focus on the role of secondary principals within the state of Kansas. While conducting research I came across your survey (the SLBS) and dissertation.

i am interested in potentially using the SLBS to gauge principal perceptions throughout the state of Kansas.

Would I be able to use your survey? If so, am I able to edit the survey to include three questions pertaining to levels of student achievement on state assessments in the areas of math, ELA, and Science? Do you have data on the validity and reliability of the instrument?

Thank you for your time, and I look forward to hearing back from you!

Respectfully,

Cody Whitney, M.Ed.
Dr. Susan Rogers, Ph.D., Dissertation Advisor

Appendix B: The Modified School Leadership Survey

The Modified School Leadership Behavior Survey (M-SLBS)

Part I: Demographics
Instructions

Please complete the following demographic items with a numerical value in the open response space provided.

1. Were you the building principal during the 2018-2019 school year? (yes/no)
2. Please indicate the number of students enrolled in your building as of the 09/20/2018 count date. (open response)
3. Please indicate the percentage of students performing at a Level 3 (proficient) on the Kansas Mathematics Assessment. (open response)
4. Please indicate the percentage of students performing at a Level 4 (advanced) the Kansas Mathematics Assessment. (open response)
5. Please indicate the percentage of students performing at a Level 3 (proficient) on the Kansas English Language Arts (ELA) Assessment. (open response)
6. Please indicate the percentage of students performing at a Level 4 (advanced) on the Kansas English Language Arts Assessment. (open response)

Part II: M-SLBS

Please read each statement and then select the number that indicates your level of agreement with each statement that describes your behavior as the building principal. For each behavior, an answer of 1 would represent *strongly disagree*, 2 represents *somewhat disagree*, 3 represents "Neutral", 4 represents "somewhat agree", and 5 represents "strongly agree." You should only select one number per statement.

Leadership Behaviors	**Rating**
As the building principal, I…	
7. acknowledge teachers' accomplishments in public.	1 2 3 4 5
8. recognize accomplishments of students.	1 2 3 4 5
9. celebrate achievement of the school.	1 2 3 4 5
10. am open to considering new ways of doing things.	12 3 4 5
11. take risks when considering new initiatives.	1 2 3 4 5
12. exhibit the willingness to change the status quo.	1 2 3 4 5
13. communicate effectively with faculty/staff.	1 2 3 4 5
14. encourage faculty communication with one another.	1 2 3 4 5
15. am accessible to school community.	1 2 3 4 5

16. recognize those who perform well. 1 2 3 4 5
17. reward those who work hard. 1 2 3 4 5
18. base advancement on excellent performance. 1 2 3 4 5

19. share a vision for the purpose of the school. 1 2 3 4 5
20. work to promote cohesion among professional staff. 1 2 3 4 5
21. encourages cooperation among faculty. 1 2 3 4 5

22. am active with faculty in curriculum development. 1 2 3 4 5
23. work with teachers on instructional issues for improvement. 1 2 3 4 5
24. am involved with faculty when dealing with assessment challenges. 1 2 3 4 5

25. serve as an advocate for teachers when appropriate. 1 2 3 4 5
26. protect teachers' classroom time from external disruptions. 1 2 3 4 5
27. shelter teachers from disruptive politics. 1 2 3 4 5

28. am comfortable with people expressing their opinions. 1 2 3 4 5
29. exhibit a flexible leadership style to adapt as the situation warrants. 1 2 3 4 5
30. am comfortable with changes in the status quo. 1 2 3 4 5

31. set expectations for students at appropriate level(s). 1 2 3 4 5
32. assist in focusing faculty on established goals of the school. 1 2 3 4 5
33. help establish concrete goals for the school. 1 2 3 4 5

34. communicate professional beliefs to the faculty and staff. 1 2 3 4 5
35. hold high ideals for the school. 1 2 3 4 5
36. operate with strong ideals and beliefs about how schools should operate. 1 2 3 4 5

37. encourages leadership team involvement in decision making. 1 2 3 4 5
38. give stakeholders opportunity for input in important decisions. 1 2 3 4 5
39. ask for faculty participation and judgments in decision making. 1 2 3 4 5

40. am informed on current trends and issues in education. 1 2 3 4 5
41. engage faculty in discussions of educational research and theory. 1 2 3 4 5
42. am a diligent reader of professional literature. 1 2 3 4 5

43. am knowledgeable about instructional practices. 1 2 3 4 5
44. am informed about effective classroom practice. 1 2 3 4 5
45. am competent in issues related to curriculum. 1 2 3 4 5

46. monitor the quality of education in the building. 1 2 3 4 5
47. assess the effectiveness of classroom teachers. 1 2 3 4 5
48. am actively involved in evaluating curriculum and instruction 1 2 3 4 5

49.	inspire staff to perform at high levels.	1 2 3 4 5
50.	advocate for major initiatives.	1 2 3 4 5
51.	believe in the faculty's ability to achieve high standards.	1 2 3 4 5
52.	establish regular patterns for accomplishing routine managerial tasks.	1 2 3 4 5
53.	provide clear and unambiguous rules, structures, and expectations.	1 2 3 4 5
54.	assist faculty, staff, and students to comprehend rules and procedures.	1 2 3 4 5
55.	interact positively with parents in the school district.	1 2 3 4 5
56.	advocate on behalf of the school in the community.	1 2 3 4 5
57.	work to ensure compliance with legal mandates for the school.	1 2 3 4 5
58.	am interested in developing personal relationships with faculty.	1 2 3 4 5
59.	keep up with significant personal matters of faculty members.	1 2 3 4 5
60.	maintain an awareness of important personal needs of faculty members.	1 2 3 4 5
61.	serve as an advocate for securing materials and equipment for teachers.	1 2 3 4 5
62.	ensure that faculty have relevant professional development opportunities.	1 2 3 4 5
63.	am involved in gaining the necessary resources for instruction.	1 2 3 4 5
64.	am aware of the informal institutional structures of the school.	1 2 3 4 5
65.	am alert to issues that could potentially degrade the schooling effort.	1 2 3 4 5
66.	am effective at predicting possible disasters.	1 2 3 4 5
67.	conduct regular and meaningful classroom visits.	1 2 3 4 5
68.	am highly visible around the school.	1 2 3 4 5
69.	have frequent contact with students in the building.	1 2 3 4 5

Appendix C: IRB Approval

Baker University Institutional Review Board

February 21st, 2020

Dear Cody Whitney and Susan Rogers,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,

Nathan Poell, MLS
Chair, Baker University IRB

Baker University IRB Committee
Scott Crenshaw
Sara Crump, PhD
Jamin Perry, PhD
Susan Rogers, PhD

Appendix D: Solicitation Email

Dear Building Principal,

You have been selected to participate in a study examining the relationship between principals' perceptions of demonstrated instructional leadership behaviors and the impact that has on the levels of student academic achievement on the Kansas mathematics and ELA assessments. I greatly appreciate your voluntary participation in this study; you may choose to withdraw at any time without penalty or repercussion.

You may choose to answer some or all of the questions; however, it may not be possible for me to complete the data analysis if you choose to not answer some of the questions. There are no risks associated with your participation, and no direct benefit from your participation is expected. The survey is completely anonymous. Your privacy is important; your responses will be combined with other participants' responses and reported in summary format. Information reported will not indicate individual participants or schools. There is no penalty should you choose not to participate or respond to all of the items. Your completion and submission of the survey will indicate your consent to participate and your permission to use the information you have provided for my study.

To complete this survey, you will need the exact percentage of students performing at a Level 3 (proficient) and a Level 4 (advanced) on the 2019 Kansas Mathematics and Language Arts Assessments. (ex. 47%), at your school. If you do not have this information readily available, you can find it here: http://ksreportcard.ksde.org/home.aspx?org_no=State&rptType=3. Please select Performance Reports and then HS for the grade level. This link is also embedded in the directions on the survey prior to the questions addressing student performance.

There is no cost to you except your time. This survey should take no more than 15 minutes of your time. Please complete the entire survey by June 1, 2020 Please click on the link below to complete the online survey.

https://forms.gle/PAxDXRUXEWMvMAND8

If you have any questions or concerns about your rights as a research participant, or have any questions regarding the study, please contact me at codykwhitney@stu.bakeru.edu or (785) 438-8450), or my major advisor, Dr. Susan Rogers srogers@bakeru.edu or (785) 230-2801.

Thank you for your time.

Sincerely,

Cody Whitney, M.Ed., M.S.S.L.
Baker University Doctoral Candidate

Appendix E: Solicitation Email Follow-up One

Dear Building Principal,

You were contacted three weeks ago about participating in a study examining the relationship between principals' perceptions of demonstrated instructional leadership behaviors and the impact that has on the levels of student academic achievement on the Kansas mathematics and ELA assessments. If you already completed the survey, thank you and disregard this email. If you have not completed the survey, I would greatly appreciate your voluntary participation in this study; you may choose to withdraw at any time without penalty or repercussion.

You may choose to answer some or all of the questions; however, it may not be possible for me to complete the data analysis if you choose to not answer some of the questions. There are no risks associated with your participation, and no direct benefit from your participation is expected. The survey is completely anonymous. Your privacy is important; your responses will be combined with other participants' responses and reported in summary format. Information reported will not indicate individual participants or schools. There is no penalty should you choose not to participate or respond to all of the items. Your completion and submission of the survey will indicate your consent to participate and your permission to use the information you have provided for my study.

To complete this survey, you will need the exact percentage of students performing at a Level 3 (proficient) and a Level 4 (advanced) on the 2019 Kansas Mathematics and Language Arts Assessments. (ex. 47%), at your school. If you do not have this information readily available, you can find it here: http://ksreportcard.ksde.org/home.aspx?org_no=State&rptType=3. Please select Performance Reports and then HS for the grade level. This link is also embedded in the directions on the survey prior to the questions addressing student performance.

There is no cost to you except your time. This survey should take no more than 15 minutes of your time. Please complete the entire survey by June 1, 2020 Please click on the link below to complete the online survey.

https://forms.gle/ko2CsQdd3xGqisdp8

If you have any questions or concerns about your rights as a research participant, or have any questions regarding the study, please contact me at codykwhitney@stu.bakeru.edu or (785) 438-8450), or my major advisor, Dr. Susan Rogers srogers@bakeru.edu or (785) 230-2801.

Thank you for your time.
Sincerely,
Cody Whitney, M.Ed., M.S.S.L.
Baker University Doctoral Candidate

Appendix F: Solicitation Email Follow-up Two

Dear Building Principal,

You have been contacted on two previous occasions about participating in a study examining the relationship between principals' perceptions of demonstrated instructional leadership behaviors and the impact that has on the levels of student academic achievement on the Kansas mathematics and ELA assessments. If you already completed the survey, thank you and disregard this email. If you have not completed the survey, I would greatly appreciate your voluntary participation in this study because it is critical to the completion of my degree; you may choose to withdraw at any time without penalty or repercussion.

To complete this survey, you will need the exact percentage of students performing at a Level 3 (proficient) and a Level 4 (advanced) on the 2019 Kansas Mathematics and Language Arts Assessments. (ex. 47%), at your school. If you do not have this information readily available, you can find it here: http://ksreportcard.ksde.org/home.aspx?org_no=State&rptType=3. Please select Performance Reports and then HS for the grade level. This link is also embedded in the directions on the survey prior to the questions addressing student performance.

You may choose to answer some or all of the questions; however, it may not be possible for me to complete the data analysis if you choose to not answer some of the questions. There are no risks associated with your participation, and no direct benefit from your participation is expected. The survey is completely anonymous. Your privacy is important; your responses will be combined with other participants' responses and reported in summary format. Information reported will not indicate individual participants or schools. There is no penalty should you choose not to participate or respond to all of the items. Your completion and submission of the survey will indicate your consent to participate and your permission to use the information you have provided for my study.

There is no cost to you except your time. This survey should take no more than 15 minutes of your time. Please complete the entire survey by June 23, 2020 Please click on the link below to complete the online survey.

https://forms.gle/ko2CsQdd3xGqisdp8

If you have any questions or concerns about your rights as a research participant, or have any questions regarding the study, please contact me at codykwhitney@stu.bakeru.edu or (785) 438-8450), or my major advisor, Dr. Susan Rogers srogers@bakeru.edu or (785) 230-2801.
Thank you for your time.
Sincerely,
Cody Whitney, M.Ed., M.S.S.L.
Baker University Doctoral Candidate

Appendix G: Solicitation Email Follow-up Three

Dear Building Principal,

I hope that this email finds you well. During this unprecedented time in our history as educators I know you are very busy planning for an uncertain start to the 2020-2021 school year. As a high school assistant principal and athletic director, I know that I have found myself overwhelmed with new responsibilities. However, I am in need of your help.

I previously contacted you about participating in a study examining the relationship between principals' perceptions of demonstrated instructional leadership behaviors and the impact that has on the levels of student academic achievement on the Kansas mathematics and ELA assessments. If you already completed the survey, thank you and disregard this email. If you have not completed the survey, I would greatly appreciate your voluntary participation in this study because it is critical to the completion of my degree; you may choose to withdraw at any time without penalty or repercussion. I anticipate that the survey should take no more than 15 minutes of your time to complete.

To complete this survey, you will need the exact percentage of students performing at a Level 3 (proficient) and a Level 4 (advanced) on the 2019 Kansas Mathematics and Language Arts Assessments. (ex. 47%), at your school. If you do not have this information readily available, you can find it here: http://ksreportcard.ksde.org/home.aspx?org_no=State&rptType=3. Please select Performance Reports and then HS for the grade level. This link is also embedded in the directions on the survey prior to the questions addressing student performance.

You may choose to answer some or all of the questions; however, it may not be possible for me to complete the data analysis if you choose to not answer some of the questions. There are no risks associated with your participation, and no direct benefit from your participation is expected. The survey is completely anonymous. Your privacy is important; your responses will be combined with other participants' responses and reported in summary format. Information reported will not indicate individual participants or schools. There is no penalty should you choose not to participate or respond to all of the items. Your completion and submission of the survey will indicate your consent to participate and your permission to use the information you have provided for my study.

There is no cost to you except your time. Please complete the entire survey by July 1, 2020 Please click on the link below to complete the online survey.

https://forms.gle/ko2CsQdd3xGqisdp8

If you have any questions or concerns about your rights as a research participant, or have any questions regarding the study, please contact me at codykwhitney@stu.bakeru.edu or (785) 438-8450), or my major advisor, Dr. Susan Rogers srogers@bakeru.edu or (785) 230-2801.

Thank you for your time.

Sincerely,

Cody Whitney, M.Ed., M.S.S.L.

Baker University Doctoral Candidate