2018

TEACHERS' PREFERENCES IN SELECTING SENIOR HIGH SCHOOL PRINCIPALS IN NEW YORK PUBLIC SCHOOLS: A DISCRETE CHOICE EXPERIMENT

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TEACHERS' PREFERENCES IN SELECTING SENIOR HIGH SCHOOL PRINCIPALS IN NEW YORK PUBLIC SCHOOLS: A DISCRETE CHOICE EXPERIMENT

by

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A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of

Doctor of Education

Presented to
The Faculty of the
College of Education, Information, and Technology

December 2018

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EDUCATIONAL STUDIES

DISSERTATION APPROVAL FORM

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DEDICATION

Dedicated to my wife, Christina, and son, Joseph Anthony. Thank you for your support and sacrifice during this journey.

ACKNOWLEGEMENTS

First and foremost, I need to acknowledge and thank my wife, Christina, for the unconditional support that she has given me throughout this journey. During this time, we have moved twice, purchased a home, changed jobs, had health issues, and experienced the birth of our son, Joseph Anthony. Through it all, Christina has been the rock of our family in making sure that our priorities were always straight and that I never lost focus of what was important. I also want to thank Joseph for the sacrifices he has made. I can promise you, Joseph, that we will have much more time play now!

I also want to thank my committee chair, Dr. Red Owl. Your unwavering support and belief in me is appreciated more than you know and were tremendous motivating factors for me. The countless evening and weekend hours that you have given me will not be forgotten, as your commitment to my success was nothing short of remarkable. I am truly honored to have worked with you during this process. I would also like to thank your wife, Mary Jo. Her joyful demeanor was always refreshing, and at times, was needed to help me get through some of our more difficult conversations!

To Dr. Inserra, I cannot put into words how enthusiastic I was to have you as part of my dissertation committee. I recognize that your time was both limited and valuable given the work that you do at both LIU Post and LIU Brooklyn, and I am extremely grateful that you made the decision to invest a portion of that time into me.

I would also like to thank Dr. Abd-El-Hafez as your expertise in the areas of decision theory and discrete choice methods were extremely helpful in the construction and completion of my dissertation. Not only was it a privilege to have you as a member of my committee, but it was also symbolic, as I was in the audience when you defended your dissertation almost 3 years ago.

I would also like to acknowledge Dr. Phyllis Harrington (Superintendent), Ms. Diane Provvido (Assistant Superintendent), Dr. Jill DeRosa (Assistant Superintendent), Ms. Geraldine DeCarlo (High School Principal), and Ms. Debra Kienke (Executive Director of Special Education) as each of you has provided me guidance in school leadership since I have come to the Oceanside School District. This guidance has helped me to develop into the school leader I am today, and I know you will continue to have an impact on the type of leader I will be tomorrow.

I would like to thank Mr. James Morrow (Special Education Chair) and Mr. Peter Gottfried (Dean/Mentor) as both of you were integral parts of my success during my time as a special education teacher at Great Neck South High School. Together, you both have helped me develop the instructional strategies and communication skills to not only be a successful teacher, but also an effective mentor to new teachers, as well as more experienced colleagues. Most importantly, your student first mentality that is steadfast within each of your decisions is a practice and philosophy that I emulate in my decision making.

Lastly, I would like to thank both Dr. Estelle Kamler and Dr. Kathy Weiss. Both of you have provided me with a great deal of guidance in terms of scholarship as well as in my professional decision making since working toward my educational leadership certificate years ago. Both your wisdom and faith in me were motivating factors in my decision to start this journey three and a half years ago, and if it were not for that, I am unsure if I would be calling myself Dr. Paul M. Guzzone today!

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ABSTRACT

Noticeably absent from prior research on the selection of high school principals is empirical evidence about the factors that teachers consider in recommending candidates for high school principalships. This study gave teachers a voice about factors that should be considered in selecting high school principals. A discrete choice experiment was conducted with 219 tenured (or previously tenured), public school teachers in Grades 9-12 in New York State. Teachers were asked to choose a single hypothetical candidate from 10 sets of 3, where each candidate was described by 6 candidate-specific characteristics: teaching experience, administrative experience, education level, instructional skills, managerial skills, and interpersonal skills. Case-specific variables (i.e., teacher-participant characteristics) in the analysis included teaching experience, education level, and school needs level. A single-class, alternative-specific conditional logistic regression (asclogit) found 4 statistically significant candidate-specific factors: previous administrative experience, instructional leadership, managerial experience, and interpersonal leadership ability. Teaching experience and holding a doctorate were not statistically significant factors in the asclogit model. The asclogit found 2 statistically significant case-specific factors (i.e., having an advanced certificate or doctorate, and being in a high-needs school), both of which affected teachers' views about candidates' instructional leadership. Latent class conditional logistic regression (lclogit) found that all 6 candidate-specific variables except holding a doctorate were statistically significant across 3 distinct latent classes and that holding a doctorate had a statistically significant negative effect only in Latent Class 3. No statistically significant case-specific factors were found by lclogit. The study concluded that greater attention needs to be given to the views of teachers in principal-selection processes.

Keywords: discrete choice, high school principal, latent class analysis, teachers

CHAPTER 1:

BACKGROUND AND CONTEXT

Early in my career, I was fortunate to teach in a high-achieving school district. During those early years, the principal of one of the secondary schools in the district was new and was just beginning his first year as a principal. This principal held a doctorate, had previous principal experience, and had recently been named as a state's Principal of the Year. Over the course of the next two years, however, he had difficulty adjusting to the norms of the building, staff, and community. He eventually left the school. On paper, he had appeared to be the perfect selection to lead the school, but over time it became apparent that he was not a good match to provide leadership for that particular school. This is not to say that he was not highly qualified nor that he might not be highly effective in a different school setting. In this case, however, the selection process had failed to identify a candidate whose qualifications and leadership style were a good match for the school.

When I decided to move from classroom teaching into an administrative role several years ago, that earlier experience was unsettling and a cause for some deep reflection. My career has progressed, and I have taken on even greater administrative responsibility. I now serve as an associate principal; and have clear aspirations for advancement when the time is right. As I have reflected on my current role and envision further opportunities as a school leader, the experience of that previous principal has come to the forefront of my thinking with some regularity. I know how the principal-selection process generally works in school districts in New York State, but I have pondered such questions as: What candidate attributes should be considered when principals are selected? How much weight should be given to the candidates' academic education, their teaching experience, their leadership experience, their personal attributes, and

their leadership styles? I have also wondered how the backgrounds and experiences of selection committee members influence their decisions in choosing the "best" candidate to recommend for a principalship. From discussions with senior school leaders in several districts and from my extensive readings in both the professional and academic literatures, I believe have a good understanding of the major factors that senior leaders consider in selecting principals, but I am less certain about the candidate attributes that are most important to the teachers who serve on principal-selection committees and who work with and for principals on a daily basis. This dissertation research emerged directly from my intellectual curiosity about these issues and no less from my professional interests in the attributes and characteristics that are sought in those who lead our schools.

Purpose of the Study

Effective school leadership matters (Brewer, 1993; Hattie, 2009; Rammer, 2007; Stronge et al., 2008), and at the helm of building leadership is the principal. Marzano, Waters, and McNulty (2005) suggested that "an effective principal is thought to be a necessary precondition for an effective school" (p. 5). Others have found that strong school leadership can markedly influence student achievement (Cotton, 2003; Hattie, 2009; Kellough & Hill, 2015; Marzano, Waters, & McNulty, 2005; Palmer, 2017) and that principals play a major part in determining the success of the schools they lead (Baron, 1990; Hauserman & Stick, 2013; Parkay & Armstrong, 1987). Indeed, only teachers have a greater impact than principals on student learning (Doyle & Locke, 2014; Hattie, 2009; Leithwood, Louis, Anderson, & Wahlstrom, 2004). The value that effective principals bring to the schools they lead is well-established and underscores the importance of selecting the best candidate when principals are appointed.

Given my strong interests in what teachers' value in principal-selection processes in New York State, the purpose of this study was twofold. First, I wanted to identify and assess the importance of those candidate attributes that teachers' value when recommending a candidate for a principalship. Second, I wanted to learn how teachers' characteristics and experiences affect their preferences, choices, and recommendations when they are asked to serve on principal-selection committees.

I begin this discussion with a brief history of the principalship and how the role has evolved and changed over history. I then present a review of the contemporary role of modern-day principals, followed by a review of key trends and challenges associated with principal leadership in New York State today. The chapter concludes with a general statement of the problem, presents a list of key terms and definitions used in the remainder of this dissertation, provides a synthesis of the information presented in this introductory chapter, and, finally, describes the nature and organization of the remaining chapters.

A Brief History of the Principalship

Leadership in schools has been discussed since the 1600s (Rousmaniere, 2013), but the nature and scope of the role has changed dramatically over time, to reflect social norms and expectation, changing views about the value of education and the role and purposes of schools, economic factors, and the digital age that was ushered in near the beginning of the 21st century. This section reviews the evolution of the principal position from the time prior to the 20th century, then focuses on major eras during the 1900s, and concludes with a description of the role as it has come to exist in the first decade of the 21st century.

Prior to the 1900s

Early public school principalships were modeled on headmaster positions of the private academies of the late 1700s and early 1800s (Matthews & Crow, 2003; Pierce, 2017). These schools were rooted mostly in religious-based education and were led by ministers or others trained in theology (Matthews & Crow, 2003). Like headmasters, public school principals typically supervised only a few teachers, handled relatively simple and routine administrative tasks, and committed a large portion of their day to teaching (Matthews & Crow, 2003; Pierce, 2017). These positions were most commonly referred to as preceptors, head teachers, or principal teachers (Kellough & Hill, 2015; Pierce, 2017; Rousmaniere, 2013) in recognition of the nature of the role as that of a first among equals or master teachers. With little to no local or state oversight, early school leaders were free to operate their schools according to their own values and beliefs (Rousmaniere, 2013).

Early in the 19th century, schools began to be divided into separate departments and sub-schools within a building, each of which was led by a different head or principal (Pierce, 2017). In 1838, the Cincinnati School District became one of the first districts to place all departments and sub-schools within one building under a single individual (Pierce, 2017; Rousmaniere, 2013). This shift in the organizational model of schools resulted from a number of factors including: increased enrollment, the standardization of curricula, an increased focus on grading, and greater attention to formalizing departments. As schools grew, superintendents began to delegate additional supervisorial tasks to building leaders as they could no longer manage them all on their own (Matthews & Crow, 2003; Pierce, 2017).

Eventually, most building leaders gave up their teaching responsibilities as principal teachers as they took on more supervisory tasks (Rousmaniere, 2013). By the mid-1800s, the duties of principals had become mostly management-based and there was little time for a focus on teaching (Pierce, 2017). Based on a review of board of education reports published between 1853 and 1900, Pierce (2017, pp. 33-34) described the allocation of principals' duties as comprising the following tasks:

- Organization and general management (32 duties, 40.5%),
- Equipment and supplies (12 duties, 15.2%),
- Office duties (11duties, 13.9%),
- Pupil personnel (10, duties, 12.7%),
- Building and grounds (6 duties, 7.6%), and
- Miscellaneous activities (8 duties, 10.1%).

The fundamental change to greater supervisory and managerial roles and the increased authority and power of principals was controversial (Rousmaniere, 2013). Some were concerned with giving an individual sole absolute administrative authority to rule a school, while others questioned whether a management-focused principal without proper professional training could effectively supervise teachers. Compounding the challenges principals faced as their roles changed to be primarily supervisory and managerial, principals received little support and typically enjoyed little security in their positions. As a result, principal churn had an impact on the continuity of the role, as well as on the schools and students who depended upon principals for leadership and stability. With the growing number of responsibilities assigned to principals near the end of the 19th century, some principals were finally provided clerical assistants (Pierce,

2017). Theses assistants helped with such tasks as maintaining records, monitoring attendance, and performing other routine duties (Pierce, 2017).

1900s–1920s

Principals had begun to have a role in supervising instruction by the 1860s, but, by the early 1900s, curricula became a major focus of the principalship (Matthews & Crow, 2003; Pierce, 2017). With this change, principals were required to review teachers' lesson plans, assist with creating crosswalks and curriculum maps, and identify appropriate curricula to be taught (Pierce, 2017). Principals were given discretion to select curricula that best aligned with the needs of the local communities they served. They were also expected to hold regularly scheduled staffing meetings to discuss school-related issues (Pierce, 2017). Despite these curriculum-related responsibilities, principals' roles in instruction had not returned to a focus on providing instruction. Rather, the role of principals had evolved to encompass planning, designing, and overseeing instruction, and to providing managerial oversight of teaching (Kellough & Hill, 2015).

In the early 1900s, as principals were increasingly assigned greater managerial and supervisory responsibilities and had moved away from direct teaching, the Chicago schools created the position of "extra-teacher" (Pierce, 2017). Other schools developed "general supervisor" positions (Matthews & Crow, 2003). These positions were designed to relieve principals from some of the administrative tasks that overburdened them but which were too difficult to be handled by clerical staff. The additional administrative support positions provided to principals at that time laid the foundation for today's assistant and associate principal positions (Matthews & Crow, 2003). The creation of this additional administrative infrastructure could

also be viewed as a recognition of the respect that principals had earned as valued leaders whose work was considered important (Beck & Murphy, 1993).

Principals' responsibilities for community relations also came to forefront as townships increasingly appreciated the pivotal role that schools and their leaders played in the success of their towns (Beck & Murphy, 1993; Matthews & Crow, 2003). Whereas schools had previously been considered burdensome, schools came to be viewed as a driving force in supporting civic causes, war efforts, and community development and advancement (Pierce, 2017; Rousmaniere, 2013). Additionally, principals began to establish relationships with media outlets, parents, safety agencies, and local businesses (Pierce, 2017). In doing so, they were better able to secure resources and services for their schools, and their role started to encompass political components (Matthews & Crow, 2003). By the end of the 1920s, the role had evolved to reflect managerial, instructional, political, and community responsibilities similar to the responsibilities of the modern principal today (Kafka, 2009).

1930s

In the 1930s, community involvement remained important as principals were expected to create comprehensive plans to enhance school-to-community relationships (Rousmaniere, 2013). During this decade, principals clearly distinguished their roles as separate and distinct from those of teachers through the National Association of Secondary School Principals (NASSP) and the Department of Elementary Principals (Beck & Murphy, 1993). At this time, both organizations were part of the National Educators Association (NEA) umbrella (Rousmaniere, 2013). Principals found themselves losing autonomy, however, as superintendents began take a more top-down approach (Beck & Murphy, 1993). The primary role of principals remained focused on administrative tasks rooted in organization and supervision (Beck & Murphy, 1993) with

many of their responsibilities grounded in fiscal administration, personnel management, facilities and equipment management, and other managerial functions (Beck & Murphy, 1993). They also increased their focus on supervising the work of their teachers to ensure that teachers were effective and that students were making acceptable academic progress (Beck & Murphy, 1993; Matthews & Crow, 2003).

1940s

The United States entered World War II in the 1940s, and principals began implementing curricula that supported the war efforts at home. For example, curricula included such courses as "Rationing" and "Vocations for Victory" (Beck & Murphy, 1993). At the war's conclusion, principals found themselves more involved in curriculum development than they had been earlier, and the focus of teaching in their schools had shifted from simply teaching about concepts to teaching how concepts could be applied. Further, principals were charged with diversifying opportunities for students by including vocational, technical, agricultural, and interdisciplinary education programs (Rousmaniere, 2013). Subsequently, principals strengthened their relationships with teachers and transformed the nature of those relations from critique and supervision to assistance and development (Beck & Murphy, 1993; Matthews & Crow, 2003). World War II also influenced the organization of schools and the nature of school leadership, as schools assumed more democratic approaches toward schooling and management. This extended to the relationships between superintendents and principals, as their interactions became more collegial and cooperative (Beck & Murphy, 1993).

1950s

The post-war era of the 1950s saw principals' responsibilities turn to the types of evidence-based practices that had emerged in business and industry (Deming, 1994) in order to improve school organization and management (Beck & Murphy, 1993). Additionally, the pressure of external accountability began to come to light as principals were asked to provide data to demonstrate the progress being made by their schools. Concomitant with the emphasis on evidence-based practices and the use of data in decision making, principals were expected to pursue ongoing professional development and to earn additional degrees in higher education. Principals also needed to pay greater attention to non-professional staff such as facilities staff, custodians, and clerical workers (Beck & Murphy, 1993). Whereas principals had previously focused on instructional oversight, they were now also expected to conduct building walk-throughs, sort data, and review reports to ensure that the critical non-instructional tasks were being completed properly, effectively, and efficiently.

One of the most important challenges faced by principals during the 1950s was implementing the changes required by the Supreme Court's decision in Brown v. Board of Education (1954). Due to increased school enrollment and school consolidations made possible by advances in transportation, principals frequently had to implement reorganizations (Knuth, 2004) in addition to addressing the challenges of racially integrating schools (Beck & Murphy, 1993). Prior to integration, black principals often led segregated schools and were highly respected by the constituents they served (Rousmaniere, 2013). These leaders had exercised more power and discretion in running their schools than their white counterparts because many local school boards had little interest in minority schools under segregation. Securing funding and resources was a major challenge faced by black principals as a result of the lack of support.

Their funding was roughly a third of that received by schools serving white students (Rousmaniere, 2013). As a result, black principals had to be especially motivated and creative in their efforts to realize student and school success.

1960s

The 1960s proved to be a difficult period for principals, as the larger society turned to social activism and as students and faculty began to assert their rights and demand greater freedoms. Principals found themselves defending the authority of their position and the right to have the final say in decisions within their buildings as teachers demanded greater involvement in school operations and procedures (Beck & Murphy, 1993; Knuth, 2004; Rousmaniere, 2013). The growth and influence of teacher unions was a major factor in the deteriorating relationship between teachers and principals during this period (Rousmaniere, 2013). The emergence of teacher unions also created ambiguity as principals struggled to determine whether they would align with their teachers or their local boards of education.

Complicating the principalship even more, this period saw a growing focus on accountability. This burden also affected principals on an emotional level, and confusion and vulnerability began to set in for many principals (Beck & Murphy, 1993). Further, due to the mounting complexities of the job, there was a great deal of conflict as they were expected to be effective in managing instruction, managing operations, working with students, and maintaining productive relationships with teachers, while attempting to not lose the power assigned to their hierarchical positions (Beck & Murphy, 1993). Attempting to find the right balance had become a difficult task for principals.

The decade of the 1960s also saw a shift in principals' relations with the students in their schools (Rousmaniere, 2013). Whereas principals had previously maintained student discipline

and order by setting and enforcing expectations aligned with cultural norms and historical practices, students in the 1960s were newly empowered by legal mandates and federal court decisions that granted them various rights and protections.

1970s

During the 1970s, principals took on a greater role in building meaningful relationships within their communities. Although community involvement had been established as important earlier, principals were expected to expand and nurture these connections by providing community education programs, allowing the use of school facilities by community stakeholders, and leading discussion groups consisting of both school staff and community members (Beck & Murphy, 1993). These responsibilities became increasingly central as principals often found themselves being pulled in multiple directions by students, parents, and community organizations (Rousmaniere, 2013). Contributing to the public's growing dissatisfaction for their school leaders was the lack of clearly defined responsibilities associated with the position of principal. The ambiguity of the principalship role made it difficult for principals to defend their practices and decisions to those who questioned their performance or challenged their authority. In response, principals attempted to strengthen their positions and enhance their job security by establishing principal unions. By 1975 there were more than 1,000 collective bargaining units for principals across 24 states (Rousmaniere, 2013).

At the same time that principals had to be outwardly focused on their communities, they also were charged with creating positive and nurturing school climates within their school buildings. By that time, teachers and students were asserting their rights to feel comfortable enough to address controversial topics from multiple perspectives without being reprimanded or disrespected on a peer or supervisory level (Beck & Murphy, 1993). From an instructional

perspective, principals started to take on a more clinical and analytical role with teachers in the 1970s (Matthews & Crow, 2003). The purpose of this approach was to help teachers become more self-reflective about their work with students and about their teaching methods and practices. By the end of the 1970s, the push for formalized principal evaluation processes was widespread and enjoyed popular and political support (Beck & Murphy, 1993). President Nixon officially encouraged educational policy makers to formalize school and educator accountability (Rousmaniere, 2013).

1980s

The concept of "instructional leadership" became the watchword in describing the role of principals during the educational reform efforts of the 1980s (Matthews & Crow, 2003; Valentine & Prater, 2011), and their responsibilities for planning, designing, and overseeing instruction started became a point of emphasis (Beck & Murphy, 1993; Kellough & Hill, 2015). Principals were expected commit more time toward instruction and allocate adequate resources to facilitate and improve instruction (Beck & Murphy, 1993). The pressure to realize high levels of student achievement was magnified in 1983 with the release of *A Nation at Risk*, which is considered one of the most impactful education reports ever produced (Goldstein, 2014). This report called for higher standards and an increased focus on accountability as it shared a concern of inadequate and declining student achievement due to a "rising tide of mediocrity" (Rousmaniere, 2013). This renewed public awareness produced great pressure for principals to increase student academic performance, and it became common to judge the success of principals by the success of their schools (Beck & Murphy, 1993; Rousmaniere, 2013). As a result, the role of the principal evolved into that of agents of change (Arsani, 2010; Beck & Murphy, 1993) as they reconfigured the organizations of their schools to better align them with

state and federal demands (Rousmaniere, 2013). During this time, principals also became more directly involved in coaching teachers on best practices in teaching and learning (Matthews & Crow, 2003) with the goal of improving overall school performance.

1990s

The final decade of the 20th century continued the emphasis on instructional leadership as a primary focus in the role of school principals. Principals who led successful academic reform initiatives, set high academic goals, critiqued curriculum, and used data to inform practice were highly regarded and deemed to be transformational leaders (Valentine & Prater, 2011). The emphasis on instructional leadership was complemented by a growing emphasis on accountability for educational outcomes and fiscal efficiency (Cruman & Sherman, 2008; Knuth, 2004). This led to the call by the public and their elected officials for schools to be more transparent in their reporting about their schools' academic performance (Sanzo, Sherman, & Clayton, 2011).

Also, during the 1990s, school choice and charter schools became major issues. In response, many public-school principals had to take on responsibilities in marketing as they either led charter schools or had to defend their own schools from poaching by charter schools (Rousmaniere, 2013). Advocating for their schools and protecting enrollment was important to principals because their school funding was based largely on enrollment levels.

The paradox of reform and accountability began to take a toll on principals in the 1990s as they were expected to make great strides in school improvement while dealing with constraints in time and resources (Grubb & Flessa, 2006). It is not surprising, then, that the number of potential principal candidates declined during this period as the job became more difficult and less attractive (Winter & Jaeger, 2004). The complexity of the position, stresses

associated with the job, perceived lack of support, disproportionate salaries, long hours, and personal life disruptions have been credited as some of the reasons for a declining interest in the position at the end of the last century (Cruziero & Boone, 2009). These factors directly contributed to a shortage of qualified principals and principal candidates (Richardson, Watts, Hollis, & McLeod, 2016).

2000s

At start of this century, the No Child Left Behind Act (NCLB) of 2001 established high standards that schools were expected to satisfy annually by 2014 (Rammer, 2007; Weber, 2012). Schools were required to report progress towards these goals each year, and these reports became report cards for principals (Sanzo et al., 2011). These expectations exacerbated the pressure on principals to increase student achievement, and they often became scape goats for schools that failed to make progress toward the established benchmarks (Gerhart, Harris, & Mixon, 2011). The onus placed on principals to be successful during these years was unprecedented, and those who failed faced likely dismissal (Rammer, 2007; Schulte, Slate, & Onwuegbuzie, 2010). This burden served as a catalyst in the evolution of the principal's role to include greater instruction-related responsibilities (Lynch, 2012; Stronge et al., 2008) because schools were primarily evaluated based on the performance of their students on standardized tests (Rousmaniere, 2013). For some, the focus on raising test scores occurred at the expense of bettering the overall schooling experience for their students and staff.

Selection and Qualifications of Early Principals

Although there is little information about the credentials of school leaders during the 1600s (Matthews & Crow, 2003; Pierce, 2017), it is known that principals were generally expected to have training in theology (Pierce, 2017; Rousmaniere, 2013). In fact, school masters

were "licensed" by local clergy, and in accordance with the licensing act of 1654, they were not able to select those who did not commit themselves to Christ (Rousmaniere, 2013, p. 44). Over the following 200 years, little changed in licensing and, consistent with their image as principal teachers, by 1840 principal certifications were merely representations of the highest form of teacher certifications. Many required prospective certificate holders to sit for and pass a battery of exams to earn their credential, some of which were conducted orally by members of the local city board (Pierce, 2017). With each passing decade, requirements became more rigorous, and certification exams began to include questions rooted in educational theory and practice. Early principal certificates issued by cities often had to be recertified each year.

By 1875, principal certifications were clearly distinguished from teacher certifications in only a few states (Pierce, 2017). At this point, principal licensure required only passing marks on local assessments, and no consideration was given to higher academic degrees or post-secondary education. The most impactful change in the principal certification process occurred in New York in 1897. In that year, regulations began to require applicants to have graduated from a college or university, to have taught for a minimum number of years, and to have satisfied an examination. Those attempting to obtain a secondary principal certificate were required to have taught a minimum of 10 years, at least five of which had to be at the secondary level (Pierce, 2017). The expectation of clearly differentiating teacher and principal licensing requirements accelerated, and, between 1923 and 1934, the number of states making this distinction almost quadrupled from seven to 27 (Rousmaniere, 2013). By 1950, every one of the 48 states had established specific requirements for administrative credentials (Matthew & Crow, 2003), but only a third required explicit academic qualifications (Rousmaniere, 2013). The number of states requiring academic qualifications for principals increased dramatically, and, by

the mid-1960s, 39 of the 50 states required candidates to hold a graduate degree as a condition for certification and licensing as a school principal.

Principal-selection processes were mostly completed by town boards or councils in the early 1800s (Pierce, 2017; Rousmaniere, 2013). The criteria by which principal teachers were selected focused on candidates' knowledge of teaching strategies, children, and the common problems of schools (Pierce, 2017). As part of the process, candidates were required to submit applications and writing samples and to participate in interviews. Some schools, such as the Chicago Schools, required that candidates be residents of the community in order to be eligible for selection (Pierce, 2017). Opportunities for married women to become principals were also suppressed as they were deemed ineligible based on their marital status and the community norms of that period. A shift in the selection process started in the late 1800s when principal appointment recommendations began to be made by school-based committees rather than town boards (Pierce, 2017). This new approach lasted only a couple of years until superintendents of schools were granted the authority to make principal-appointment recommendations to their local board of educations. Principal appointments by superintendents with approval of boards of education has remained the common practice into the 21st century.

Modern Day Public School Principalships

Today, school principals are expected to be strategic visionaries who can increase student and school performance, while ensuring their schools provide enriching experiences for students (Richardson et al., 2016). Increasing student performance has garnered even greater attention with the emphasis on the use of standardized assessments as the measures of school success or failure. Principals today are also required to be aware of the political environment as elected officials and district administrators hold them accountable for meeting achievement goals and

increasing achievement (Kafka, 2009). Community members and voters expect principals to be a major part of the solution to social and educational injustices in their areas (Kafka, 2009). Additionally, school principals today face another paradox: they are expected to lead and accept responsibility for results, but they must do so by sharing decision making with others (Urick & Bowers, 2014).

There is a recent a shortage of principal candidates for schools located in urban (Doyle & Locke, 2014) and rural areas (Latterman & Steffes, 2017) in the United States. For some districts, the shortage has been attributed to the quality of applicants rather than to the number of candidates (Richardson et al., 2016). With the number of unfilled principal positions anticipated to increase through 2024 (USBLS, 2015), the imbalance in the supply and demand of school principals appears likely to become worse over the next decade and perhaps beyond.

Policy initiatives such as Race to the Top (RTT) have increased the responsibilities of principals and made principalships even more unattractive. In their efforts to receive federal money attached to RTT, states have substantially increased the number of observations that principals and their fellow leaders must conduct for teachers each year. This has directly increased the workload of principals and has made the job more demanding (Dufour & Mattos, 2013). However, the Every Student Succeeds Act of 2015 has given principals reason to be optimistic (Pollitt, 2016). This legislation has opened a window of opportunities for school principals to have a seat at the table with respect to measures of accountability, and it includes provisions that increase professional development for principals.

Additionally, modern day principals lead schools of various grade level distributions. The most popular building-based grade spans include K-5, K-6, 6-8 or 7-9, and 9-12 (Howley, n.d.). Senior high schools, junior/senior high schools, junior high schools, middle schools, and

K-12 schools are the building types led by secondary principals (IAO, 2008). Table 1.1 provides a description of the grade spans within each school type. In New York State specifically, the public secondary school structure used most frequently are senior high schools consisting of grades 9-12 (Snyder, de Brey, & Dillow, 2016).

Table 1.1

Grade Spans of Secondary Schools

School type	Grade spans
Senior high	Grade 9 or Grade 10 through Grade 12
Junior/Senior high	Grade 7 through Grade 12*
Junior high	Grade 7 through Grade 9*
Middle	Grade ranges between Grade 5 and Grade 9. The most popular span of middle schools is Grade 6 through Grade 8.
K-12	All grades between kindergarten and Grade 12.

Note. * = Other grade spans may be included in these types of school buildings. Information based on and adapted from "*Organization of U.S. Education: The school level*," by International Affairs Office, 2008, U.S. Department of Education website.

Roles and Responsibilities

Principals are expected to play many different and complex roles in the schools they lead (Cottrell, 2017; Crum & Sherman, 2008; Eckerman, 2017; Valentine & Prater, 2011). These roles include being learners, leaders, supervisors, mentors, managers, advocates, and politicians (Matthews & Crow, 2003), and they are constantly evolving and changing (Daresh, Gantner, Dunlap, & Hvizdak, 2000). There are no clear definitions of these roles, and that has led to role ambiguity and conflict. That is, some of the roles principals actually play and the roles that others perceive for them are often incompatible, leading to role conflict and conditions that are not supportive of success.

Historically, most of the specific tasks of principals have been largely management-based (Cavazos, 2012; Cottrell, 2017; Valentine & Prater, 2011). In the last quarter of the 20th

century, instruction-based responsibilities became more important to the role of school principals (Stronge et al., 2008). This shift, however, has not diminished the demands on principals (Gentilucci & Muto, 2007; Kafka, 2009). Indeed, 32.4% of the 59.3 hours a week that an average high school principal works is spent on administrative tasks, while 28.0% is devoted to curriculum and teaching-related tasks, 22.8% to student interactions, and 12.8% to parent interactions (NCES, 2017).

In totality, the scope of duties which principals must carry out is vast (Cottrell, 2017; Hauserman & Stick, 2013), and that has resulted in a sharp growth in the need for administrative support. As shown in Figure 1.1, the number of assistant principals in public education increased by 43.4% from 53,409 to 76,606 between 1999 and 2011 (Snyder et al., 2016). Additionally, the number of instructional coordinators increased by 75.1%, growing from 38,667 to 67,711, during that same period. By contrast, in that time frame, the number of principals in public education grew by only 7% (about 6,000 positions).

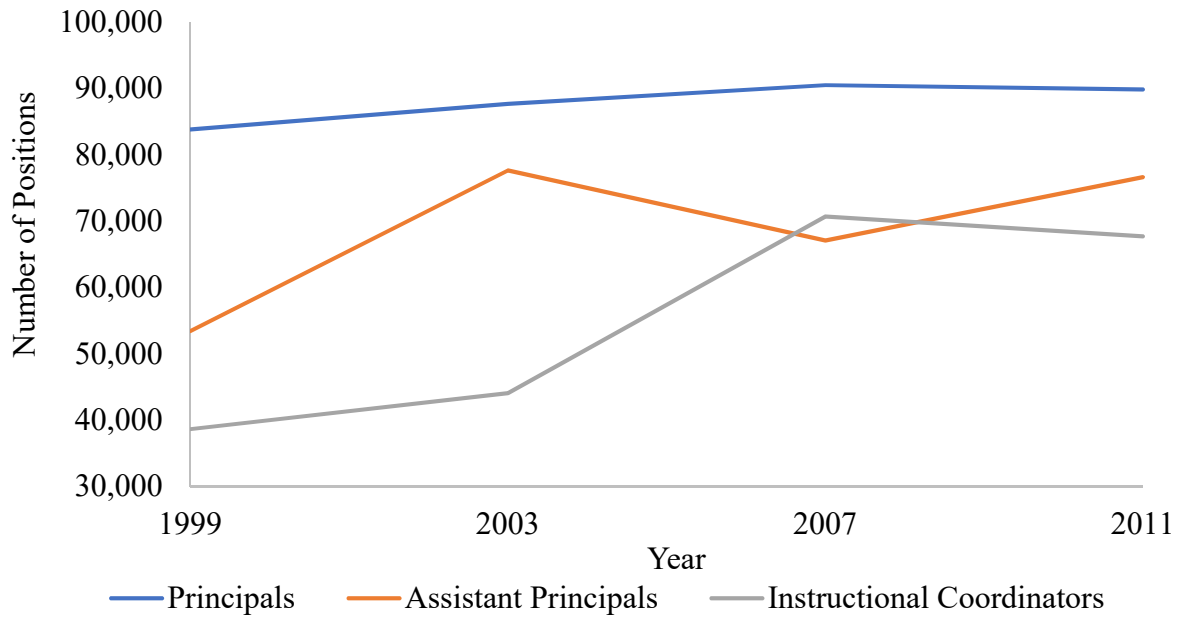

Figure 1.1. This line graph represents the number of principals, assistant principals, and instructional coordinators employed in public schools in the United States for selected years

between 1999 and 2011. Based on and adapted from "Digest of Education Statistics," by T. D. Snyder, C. de Brey and S. A. Dillown, 2016, *National Center for Education Statistics*, p. 82 and p. 176.

I now turn attention to the key responsibilities that modern day principals must carry out, based on my understanding from the professional and research literature. These key responsibilities include: (a) collecting and analyzing data; (b) building community relationships; (c) developing staff; (d) evaluating staff; (e) fostering a positive school climate; (f) developing, communicating, and modeling an effective school vision; (g) managing finances, information, facilities, and other non-human resources; (h) managing human resources; (i) providing a safe environment; and (j) supervising curriculum and instruction. Each of these is described in turn below.

Collecting and analyzing data. Principals are responsible for collecting and analyzing data to inform their decision making, procedural protocols, and instructional practices (Cotton, 2003; Stronge et al., 2008). Further, they are tasked with aggregating and disaggregating large amounts of data that need to be reported to district and state officials, as well as to the local community. This responsibility includes describing and analyzing demographic data, monitoring progress, making formative assessments, conducting summative assessments, and applying perceptual data (Matthews & Crow, 2003; Stronge et al., 2008).

Building community relationships. Principals must also build community relationships (Cotton, 2003; Matthews & Crow, 2003; Stronge et al., 2008) by connecting with students, parents, and community stakeholders. Principals are required to work with local parent-volunteers, hold meetings in community locations, and facilitate different forms of outreach (Stronge et al., 2008). Further, principals must serve as spokespeople for the schools they lead and the districts they represent. It is their responsibility to communicate school procedures,

policies, and information to local fire officials, police, the media, and community agencies. Principals are also expected to be knowledgeable about current trends in communications, such as social media and various digital technologies, and their benefits and pitfalls (Kellough & Hill, 2015). Additionally, they are responsible for encouraging community outreach by their staff and students (Matthews & Crow, 2003).

Developing staff. Although principals are only expected to provide direct instruction in a few very small schools, all have a major responsibility for the professional development and ongoing training of their faculty, and they must ensure that their teachers are provided with opportunities to enhance and expand their skills as they grow professionally (Valentine & Prater, 2011). Indeed, professional development is one of the most important responsibilities of a principalship (Richardson et al., 2016; Spiro, 2015). Principals are also charged with ensuring that professional development meets teachers' needs and is aligned with the goals of the participants, the school, and the district. Further, it is their responsibility to support and develop staff members culturally as well, recognizing that each building has its own unique set of norms (Matthews & Crow, 2003). While principals' leadership in this area is essential to the growth of all teachers, it is especially vital to the development and success of new teachers and staff (Lynch, 2012).

Evaluating staff. The evaluation of staff was perceived to have the greatest influence by almost all (95%) principals in a recent national survey (NCES, 2017). In order to fulfill this obligation, principals must be knowledgeable about local policies, legal guidelines, and various contractual obligations that guide staff evaluation procedures (Stronge et al., 2008). This includes ensuring that faculty members are aware of the criteria and standards by which they are evaluated. Principals are also charged with providing useful and meaningful feedback to their

non-teaching staff (Cotton, 2003; Spiro, 2015). In carrying out this important responsibility, principals must remain objective throughout the evaluation process and must guard against inappropriate bias. Principals are also expected to ensure that patterns of inadequate instructional practices or unethical behavior by staff are documented and they must respond to such patterns appropriately (Stronge et al., 2008).

Fostering a positive school climate. Principals are also charged with creating and maintaining a positive school climate (Cotton, 2003; Gerhart et al., 2011; Kellough & Hill, 2015; Stronge et al., 2008). This responsibility includes ensuring that professional and social relationships among staff are positive and that behaviors exhibited by students and faculty contribute to—and do not hinder—teaching and learning. At the faculty level, principals must decide when and when not to intervene when conflicts arise between staff, as some degree of conflict may even be healthy and productive (Matthew & Crow, 2003). When principals do decide to mediate conflicts, it is their responsibility to do so fairly and without bias.

Principals are further required to ensure that students and staff are respected and treated equally regardless of their race, ethnicity, socioeconomic status, gender, sexual orientation, disability, or ability (Matthews & Crow, 2003). Principals are also required to ensure that students and staff are not discriminated against, bullied, or ostracized. To support a positive school climate, principals are expected to model the desired core behaviors and to characterize the values they expect of others (Cotton, 2003; Stronge et al., 2008). Principals are charged with creating, nurturing, and sustaining professional learning communities that encourage collaboration among the faculty and staff (Hauserman & Stick, 2013; Spiro, 2015). Moreover, principals are responsible for creating a school vision that positively affects the school environment (Gerhart et al., 2011; Matthews & Crow, 2003).

Developing, communicating, and modeling an effective school vision. Principals are responsible for establishing a shared vision (Cotton, 2003). The vision established needs to provide direction to stakeholders and reflect the values of the school and its community (Kellough & Hill, 2015). To do this, principals are required to understand the culture, strengths, and areas in need of improvement of their schools. They are also expected to model expectations consistent with the school's vision (Blase & Kirby, 2009). This includes being appropriately dressed, punctual, positive with others, and effective. In terms of students, principals must establish and implement clear and fair disciplinary procedures that promote positive behaviors and moral character (Lynch, 2012).

Managing finances, information, facilities, and other non-human resources. Principals are responsible for a broad scope of managerial functions. This is especially challenging for many principals, because most began their careers as teachers and scholars with backgrounds that did not prepare them for such managerial responsibilities. The fiscal, information, and facilities and management skills they need often have to be developed on the job, by apprenticeships (in the form of assistant or associate principal positions), or by observing of others. The managerial responsibilities of principals include the following specific functions (Kellough & Hill, 2015; Matthews & Crow, 2003; Stronge et al., 2008):

- Allocating resources,
- Conducting and overseeing daily operations and procedures,
- Overseeing facilities maintenance,
- Overseeing food service operations,
- Managing finances and fiscal resources,
- Scheduling, and

- Overseeing and managing transportation.

It is the obligation of principals to manage effectively in these areas, and that often requires making decisions that are likely to be opposed by specific stakeholders or groups (Matthews & Crow, 2003). These responsibilities become increasingly difficult for principals to manage in schools where financial resources are insufficient and where access to other resources and facilities is limited. Many of these non-human-resource based management responsibilities are now entrusted to assistant or associate principals or other school leaders (i.e., department chairs) to allow principals to focus on other matters (Matthews & Crow, 2003).

Managing human resources. In addition to the non-human-resource responsibilities, principals must be adept in managing and developing human resources (Lynch, 2012; McKay, 2013; Rammer, 2007). As part of this responsibility, principals are charged with hiring faculty and staff; with developing them; with assessing, rewarding, and disciplining them; and with retaining the most effective faculty and staff (Kellough & Hill, 2015; Stronge et al., 2008). Within the staff selection process, principals' roles vary from school to school (Matthews & Crow, 2003), but more than 90% of secondary principals reported in a recent national survey that they play a major role in the hiring process (NCES, 2017). Some districts allow principals to make final recommendations to their board of education, while others may not include them. In addition, principals are responsible for making tenure recommendations to the superintendent, and for terminating staff who are unable to meet expectations after being offered opportunities and resources to help them succeed (Kellough & Hill, 2015; Rammer, 2007).

Providing a safe environment. Another important responsibility of principals is to ensure the safety of their students and staff (Cotton, 2003; Spiro, 2015). This includes establishing and implementing protocols and procedures for emergencies and crisis situations

(Kellough & Hill, 2015; Stronge et al., 2008), and providing proper supervision (Kellough & Hill, 2015). Principals are also required to be knowledgeable about current federal, state, and local safety laws, regulations, and guidelines, and to follow and implement them accordingly. Principals must also maintain an awareness of trending safety concerns, emerging risks, and to take action when needed, such as providing students with a safe digital environment that restricts access to inappropriate content (Kellough & Hill, 2015).

Supervising curriculum and instruction. Since the 1970s, one of the most fundamental responsibilities of principals is to be knowledgeable about and involved in planning, designing, implementing, and assessing curriculum and instruction (Cotton, 2003; Palmer, 2017; Spiro, 2015; Valentine & Prater, 2011). Principals are expected to be continuously aware of current education trends and the best practices needed to support and improve teaching and learning (Cotton, 2003; Kellough & Hill, 2015). This includes helping align curricula to national and state standards and finding ways to integrate technology into the classroom effectively (Richardson, 2016). They are also charged with ensuring that students are not placed inappropriately into restrictive programs on a systematic basis and are not denied access to more appropriate coursework (Matthews & Crow, 2003). In this regard, principals must also participate in Committee on Special Education meetings for students with disabilities to discuss programs offered by the school with parents (Lynch, 2012). Further, principals are also expected to strengthen the quality of instruction inside the classroom (Spiro, 2015), including such responsibilities as modeling lessons and conducting formal and informal teacher evaluations.

Education Requirements and Other Credentials for School Principals

The rules and procedures for acquiring a license to be a public-school principal vary by state, as shown in Table 1.2. Only 8 states offer a single license that makes one eligible for

employment as an administrator at any level up through the superintendency (Davis, 2010). New York and 17 other states have established a building-level certificate that allows individuals to apply for any building-level position, whereas 15 other states require a specific principal certification to be employed in the position. More than half (53%) of the states require principal applicants to hold a master's degree, 40% require satisfactory scores on certification exams, and the overwhelming majority require previous teaching experience (Davis, 2010). New York requires all three of these qualifications in order to obtain a school-building leader certificate and to qualify for a principal position. As of 2012, almost all (98%) public-school principals across the United States held at least a master's degree, and about one in 10 had earned a doctorate (NECES, 2016).

Table 1.2

Credentials Required for Selected Administrative Certifications and Employment by State

Description	State
States requiring one license for all building and district wide administrative positions (i.e., dean, principal, director, superintendent).	CA, DE, FL, NE, NV, NM, OR, UT
States requiring one license for all school-site administrative positions (i.e., dean, assistant principal, principal).	CA, AZ, AK, AR, CO, CT, IL, IN, IA, MT, NJ, NY, OH, OK, PA, VA, WA, WI
States requiring a specific principal certification.	GA, ID, MA, MD, ME, MI, MC, OK, OR, SC, SD, TX, VT, WI, WV
States requiring a master's degree.	AL, AZ, AK, CT, DE, FL, IL, KY, LA, MT, NB, NC, NJ, NM, NV, NY, OH, OR, RI, SC, TX, UT, VA, WA, WI, WV

Note. Based on and adapted from "*Analysis of site-level administrator and superintendent certification requirements in the USA*," by S. H. Davis, 2010, Commission on Teacher Credentialing website.

As reflected in Table 1.3, during the 2015-2016 school year 8.7% of public secondary school principals in New York (excluding New York City and charter Schools) held doctorates.

In "Downstate" New York (including the counties of Nassau, Putnam, Rockland, Suffolk, and Westchester), 65 of 370 (17.6%) secondary public-school principals held doctorates (NYSED, 2017). Schools located in rural areas of New York State had the lowest percentage of principals holding doctorates at a rate of 3.1%. Further, 19% of public-school principals who led a low-need area secondary school had earned their doctorate. By contrast, about 4% of those leading secondary schools in high need areas had achieved a doctoral degree. As shown in Table 1.4, New York State's junior high schools and senior high schools had a greater percentage of principals with doctorates than junior/senior high, middle level, and K-12 schools (NYSED, 2017).

Table 1.3

Percentage of Public Secondary School Principals who Held Doctorates in New York by Geographic Setting and Need Index During the 2015-2016 School Year

	% principals with doctorate
Downstate - low needs	19.5%
Downstate - urban/suburban/high needs	18.2%
Upstate - low needs	17.4%
Downstate - average needs	13.5%
Big 4 cities - large city	11.0%
Upstate - average needs	5.8%
Rural - average needs	4.4%
Upstate - rural high needs	3.2%
Upstate - urban/suburban/high needs	2.2%
Rural - high needs	2.0%
Rural - low needs	0.0%
All school types	8.7%

Note. Data exclude New York City schools and charter schools. Based on and adapted from "Personnel Master File," *Information and Reporting Services*, 2017, last updated 2017 by the New York State Education Department.

Table 1.4

Percentage of Public Secondary School Principals who Held Doctorates in New York by Building Type During the 2015-2016 School Year

Building type	% principals with doctorate
Junior high school	12.5
Senior high school	10.7
Junior/Senior high school	7.7
Middle school	7.4
K-12 school	5.6

Note. Data exclude New York City schools and charter schools. Based on and adapted from "Personnel Master File," *Information and Reporting Services*, 2017, last updated 2017 by the New York State Education Department.

Additional credentials expected of principals today include participation in professional associations. These affiliations are important as the work of the associations in research and professional development substantially affect the practices of principals across the country (Matthews & Crow, 2003). The first administrative association was created in 1916 when the NEA established the Department of Secondary School Principals (Rousmaniere, 2013). Since then, the association has separated from the NEA and rebranded itself as the National Association of Secondary School Principals (NASSP). The NASSP and the Association of Supervision and Curriculum Development (ASCD) have become popular among secondary principals (Kellough & Hill, 2015). Further, the School Administrators Association of New York State is a state specific association that is popular among principals in New York State.

Trends in Public School Principalships

In the previous sections of this chapter, I have reviewed the development and evolution of the principalship primarily from a qualitative perspective. In this section, I discuss changes in the nature of the role and position of principals from a more quantitative perspective. In the

following, I give particular emphasis to the growth of the number of school principal positions, gender differences, and racial/ethnic gaps.

Principalships by Number

In 1900 there were more than 500,000 students enrolled in public schools between Grade 9 and Grade 12 (Snyder et al., 2016). By 1930, that number had grown sharply to about 4.5 million students. The primary causes for the increase in enrollment between 1900 and 1930 were the adoption of compulsory education laws and child labor laws (Rousmaniere, 2013). Another major jolt in student enrollment occurred with the "Baby Boom," which occurred after World War II and continued through the mid-1960s. Between the years 1945 and 1965, secondary student enrollment increased from 78.4% to more than 93% (Snyder et al., 2016). As of 2014, almost 15 million students (about 95%) were enrolled in public schools in Grades 9 and 12. Almost 850,000 public school students were enrolled in Grade 9 through Grade 12 in New York State as of 2014 (Snyder et al., 2016). By contrast, that number was only about 771,000 students in 1990.

The growth in enrollment during the 20th century has had a substantial impact on the number of secondary schools and the numbers of principals needed to lead them. In 1920, there were an estimated 14,000 public school principals and assistant principals at all organizational levels across the United States (Snyder et al., 2016). Between 1940 and 1970, that number tripled from 32,000 to 91,000 (Snyder et al., 2016), which can also be explained by the "Baby Boom" period. In 2014, the number increased to an estimated 168,000. Figure 1.2 displays the growth of these positions between 1920 and 2014.

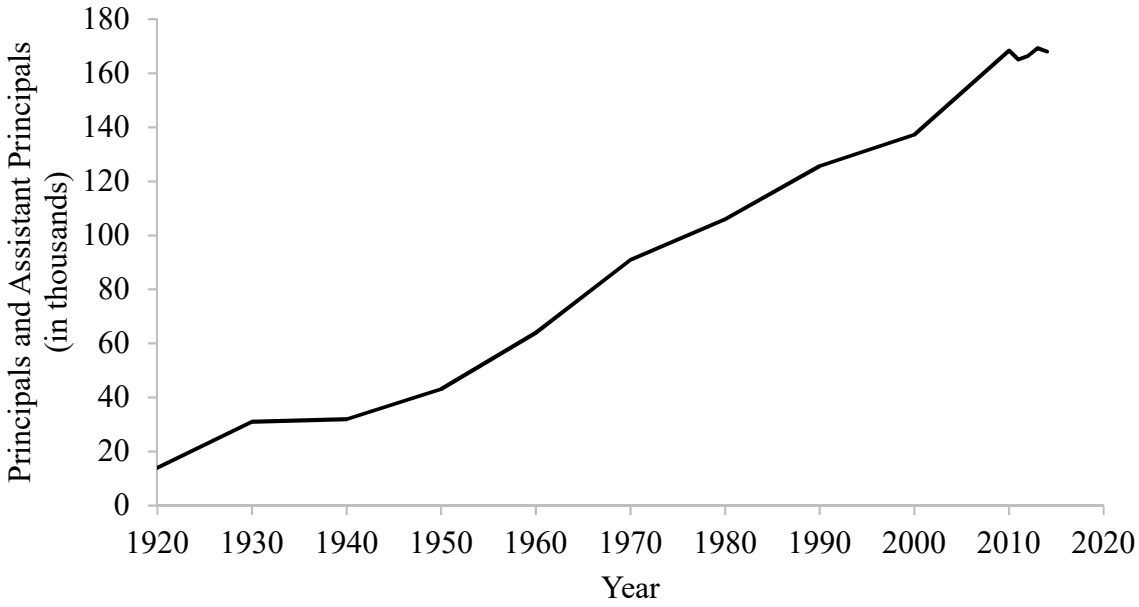

Figure 1.2. This line graph represents the number of principals and assistant principals employed in public schools in the United States between 1920 and 2014. Based on and adapted from "Digest of Education Statistics," by T. D. Snyder, C. de Brey, and S. A. Dillown, 2016, *National Center for Education Statistics*, p. 82.

As displayed in figure 1.3, in 1930, there were just under 24,000 schools containing secondary grade levels (Snyder et al., 2016). That number reached a high point of 27,000 in 1968, before dipping after the baby boomers had graduated. After seeing the number of secondary schools decline over the next 30 years, a new record was reached in 2011 when there were more than 30,000 secondary public schools. New York State had the third most public secondary schools in 2014, behind only California and Texas, respectively (Snyder et al., 2016).

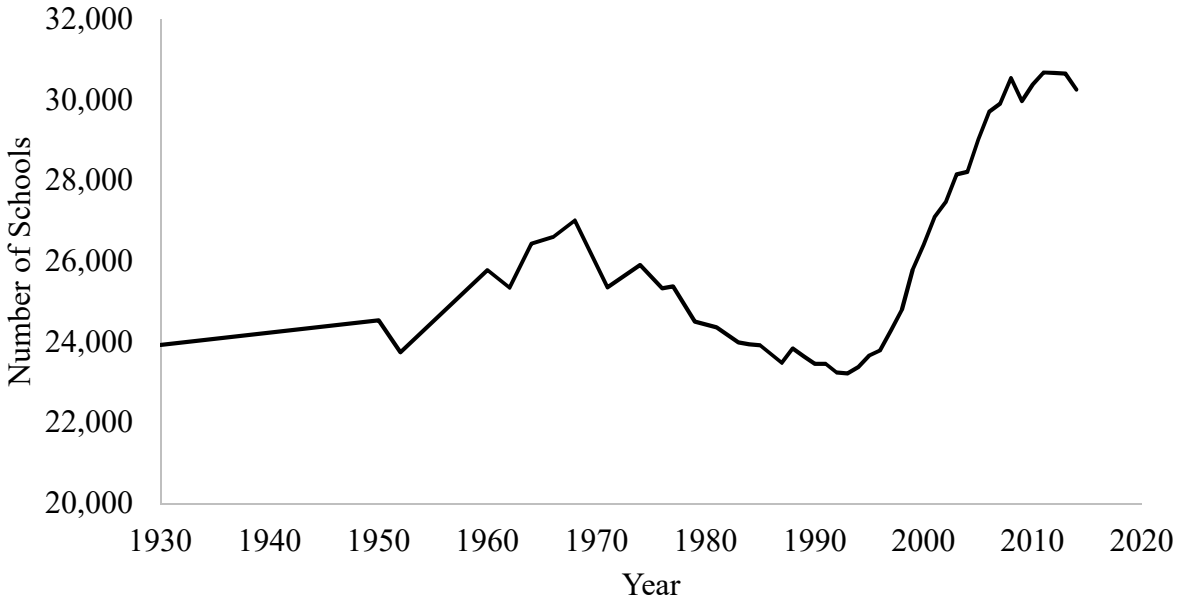

Figure 1.3. This line graph displays the number of secondary public schools located in the United States between 1930 and 2014. Based on and adapted from "Digest of Education Statistics," by T. D. Snyder, C. de Brey, and S. A. Dillown, 2016, *National Center for Education Statistics*, p. 181.

The average secondary principal in the United States earned more than $100,000 in salary in 2012 (Snyder et al., 2016). In comparison, the average elementary principal earned about $95,000, and principals of combined schools earned an average salary of almost $85,000. Table 1.5 displays the average salary of public secondary school principals (excluding charter schools) in New York State during the 2015-2016 school year. The average salary of a secondary public-school principal in New York State was approximately $135,000. When the salaries of New York City (NYC) principals are excluded, the average salary of a secondary public-school principal decreases by $10,000 due to the large number they employ. Principals of downstate secondary schools earned more than $174,000 on average, whereas principals in rural school districts made about $94,000 (NYSED, 2017). Secondary public-school principals in low need

areas earned more than $168,000 across the state on average, whereas those leading high need schools made just over $108,000.

Table 1.5

Average Salary of Public Secondary School Principals in New York State by Geographic Setting and Need Index During the 2015-2016 School Year

School type	Average salary
Downstate - low needs	$178,586.29
Downstate - average needs	$169,208.47
Downstate - urban/suburban/high	$167,424.05
NYC	$143,217.27
Upstate - low needs	$128,173.56
Big 4 cities - large city	$123,022.15
Upstate - urban/suburban/high needs	$117,737.19
Upstate - average needs	$110,988.67
Rural - low needs	$100,984.50
Rural - average needs	$96,082.06
Upstate - rural high needs	$95,128.71
Rural - high needs	$92,385.94
All school types	$134,856.65
All school types - excluding NYC	$125,343.05

Note. Data exclude charter schools. Based on and adapted from "Personnel Master File," *Information and Reporting Services*, 2017, last updated in 2017 by the New York State Education Department.

Principals by Gender

In 1901, there was a clear disparity with respect to gender in the principalship in secondary schools. Although women held an advantage over their male counterparts in leadership roles in schools at the primary level, higher-level schools were dominated by male principals (Pierce, 2017; Rousmaniere, 2013). Rousmaniere (2013) estimated that men held 90%

of secondary principal positions through the 1920s. Women at that time faced many obstacles to obtaining a principalship. In New York State, unless they already held a principalship upon marriage, married women were allowed to pursue principal positions only if their husbands were either unable to earn a living or had left the marriage (Pierce, 2017). Males were also preferred based on the mistaken male bias that women were accustomed to following orders given by males (Rousmaniere, 2013). Almost a century later, as of 1994 there continued to be a large gender gap, when almost nine of 10 (86%) of secondary principals were males (Matthew & Crow, 2003).

As of the 2015-2016 school year, females had gained ground and held about a third of principalships in high schools (NCES, 2017). Specifically, as shown in Table 1.6, in New York State (excluding New York City and charter schools), males occupied about two-thirds of secondary public school principalships in that same year (NYSED, 2017). When the gender of public secondary school principals in NYC is included, however, females hold more positions than males at a rate of 52%. Collectively, male principals of downstate secondary public schools (excluding New York City) held almost three-quarters (72%) of available principalships. The only geographic area, outside of NYC, in which women held more principalships than men was the "Big 4 cities" (i.e., Buffalo, Rochester, Syracuse, and Yonkers), where women occupied more than half (58%) of principal positions.

Table 1.6

Percentage of Public Secondary School Principals in New York State by Geographic Setting and Gender During the 2015-2016 School Year

Geographic setting	% male principals
Downstate	72.2
Upstate	67.0
Rural	64.5
Big 4 cities - large city	41.8
NYC	32.0
All geographic settings – excluding NYC	66.2
All geographic settings	48.1

Note. Data exclude charter schools. Based on and adapted from "Personnel Master File," *Information and Reporting Services*, 2017, last updated 2017 by the New York State Education Department.

In terms of pay, women have also generally suffered disparities in terms of compensation. In the 1850s, women earned an average annual salary of $450, while men earned $1,800 in the Boston area. Although men in New York State earned salaries that were more than double those of women, New York City paid women the highest mean annual salary, about $700 a year in that time period (Pierce, 2017). Since that time, women have realized equity in their salaries in public schools as their salaries are essentially identical when comparing principals holding equal qualifications (Snyder et al., 2016).

Principals by Race and Ethnicity

Prior to the 1950s, African-Americans held a greater percentage of principal positions than in the years following (Matthew & Crow, 2003) due mainly to the elimination of segregation and the closure of formerly all-black schools. Before the racial integration of schools in the United States, segregated schools consisting of non-white students were almost

always led by principals who were black (Matthew & Crow, 2003). After schools started to integrate, most principal positions were awarded to white principals and the percentage of black principals declined by 90% (Rousmaniere, 2013). Nationally, as of the 2015-2016 school year, more than three-quarters (77.8%) of secondary principals were white, 10.6% were black, and 8.2% were Hispanic (NCES, 2017). Although the numbers of non-white principals are still not proportionate to the population, the average white, non-Hispanic principal in 2016 had a lower salary than average principals who identified as being of black, Hispanic, Asian, or mixed ethnicity (Snyder et al., 2016).

Challenges of the Public School Principalship

The principalship is challenging because of the various roles that principals are expected to assume and the various tasks for which they are responsible. However, principals face a number of other daunting challenges in their positions. These challenges include such issues as the pressures of accountability, improving student achievement, being the middleman, earning tenure, continuity of their position, and being well-versed in all aspects of the job.

Accountability

Given the current emphasis on standardized test-based accountability the principal position has become increasingly challenging (Kellough & Hill, 2015). This has been especially true since the adoption of NCLB in 2001 (Sanzo et al., 2011). Consequently, public and elected officials have given increasing attention to standardized testing results, and there has been a growing amount of public scrutiny of public schools and the principals who lead them (Cavazos, 2012; Sanzo et al., 2011). Principals are expected to demonstrate school improvement, but they often face budget cuts and tax levy limits that restrict the resources available for their schools. In

fact, when schools do not meet established achievement benchmarks, their principals face dismissal (Doyle & Locke, 2014; Weber, 2012).

Accountability presents an especially challenging obstacle for principals of schools located in urban areas or urbanized suburbs because their students tend to be the neediest (Williams, 2008). This pressure has caused some principals and other administrators to make unethical or unlawful decisions (Rousmaniere, 2013). This was the case in Houston in what became known as the "Texas Miracle," in 2003 (Rousmaniere, 2013) and in the Atlanta Public Schools test score inflation scandal during 2015 (Blinder, 2015). Further, the pressure of accountability has also been suggested as a reason why teachers and other administrators choose not to seek principal positions (Doyle & Locke, 2014).

Improving Student Achievement

One of the greatest challenges of the principalship is improving student achievement (Hattie, 2009; Stronge et al., 2008; Valentine & Prater, 2011). Unlike teachers who work directly with students, principals are responsible for increasing student outcomes indirectly through teachers and staff by creating effective learning environments, supporting nurturing learning communities, and creating and sustaining positive school climates (Sanzo et al., 2011). Valentine and Prater (2001) have argued that secondary principals face a greater difficulty in influencing student achievement than elementary principals due to the size of their schools. Most secondary schools are too large to permit their principals to directly influence classroom instruction. Secondary principals also struggle to find adequate time to contribute to instruction (Gentilucci & Muto, 2007). Indeed, Horng, Klasik, and Loeb (2010) found that principals reported that they were able to invest only 12% of their time to instruction. In addition, the depth of content specific curriculum that secondary school principals would need to command also

hinders their ability to affect student achievement (Valentine & Prater, 2011). Therefore, secondary school principals must attempt to influence student achievement by setting appropriate expectations and goals that focus on student success, providing instructional resources, creating effective learning environments and positive school climates, and ensuring that goals remain at the forefront throughout the year (Horng, Klasik, & Loeb, 2010; Stronge et al., 2008).

Being the Person in the Middle

The nature of the management positions held by principals puts them in the middle of four sets of relationships (Matthews & Crow, 2003):

- Principals and central office administration,
- Principals and their faculty,
- Principals with other principals within the district, and
- Principals and the community.

As they stand at the nexus between the teaching faculty and professional staff on one hand, and, on the other hand, higher administration at the district level, principals are often put into conflicting situations (Kafka, 2009). Principals are responsible for communicating district office initiatives to faculty and community members and implementing those policies and procedures, but those policies and procedures are not always popular or well received (Matthews & Crow, 2003). On the other hand, principals are also charged with advocating for their faculty and staff to district office. Given the complexity of the position, principals require keen political and interpersonal skills in their practice, which includes relationship building and negotiating to assist with managing the different networks they find themselves in between.

Earning Tenure

By the end of the 20th century, only 16 U.S. states offered tenure, or similar rights, for principals (Hendrie, 1998). New York is one such state, and, as of 2015, had revised its tenure regulations to make the granting of tenure more comprehensive (Centrone, Kehl, & Miller, 2015). One major change to make principal tenure more comprehensive in New York State was to extend the number of probationary years from three to four for teachers and administrators who have not been tenured in their positions before. The criteria to earn tenure in a new district, in a position that one has been tenured in before in a past district, was increased from two to three years. The most significant change, however, was the addition of criteria which required principal-tenure candidates to have earned no rating lower than "effective" for at least three of their four years of service in the position. Although an ineffective rating in the tenure year would make tenure candidates ineligible, extensions are permitted (Sokol, 2015). Principals' effectiveness ratings are now based on a composite scoring which includes school performance on standardized tests and school visit evaluations.

Principal Turnover and Longevity

Across the United States, about one in five principals leave their positions each year (McKay, 2013). Principal annual turnover rates (i.e., churn) are greatest in schools that primarily educate poor, minority, or low-achieving students (Beteille, Kalogrides, & Loeb, 2011; Fuller & Young, 2009; Kellough & Hill, 2015). Almost a third (30%) of the principals of schools with large numbers of students receiving subsidized lunch lose their positions each year, whereas their counterparts experience a turnover rate of about 16% (Beteille et al., 2011). Smaller schools and schools located in rural areas also experience greater difficulty retaining principals than do schools located in suburban areas (Fuller & Young, 2009). Further, just over 50% newly hired

principals of schools in Texas have remained in their schools for more than three years, and fewer than 30% of them have been retained for five years (Fuller & Young, 2009).

At the high school level, as of the 2015-2016 school year, the average principal had only been in the current position for about 3.6 years, with almost two-thirds (62%) of them having been at their current school for three years or less and only 8.1% for at least 10 years (NCES, 2017). Principals most often leave their schools due to the lack of support from central office staff, disproportionate pay, and the growing complexity of their positions (Fuller & Young, 2009). Further, the stress experienced by principals from the pressures of accountability has been described as a major reason for principals to leave their schools, as they are frequently asked to do more with less.

Having the Needed Skill Sets

As discussed above, the responsibilities entrusted to school principals today are diverse and transcend many roles and several disciplines. The constant additions of responsibilities throughout the years have led to principal positions with performance expectations that are almost unrealistic for any individual to achieve because it is unlikely that any single individual will have all of the skill sets needed to perform effectively as a school principal (Kellough & Hill, 2015). For example, contemporary principals are expected to be knowledgeable about special education practices, laws, and regulations, but most school principals have not had previous experience as special education teachers (Lynch, 2012). As a result of the broad skills required, principalships are perceived as more difficult, more stressful, and less satisfying than many other positions of comparable status requiring similar professional and educational backgrounds (Black, Martin, & Danzig, 2014). This perception presents an obstacle to attracting and recruiting qualified educators for this critical position. To deal with the complexity of the

principalship, effective principals have to be willing and able to delegate some of their duties to others, while retaining overall responsibility for all of the functions assigned to them (Kellough & Hill, 2015).

General Statement of the Problem and Scope of the Study

Selecting the most appropriate principal for a school is one of the most important factors in the success of a school (Palmer, 2014; Rammer, 2007). Indeed, schools that mistakenly select principals who later are found to be ineffective often experience reductions in student achievement (Waters, Marzano, & McNulty, 2003). Complicating the selection of an effective principal is the need to balance such factors as demographic characteristics of the school and community, the socioeconomic status of students, school culture, and school needs and history (Urick & Bowers, 2014); such factors make each principal position unique and must be considered in the principal-section process (Cottrell, 2017; Schulte et al, 2010). With no single set of leadership behaviors or styles identified as reflecting the one best fit (Valentine & Prater, 2011), matching the right candidate with the right school is difficult but essential (Cottrell, 2017).

The final authority for appointing school principals in New York State rests with boards of education relying on the advice and recommendations of their school superintendents. The teachers who work with principals on a daily basis and who understand the needs and nature of their buildings also play an important role in the principal-selection process, however, by serving on the selection committees that evaluate and recommend candidates to their superintendents. Accordingly, I undertook this study to better understand the views of teachers related to the selection of secondary public-school principals in New York State. As discussed in detail in Chapter 3, this investigation took the form of a discrete choice experiment (DCE) which

considered the influence of both candidate-specific characteristics and teacher-specific characteristics.

Key Terms and Definitions Used in the Dissertation

The following key terms are used throughout the remainder of this dissertation and are defined below for the purpose of this study:

- Public schools: Publicly funded schools with the exception of publicly funded charter schools.
- Secondary schools: Any school buildings containing one or more grade levels the range of Grade 7 through Grade 12.
- Decision maker: An individual who contributes input towards the hiring of a principal.
- Principal candidate: An individual eligible and being considered for hire for a principal position.

Chapter Synthesis

The leadership positions we today describe as school principalships have encompassed many different titles, roles, and responsibilities in the United States over the past two centuries. What has not changed, however, is how important each preceptor, head teacher, principal teacher, and principal is in determining success for their schools, and their communities. The selection of a school principal is one of the most important factors in the success of a school. As part of this process, selection committees need to understand the specific demands and challenges that prospective candidates face within their schools and identify the candidate attributes that best give their choice the best opportunity to be successful within their unique school and community.

The next chapter reviews the research literature on the qualifications and selection processes of school principals, and the third chapter presents the Discrete Choice Experiment (DCE) methodology I employed in this study. The results of the study are reported in Chapter 4. In the final chapter, I offer conclusions, implications, and recommendations related to the candidate-specific and teacher-specific factors that were found to influence teachers' judgments about the candidates they would recommend for positions as public secondary school principals in New York State.

CHAPTER 2:

LITERATURE REVIEW

This chapter provides a review of the research literature related to factors that are believed to influence the selection of secondary school principals. In that regard, the literature is reviewed from three primary perspectives. The first reviews the literature that has focused on the characteristics of effective principals from multiple viewpoints. The second perspective considers the previous research on the background characteristics and qualifications of principal-candidates themselves—the characteristics of the choice alternatives available to the decision makers (i.e., alternative-specific factors in the terminology of choice research). The third perspective concerns how the characteristics of the decision makers who are involved in the principal-selection process (i.e., case-specific factors in the choice research) influence the selection of principals. These case-specific factors reflect the personal biases that may affect the preferences and priorities of those who have a role in the selection of school principals, including teachers, administrators, and those senior administrators (i.e., school superintendents) charged with making appointment recommendations. As a result, the values assigned to particular alternative-specific factors (i.e., candidate background characteristics and qualifications) in a selection process may interact with the case-specific factors associated with the "deciders" and, therefore, may vary.

Some of the literature related to the qualifications and selection criteria of school leaders were excluded from this study based on its limited scope and focus. Although related studies that have addressed other geographic areas outside of North America were considered (Blackmore, Thomson, & Barty, 2006; Dinham, 2005; Goolamally & Ahmad, 2014; Gronn & Lacey, 2006; Kwan, 2012; Kwan & Walker, 2009; Parkes & Thomas, 2007; Walker & Kwan,

2012; Watkins, 1991; Wildy, Pepper, & Guanzhong, 2010), those studies were excluded from this review based on cultural relevance or a building level focus other than secondary schools. This review was limited to studies related to secondary school principals in public schools in North America because the factors involved in the school principal-selection process generally reflect the cultures of the educational systems and communities they serve. Further, given the substantial differences in the nature and structure of elementary schools vs. secondary schools, prior studies that focused solely on elementary school principals or teachers were deemed to be outside the scope of this synthesis.

The literature review in this chapter is organized into three sections, which focus on (a) the characteristics of effective secondary school principals, (b) the candidate-specific attributes considered in selection processes for secondary school principals, and (c) the case-specific attributes of decision makers in the principal-selection process that are believed to affect the preferences and biases of those who recommend candidates or choose principals. The chapter concludes with a synthesis of the key factors involved in the selection of secondary school principals.

Characteristics of Effective Secondary School Principals

A considerable body of the relevant research literature has focused on the characteristics of effective principals and the salient qualities of other effective educational leaders (Ash, Hodge, Connell, 2013; Awender, 1978; Bauck, 1987; Blaise & Kirby, 2009; Blase & Blase, 2000; Brewer, 1993; Carlton, 1987; Clark, Martorell, & Rockoff, 2009; Cotton, 2003; Crum & Sherman, 2008; Daresh, Gantner, Dunlap, & Hvizdak, 2000; Garza, Drysdale, Gurr, Jacobson, & Merchant, 2014; Gerhart, Harris, & Mixon, 2011; Griffing, 2010; Grissom & Loeb, 2011; Hallinger, 2011; Hauserman; Ivankova, & Stick, 2007; Hauserman & Stick, 2013; Herriot, 2012;

Hitt & Tucker, 2016; Hudson & Rea, 1996; Hull, 2012; Krasnoff, 2015; Marzano, Waters, & McNulty, 2005; McKinney, Labat Jr., & Labat, 2015; Leithwood & Sun, 2012; Oyer, 2015; Parylo & Zepeda, 2014; Preston & Barnes, 2017; Robinson, Lloyd, & Rowe, 2008; Sanzo, Sherman, & Clayton, 2011; Schulte, Slate, & Onwuegbuzie, 2010; Stronge, Richard, & Catano, 2008; Valentine & Prater, 2011; Waters, Marzano, & McNulty, 2003; Whaley, 2002; Williams, 2008). Understanding what those qualities are is important as effective building leadership is directly linked to the success of a school (Kersten, 2006). Further, schools that have effective principals tend to manifest higher levels of student achievement than schools with similar demographics that have less effective principals (Waters et al., 2003).

Hitt and Tucker (2016) developed a literature synthesis of key leadership practices that have been found to influence student achievement. They identified 28 practices organized into five broad themes. Those themes are: (a) establishing and conveying the vision (ECV), (b) facilitating a high-quality learning experience for students (FHQL), (c) building professional capacity (BPC), (d) creating a supportive organization for learning (CSO), and (e) connecting with external partners (CEP). Those specific practices and their corresponding themes are listed below:

- Creating, articulating, and stewarding shared mission and vision [ECV]
- Implementing vision by setting goals and performance expectations [ECV]
- Modeling aspirational and ethical practices [ECV]
- Communicating broadly the state of the vision [ECV]
- Promoting use of data for continual improvement [ECV]
- Tending to external accountability [ECV]
- Maintaining safety and orderliness [FHQL]

- Personalizing the environment to reflect students' backgrounds [FHQL]
- Developing and monitoring curricular program [FHQL]
- Developing and monitoring instructional program [FHQL]
- Developing and monitoring assessment program [FHQL]
- Selecting for the right fit [BPC]
- Providing individualized consideration [BPC]
- Building trusting relationships [BPC]
- Providing opportunities to learn for whole faculty, including leader(s) [BPC]
- Supporting, buffering, and recognizing staff [BPC]
- Engendering responsibility for promoting learning [BPC]
- Creating communities of practice [BPC]
- Acquiring and allocating resources strategically for mission and vision [CSO]
- Considering context to maximize organizational functioning [CSO]
- Building collaborative processes for decision-making [CSO]
- Sharing and distributing leadership [CSO]
- Tending to and building on diversity [CSO]
- Maintaining ambitious and high expectations and standards [CSO]
- Strengthening and optimizing school culture [CSO]
- Building productive relationships with families and external partners in the community [CEP]
- Engaging families and community in collaborative processes to strengthen student learning [CEP], and
- Anchoring schools in the community [CEP].

Garza, Drysdale, Gurr, Jacobson, and Merchant (2014) conducted case studies on four principals who were considered to be successful based on their school's reputation, student outcomes over time, and peer acknowledgment. These cases revealed five themes related to exceptional affective and personal dispositions: (a) driven by a philosophy of social justice, (b) has a strong notion of care, (c) exhibits a high degree of ethical and morally responsibility, (d) has a high degree of resiliency and persistence, and (e) is courageous.

Based on the responses of central office administrators, Parylo and Zepeda (2014) identified eight characteristics associated with effective principals. They further clustered these traits into four groups: (a) documented characteristics, (b) instructional skills, (c) interpersonal skills, and (d) perceptual characteristics. The characteristics they reported and the cluster labels they assigned to each are:

- Having a track record [Documented characteristics]
- A good manager [Documented characteristics]
- An instructional leader [Instructional skills]
- A data leader [Instructional skills]
- A team player [Interpersonal skills]
- A community leader [Interpersonal skills]
- A perfect fit to the school [Perceptual characteristics], and
- A passionate leader [Perceptual characteristics].

Grissom and Loeb (2011) collected responses from principals and assistant principals in the Miami-Dade County Public Schools to identify the key skills that are needed by principals in order to promote school success. Principals were asked to rate their level of effectiveness when handling identified tasks. Assistant principals were asked to rate their principal's level of

effectiveness in handling the same designated tasks. An exploratory factor analysis of the principals' responses revealed five broad common factors, (a) instruction management, (b) internal relations, (c) organization management, (d) administration, and (e) external relations. When applying exploratory factor analysis to the assistant principal's responses, three broad factors emerged: (a) instruction management, (b) internal relations, and (c) organization management. The three factors identified from the assistant principals were all included in the factors that emerged from the views of the principals.

Schulte, Slate, and Onwuegbuzie (2010) surveyed college students to determine their perceptions of the qualities held by effective principals. The students involved in the study were either enrolled in an undergraduate program with a focus on education or were graduate students who held an undergraduate degree in education. The researchers identified 29 themes, which loaded on to five factors: (a) responsible and supportive leader (RSL), (b) being impartial (BI), (c) straightforward, task-oriented, and communicative (STC), (d) professional and facilitator (PF), and (e) collaborative, organized, and inclusive role model (COI). The identified themes and the factors they reflect, if applicable, include the following:

- Being flexible [COI]
- Being friendly
- Being visible
- Builds relationships
- Caring [RSL]
- Communication [STC]
- Consistent [BI]
- Disciplinarian [STC, BI]

- Experience in the classroom
- Fair [BI]
- Focus on school [STC]
- Good attitude
- Good role model [COI]
- Helping [PF]
- Honest [STC]
- Involving [PF, STC]
- Knowledgeable
- Leader [RSL]
- Listening [COI
- Motivating
- Open-mindedness [BI]
- Organized [COI]
- Patience [RSL, PF]
- Professional [PF, COI]
- Respectful
- Responsible [RSL]
- Service [PF]
- Understanding [RSL], and
- Works well with others [COI].

Crum and Sherman's (2008) study focused on identifying the practices of successful high school principals located in Virginia. Based on interviews, they identified six overarching

themes: (a) developing personnel and facilitating leadership, (b) responsibly delegating and empowering the team, (c) recognizing ultimate accountability, (d) communicating and rapport, (e) facilitating instruction, and (f) managing change.

Robinson, Lloyd, and Rowe (2008) conducted a series of meta-analyses to determine the impact of different types of leadership on student outcomes. Using their criteria, 22 studies were identified as eligible, and that accounted for more than 3,800 schools. Their first meta-analysis focused on the impact of leadership style on student outcomes. From the 22 studies, 251 effect sizes were calculated, with transformational leadership accounting for 13, instructional leadership accounting for 188, and other leadership approaches accounting for 50. Their results revealed that transformational leadership (d = 0.11) was the least effective, as instructional leadership (d = 0.42) was about three times more effective. Collectively, other leadership styles (d = 0.30) had a greater mean effect size than transformational leadership. Their second meta-analysis, which focused on the impact of different leadership practices on student achievement, included 12 of the 22 studies, and produced 199 indicators. These indicators were then grouped according to dimensions reflected in the conceptual frameworks of the 12 studies. Those leadership dimensions are the following: (a) establishing goals and expectations (d = 0.42), (b) resourcing strategically (d = 0.31), (c) planning, coordinating, and evaluating teaching and the curriculum (d = 0.42), (d) promoting and participating in teacher learning and development (d = 0.84), and (e) ensuring an orderly and supportive environment (d = 0.27).

Waters, Marzano, and McNulty (2003) identified 21 key leadership responsibilities significantly correlated with student achievement through a meta-analysis. Criteria included teacher perceptions as the independent variable, and quantitative student achievement (as measured by standardized, normed, or objective measures of achievement) data as the dependent

variable. After reviewing more than 5,000 studies, 70 studies were selected to be included in their meta-analysis. These studies accounted for 2,894 schools, approximately 1.1 million students, and 14,000 teachers. These responsibilities include:

- Culture ($d = 0.29$)
- Order ($d = 0.26$)
- Discipline ($d = 0.24$)
- Resources ($d = 0.26$)
- Involvement with curriculum, instruction, and assessment ($d = 0.16$)
- Focus ($d = 0.24$)
- Knowledge of curriculum, instruction, and assessment ($d = 0.24$)
- Visibility ($d = 0.16$)
- Contingent rewards ($d = 0.15$)
- Communication ($d = 0.23$)
- Outreach ($d = 0.28$)
- Input ($d = 0.30$)
- Affirmation ($d = 0.25$)
- Relationship ($d = 0.19$)
- Change agent ($d = 0.30$)
- Optimizer ($d = 0.20$)
- Ideals and beliefs ($d = 0.25$)
- Monitor and evaluate ($d = 0.28$)
- Flexibility ($d = 0.22$)
- Situational awareness ($d = 0.33$), and

- Intellectual stimulation (d = 0.32).

The researchers reported that effective principals recognize which of these responsibilities require the greatest attention in their school and employ the appropriate practices to see the greatest gains in student achievement.

Daresh, Gantner, Dunlap, and Hvizdak (2000) surveyed principals to uncover what they believed were effective school leadership characteristics. The responses yielded 27 characteristics of effective principals, reflecting six factors: (a) technical skills influenced by human relations (TSIHR), (b) technical skills influenced by legal mandates (TSILM), (c) creating the inviting culture (CIC), (d) building community (BC), (e) ethics in practice (EIP), and (f) understanding relationships (UR). The specific characteristics and factors on which they loaded at or above the interpretive cut-off factor loading are:

- Conducting a meeting [TSIHR]
- Managing an office [TSIHR, TSILM]
- Implementing site-based management [TSIHR]
- Integrating student learning styles with appropriate pedagogical methods [TSIHR, CIC]
- Forming and working with teams [TSIHR, UR]
- Planning strategically future needs and growth [TSIHR, EIP]
- Identifying the special population student [TSIHR]
- Applying educational law to specific situations [TSILM]
- Understanding those underlying principles which drive state mandated evaluation and assessment [TSILM]
- Maintaining effective discipline throughout the campus [TSILM]

- Building master schedules [TSILM, TSIHR]
- Using technology and other tools to successfully manage time [TSILM, TSIHR]
- Correlating state mandating outcomes with curriculum [TSILM, TSIHR]
- Understanding the impact of developmentally appropriate curriculum and instructional practices on student learning [CIC, BC]
- Understanding how current educational trends and issues impact change in organizations [CIC]
- Understanding ways in which reflective practice develops healthy organizations [CIC]
- Understanding how stakeholders core values and attitudes affect their conceptualizations of educational issues [CIC]
- Creating a community of learners [BC]
- Ensuring stakeholder involvement with the school mission [BC, TSIHR]
- Building community and parental involvement [BC]
- Fostering respect for lifelong learning [BC]
- Articulating vision [BC, TSIHR]
- Behaving in ways consistent with one's personal values attitudes, and beliefs [EIP]
- Promoting ethical practices [EIP]
- Resolving conflict [UR]
- Working effectively with adults [UR, BC], and
- Working with the marginal teacher [UR, EIP].

From this review of the literature on the characteristics of effective secondary school principals, I identified four overarching themes: (a) ability to be an instructional leader, (b) ability to communicate and build relationships, (c) ability to manage, and (d) ability to lead. Each of these broad themes is discussed below.

Ability to be an Instructional Leader

One of the most important areas that characterizes effective principals is instructional leadership (Palmer, 2016; Preston & Barnes, 2017; Sanzo et al., 2011; Valentine & Prater, 2011). Principals need to be well-versed in the areas of curriculum, instruction, and assessment, instructional goals and expectations, staff development, development of teacher leaders, and protection of instructional time. All of which are discussed below.

Curriculum, instruction, and assessment. Involvement with and knowledge of curriculum and instruction is a very important characteristic associated with effective principals (Awender, 1978; Bauck, 1987; Brewer, 1993; Cotton, 2003; Cruzeiro & Boone, 2009; Doyle & Locke, 2014; Griffing, 2010; Hauserman et al., 2007; Krasnoff, 2015; Marzano et al., 2005; McKinney et al., 2015; Palmer, 2016; Parylo & Zepeda, 2014; Stronge et al., 2008; Valentine & Prater, 2011). Principals' knowledge of curriculum, instruction, and assessment, and participation in curriculum development has been found to have a positive effect on student achievement (Marzano et al., 2005; Robinson et al., 2008; Stronge et al., 2008) and "is considered critical to the concept of instructional leadership" (Marzano et al., 2005, p. 53).

Further, effective principals believe in the power of instruction and tend to spend more time on academic planning than on any other aspect of the job (Bauck, 1987; Brewer, 1993; Cotton, 2003; Krasnoff, 2015). Effective principals take responsibility for being aware of recent developments in curriculum and continually assess current practices to ensure that the most

effective instructional methods are being used (Bennett, 1987; Cotton, 2003; Griffing, 2010; Marzano et al., 2005; Stronge et al., 2008). A principal's involvement in curriculum has less effect on student achievement, however, in schools with greater degrees of specialization (Brewer, 1993; Hull, 2012) and in high schools in general due to the departmentalization of most secondary schools (Hull, 2012). High school principals are likely to have less effect on student achievement than elementary school principals with respect to instruction.

Teachers place a high value on an administrator's ability and willingness to be involved in instruction (Marzano et al., 2005). This represents a sharp change from earlier periods, when teachers generally did not view instructional expertise as being among the most important qualifications for school principals (Awender, 1978).

Instructional goals and expectations. The ability to establish goals and clear expectations for instruction and student achievement is another salient quality that distinguishes effective school principals (Ash et al., 2013; Bennet, 1987; Blaise & Kirby, 2009; Cotton, 2003; Cruziero & Boone, 2009; Gerhart et al., 2011; Griffing, 2010; Hallinger, 2011; Hitt & Tucker, 2016; Hodge & Connell, 2013; Hull, 2012; Krasnoff, 2015; Leithwood, Seashore, Anderson, & Wahlstrom 2004; Preston & Barnes, 2017; Robinson et al., 2008; Van de Water, 1988). Gerhart, Harris, and Mixon (2011) also found that effective principals not only had expectations for themselves, but also that their standards were set higher than those they set for others. When principals' building goals focus on "academic excellence, building basic literacy skills, and promoting good work habitats," they are more likely to receive positive ratings from teachers (Herriot, 2012, p. 18). Moreover, those principals whose goals focus on high academic achievement tend to produce better results from new teachers than those whose goals have a different focus (Brewer, 1993). In establishing goals, it is critical, however that the expectations

principals hold be both practical and achievable in order for those expectations to serve as effective motivators (Cotton, 2003).

Staff development. A critical component of a principal's responsibilities is the professional development of staff (Arsani, 2010; Blaise & Kirby, 2009; Cruziero & Boone, 2009; Krasnoff, 2015; Leithwood et al., 2004; McKinney et al., 2015; Reichhart, 2008). Effective principals promote professional learning within their staff (Cotton, 2003; Hauserman et al., 2007; Krasnoff, 2015; Preston & Barnes, 2017; Reichhart, 2008; Robinson et al., 2008; Sanzo et al., 2011) and encourage their staff members to attend conferences and seminars, complete specialized trainings, and pursue other professional development opportunities (Bennet, 1987). Additionally, effective principals assign a high priority to professional development and devote resources, time, and space for staff training and development (Ash et al., 2013; Bennet, 1987; Cotton, 2003; Robinson et al., 2008; Stronge et al., 2008; Williams, 2008). Further, the willingness of principals to participate in the programs alongside their teachers has been viewed as an admirable trait (Cotton, 2003) and contributes to their "creditability and legitimacy as an instructional leader" (Hitt & Tucker, 2016, p.548). Principals' involvement within the staff development process, as either a leader or learner, has been found to have a large effect (d = 0.84) on student outcomes (Robinson et al., 2008). Effective principals are also experts in the observation process and have the ability to provide useful feedback to staff (Blase & Blase, 2000; Cotton, 2003; Griffing, 2010; Krasnoff, 2015; Robinson et al., 2008). Robinson et al. (2008), found that leaders of high performing school are more likely be involved in the evaluation process of teachers than leaders of lower performing schools.

Development of teacher-leaders. Highly regarded educational administrators appreciate the value and importance of developing teacher-leaders (Arsani, 2010; Ash et al., 2013; Blaise & Kirby, 2009; Crum & Sherman, 2008; Garza et al, 2014; Hauserman et al., 2007; Hauserman & Stick, 2013; Kersten, 2006; Krasnoff, 2015; Valentine & Prater, 2011). This view is shared by teachers (Hauserman et al., 2007; Hauserman & Stick, 2013; Krasnoff, 2015) and superintendents (Arsani, 2010; Kersten, 2006) and reflects the belief that empowered teachers are more likely to be engaged and to initiate and support new academic initiatives that benefit students (Arsani, 2010). This quality also encourages and fosters teacher commitment, which has been found to lead to improved instruction (Hitt & Tucker, 2016). Further, within struggling schools those principals who develop teacher leaders tend to have greater success in implementing reforms and improving school performance (Blaise & Kirby, 2009). Often, this is done by delegating leadership responsibilities to staff when appropriate, as well as by providing leadership training opportunities (Parylo & Zepeda, 2014).

The development of teacher-leaders has been shown to improve student achievement (Johnston, Walker, & Levine, 2010; Krasnoff, 2015) and also to cultivate future building leaders (Johnston et al., 2010). Principals who value and support teacher leaders are also less likely to experience burnout in dealing with the many challenges they address (Stronge et al., 2008).

Protection of instructional time. Teachers experience many distractions and intrusions, such as administrative tasks, announcements, and community interference (Cotton, 2003; Marzano et al., 2005; Stronge et al., 2008), so effective school leaders must minimize the impact of these distractions by protecting instructional time (Bauck, 1987; Blaise & Kirby, 2009; Cotton, 2003; Hitt & Tucker, 2016; Marzano et al., 2005; Stronge et al., 2008; Williams, 2008). Effective principals work diligently to limit paper work and meetings in order to maximize the

time their teachers have to plan for instruction (Blaise & Kirby, 2009; Hitt & Tucker, 2016). Teacher attitudes and their performance tend to improve when school leaders protect instructional time (Blaise & Kirby, 2009).

Ability to Communicate and Build Relationships

Communicating and building relationships is another important component of an effective principalship. Students, staff, and community members need to know, understand, and support the direction in which the school is heading. Without being able to articulate the school vision and goals clearly, principals find it difficult to build the relationships needed to move their schools forward. Areas of which principals need to be strong in to do so includes their general communication, collaboration and relationship building, connecting with students, and community and public relations.

General communication skills. Communication has been credited as the "glue that holds together all the other responsibilities of leadership" (Marzano et al., 2005, p. 46) and is a key quality of effective principals (Awender, 1978; Cotton, 2003; Crum & Sherman, 2008; Hitt & Tucker, 2016; Parylo & Zepeda, 2014; Preston & Barnes, 2017; Schulte et al., 2010; Stronge et al., 2008; Waters et al., 2003). Effective principals assign a high priority to establishing sound communication practices in their buildings (Crum & Sherman, 2008). The failure to do so results in misunderstandings which take the focus away from teaching and learning (Crum & Sherman, 2008). For this reason, effective principals practice listening as much as speaking in their work (Hitt & Tucker, 2016; Stronge et al., 2008). Strong communicators use their skills to navigate their way past unpopular decisions by clearly articulating the purpose and rationale in a way that reflects genuine care and concern for student, staff, and other stakeholders (Crum &

Sherman, 2008). Effective principals also use their communication skills to positively influence and motivate staff, as well as to assist when moving in new directions (Parylo & Zepeda, 2014).

Collaboration and relationship building. Effective principals recognize the value of collaborating and building relationships (Bennet, 1987; Crum & Sherman, 2008; McKinney et al., 2015; Preston & Barnes, 2017; Sanzo et al., 2011; Williams, 2008). It is through collaboration that leaders build trust and sustain the positive morale of staff members, and that leads to increased faculty performance (Preston & Barnes, 2017). In building collaborative relationships, effective principals often hold informal meetings with their staff members as a means of focusing on their professional needs (Preston & Barnes, 2017; Robinson et al., 2008).

The practice of including school staff in the decision-making process, especially when it pertains to students, has been found to be a major factor in creating and sustaining "high achieving" schools (Ash et al., 2013; Cotton, 2003; Marzano et al., 2005). Teachers want their principal to be willing to include them in the process of creating new programs, procedures, and policies by welcoming their input, asking their opinions, and making adjustments based on that feedback (Griffing, 2010; Hauserman et al., 2007). Research has found a positive relationship between student achievement and involving teachers within processes focused on procedural changes and important decisions (Hitt & Tucker, 2016; Krasnoff, 2015; Marzano, et al. 2005). This ability to facilitate effective shared decision-making is a characteristic credited to effective school leaders (Hitt & Tucker, 2016; Schulte et al., 2010; Stronge, 2008; Valentine & Prater, 2011). Lastly, the practice of having collaborative structures in place has shown to have a positive effect ($d = 0.47$) on school conditions (Leithwood & Sun, 2012). However, effective principals have noted that while they value input of others, they do not lose sight that, ultimately, they are the final decision makers (Crum & Sherman, 2008).

Student connections. Beyond having strength in instructional leadership and management, central office leaders have indicated that effective principals must also be able to foster strong student connections and have a clear passion for working with students (Parylo & Zepeda, 2014). They demonstrate this commitment by building relationships with students and becoming personally involved when possible (Gerhart et al., 2011). They make themselves available to meet, either formally or informally, to discuss both academic and non-academic issues (Gentilucci & Muto, 2007; Gerhart et al., 2011). Students have been found to be more motivated to achieve academically when their principal shows interest in their academic challenges and successes (Gentilucci & Muto, 2007). Further, those principals who make attempts to get to know students gain a better understanding of the backgrounds and needs of the students they serve, and, therefore, they are better able to create an optimal learning environment (Gerhart et al., 2011; Preston & Barnes, 2017).

Community and public relations. A major function of a school principal's communication skills is to build and nurture effective community and public relations (Bauck, 1987; Cotton, 2003; Marzano et al., 2005; Parylo & Zepeda, 2014; Preston & Barnes, 2017; Stronge et al., 2008). This viewpoint was shared by superintendents as a characteristic of effective school principals (Preston & Barnes, 2017). School principals are not only responsible to ensure that stakeholders within their buildings feel supported, understand the vision, and are engaged, but they are also responsible for creating and sustaining similar relations with the school's larger community (Cotton, 2003; Marzano et al., 2005; Parylo & Zepeda, 2014; Preston & Barnes, 2017; Stronge et al., 2008). Parents, local business owners, public figures, and other community members and leaders often have great influence on the success—or failure—of the acceptance and successful implementation of an educational leader's vison (Leithwood et al.,

2004; Stronge et al., 2008; Whaley, 2002). Educational leaders who foster positive relationships with community stakeholders tend to experience less resistance when they attempt to make change because they have developed a climate of mutual support (Leithwood et al., 2004; Stronge et al., 2008).

When principals make parents feel that they are a part of the school through their outreach efforts, parents are more likely to be involved in the education process (Hitt & Tucker, 2016; Leithwood, et al., 2004; Stronge et al., 2008). The ability to encourage greater parental involvement has been identified as an important characteristic of effective principals (Bauck, 1987; Hitt & Tucker, 2016; Williams, 2008), but teachers have noted that effective principals know where to draw the line between positive community involvement and intrusive involvement (Griffing, 2010). For a review of the literature on parental involvement, see Kolodnicki (2017).

Ability to Manage

Another key quality of school principal-candidates are their abilities to manage people, resources, facilities, programs, and situations (Bennet, 1987; Cotton, 2003; Grissom & Loeb, 2011; Johnston et al., 2010; Kersten, 2006; Leithwood et al., 2004; Marzano et al., 2005; Parylo & Zepeda, 2014; Reichhart, 2008; Schulte et al., 2010; Stronge et al., 2008; Van de Water, 1988). Such management abilities include skills in decision-making, maintaining discipline, and managing the financial, facilities, and other human and non-human resources.

Decision-making. One of the most important professional skills of effective school leaders is the ability to make effective decisions, and especially the ability to use data and analysis to inform judgments (Awender, 1978; Carlton, 1987; Doyle & Locke, 2014; Krasnoff, 2015; Marzano et al., 2005; Parylo & Zepeda, 2014; Whaley, 2002). The importance of this

ability is emphasized by both administrators (Arsani, 2010; Cruziero & Boone, 2009; Kersten, 2006) and teachers (Awender, 1978; Baker, 2001; Carlton, 1987). Although it is important for school principals to make decisions that are technically "correct," it is equally important that they make choices that are seen as consistent and fair. Inconsistencies in decisions and judgments can cause confusion in expectations and procedures and can lead to feelings of favoritism and inequity among stakeholders (Baker, 2001). School leaders need to be able to assess situations, consider all factors, and foresee a full range of possible outcomes prior to reaching their final conclusions (Doyle & Locke, 2014; Marzano et al., 2005). Effective principals who are able to use data to inform their decisions are more likely to be able to identify gaps in instruction, processes, and organization, by discovering root causes; knowing such factors, they are better able to develop effective plans to overcome issues (Kersten, 2006; Krasnoff, 2015; Marzano et al., 2005; Parylo & Zepeda, 2014).

Discipline. The ability to demonstrate clarity, firmness, consistency, and fairness when fostering and maintaining student discipline is critical to effective school leadership (Blaise & Kirby, 2009; Cotton, 2003; Gerhart et al., 2011; Hauserman et al., 2007; Schulte et al., 2010). This is important for maintaining order within the school and supporting teachers in their classroom management, creating a safe and conducive teaching environment, and creating greater teacher effectiveness (Blaise & Kirby, 2009). Further, from a teacher's perspective, principals who are perceived to be effective disciplinarians are more often deemed to be highly transformational leaders (Hauserman & Stick, 2013). Few principals who are perceived as weak disciplinarians are perceived by teachers to be effective leaders (Valentine & Prater, 2011).

Financial, facilities, and other non-human resource management. Although instruction has become one of the highest priorities for principals, the ability to plan and manage budgets, oversee and manage day-to-day operations, and provide a safe working and learning environment remains a critical function of the principalship (Awender, 1978; Blaise & Kirby, 2009; Cotton, 2003; Hitt & Tucker, 2016; Knuth, 2004; Parylo & Zepeda, 2014; Stronge et al., 2008; Valentine & Prater, 2011). Principals who have deep skills in managing the day-to-day operations of their schools are more likely to be viewed as effective (Knuth, 2004; Stronge et al., 2008). This includes managing financial resources (Bennet, 1987). The daily operations managerial responsibilities of principals also include providing oversight for transportation, building maintenance, and cafeteria operations (Stronge et al., 2008). Of particular emphasis are the principal's responsibilities for ensuring student and staff safety, and creating an effective and conducive learning environment (Robinson et al., 2008; Stronge et al., 2008). When students and staff are subjected to unsafe conditions, achievement is adversely affected (Hitt & Tucker, 2016).

Scheduling has been noted as another important function overseen by school principals (Blaise & Kirby, 2009; Stronge et al., 2008). Principals need to ensure that teachers are assigned to appropriate courses and that teaching resources are employed in as optimal manner as possible (Blaise & Kirby, 2009) and that state and local requirements are reflected in allotting time for specific subjects to ensure that both internal and external standards are met (Stronge et al, 2008). Effective principals also take into consideration the practice of affording common planning time for teachers when developing teacher schedules (Hitt & Tucker, 2016).

Human resources management. The ability to select qualified and effective personnel and to retain highly regarded staff members is a paramount characteristic of school principals (Crum & Sherman, 2008; Hitt & Tucker, 2016; Krasnoff, 2015; Stronge, 2008). Retaining the most effective staff is particularly difficult when principals are new to the role or just to the building, regardless of the level of past experience or competence the principal possesses (Krasnoff, 2015). Research has shown that there is an increase in teacher turnover at the time that new principals are appointed, but effective principals are more likely to retain effective teachers (Hull, 2012). Effective principals also possess skills in recruiting, selecting, and evaluating non-instructional staff such as librarians, psychologists, and media specialists (Stronge et al., 2008). Further, they understand the importance of removing both teaching and non-instructional staff who are not performing to the school's standards (Hitt & Tucker, 2016; Krasnoff, 2015; Whaley, 2002).

Ability to Lead

Effective leadership within schools is not substantially different from effective leadership in other sectors, as leaders in all sectors tend to share similar leadership philosophies and foundational competencies (Hallinger, 2010; Krapfl & Kruja, 2015; Marzano et al., 2005). Due to the diverse perspectives and aspects of leadership, there is no single "correct" definition (Yukl, 2010), but leadership can be defined generally as the process of influencing others to work towards achieving a shared objective (Krapfl & Kruja, 2015; Yukl, 2010). Further, Krapfl and Kruja, (2015) reported it is difficult to expand this definition as interactions between leadership styles and environments yield different success outcomes. Focusing on educational leadership, although there is no one best leadership style for attempting to increase student

outcomes and improve schools (Hallinger, 2010), Fullan and Scott (2009) asserted that effective leaders "listen, link and lead, and model, teach and learn themselves," (p. 152).

Having a broad ability to "lead" is what makes a principal effective (Bennet, 1987). Although recent literature has focused on instructional leadership abilities and practices of principals (Arsani, 2010; McKinney et al., 2015; Preston & Barnes, 2017; Robinson et al., 2008; Sanzo et al., 2011), being strong in instruction is only one aspect of what it takes for schools to succeed. Valentine and Prater's (2011) findings align with this as when reviewing instructional, transformational, and managerial leadership, they found that absent the others, no set of leaderships behaviors were effective by themselves.

Effective principals adapt their leadership according to the constraints and opportunities that present themselves within their schools (Hallinger, 2010). They also use their leadership abilities to produce positive changes (Ash et al., 2003). Those principals who have teachers who have faith in their ability to lead are more likely to realize those changes (Crum & Sherman, 2008). Aspects of leadership associated with effective principals include having a vision, employing affirmation practices, being an agent of change, being ethical and moral, being confident and humble, motivating others, and being visible.

Vision. One of the most salient traits of effective principals is the ability to articulate a clear and appropriate vision (Cotton, 2003; Doyle & Locke, 2014; Hallinger, 2011; Hitt & Tucker, 2016; Hull, 2012; Krasnof, 2015; Parylo & Zepeda, 2014; Sanzo et al., 2011; Stronge et al., 2008; Valentine & Prater, 2011). Educational leaders may require a vision for their school, for the role they will play within their school, and for the process of change (Stronge et al., 2008). Carefully crafted ones can inspire and unite staff, students, and community members to come together to works towards a shared goal (Bennet, 1987; Doyle & Locke, 2014; Hallinger,

2011; Krasnoff, 2015). For this reason, effective principals seek input from others when designing a vision. The more that others feel a part of the process, the greater the likelihood that their peers and other stakeholders will commit themselves to it (Hitt & Tucker, 2016). Leithwood and Sun (2012) reported that involving stakeholders in developing visions has positive effects on creating favorable school conditions ($d = 0.43$). Without the support of others, it would be nearly impossible to achieve desired outcomes (Stronge et al., 2008; Parylo & Zepeda, 2014).

Affirmation of others. The appreciation and affirmation of others have also been identified as an important characteristic of successful principals (Bennet, 1987; Blase & Blase, 2000; Cotton, 2003; Hauserman & Stick, 2013; Hitt & Tucker, 2016; McKinney et al., 2015; Preston & Barnes, 2017). This quality has been reported to be especially important to the effectiveness of high school principals (Cavazos, 2012). Affirmation is important further in supporting and providing guidance to teachers who take academic risks (Ash et al., 2013; Cotton, 2003; Whaley, 2002). It is important that principals acknowledge their teachers' efforts even (or especially) when those efforts are unsuccessful. Additionally, effective principals praise teachers by telling stories about their efforts and successes to others, which creates an atmosphere in which teachers feel appreciated and respected (Blaise & Kirby, 2009; Cotton, 2003; Marzano et al., 2005; McKinney et al., 2015; Whaley, 2002). They also highlight and reward those teachers whose students realize the greatest gains (Hitt & Tucker, 2016). Effective principals who practice affirmation of others build trusting relationships which lead to teachers' having positive opinions about their leadership (Blaise & Kirby, 2009; Preston & Barnes, 2017). This approach also contributes to teacher motivation, self-esteem, and efficacy (Blase & Blase, 2000).

Change agency. Effective principals have the ability to serve as change agents when needed (Crum & Sherman, 2008; Marzano et al., 2005; Preston & Barnes, 2017; Williams, 2008). Preston and Barnes (2017) defined a change agent as "a person who intentionally or unintentionally, supports and accelerates educational, social, cultural, and/or behavior change in an organization" (p. 10). To do this, principals are willing to challenge the norms of the building for which they are responsible to achieve a desired outcome (Hauserman & Stick, 2013; Marzano et al., 2005). This practice can raise concerns for staff who are accustomed to and usually want to maintain the status quo (Marzano et al., 2005). What separates the effective leaders is the ability to bring about change in a manner that is encouraging and motivating to faculty and which does not increase the sense of uncertainty among the staff members and other stakeholders (Crum & Sherman, 2008).

Personal and professional ethics, integrity, and morals. Educational leaders who are considered to be effective and successful are distinguished by their high standards of personal and professional ethics, integrity, and morality (Bennet, 1987; Hauserman & Stick, 2013; Knuth, 2004; Painter, 2006; Garza et al., 2014). The ability to demonstrate these ethical traits is critical to principals' success and lasting power (Stronge et al., 2008). When a group of superintendents and principals from Indiana was asked to rate the six Interstate School Leaders Licensure Consortium Standards (ISLLC), "integrity, fairness, and ethics" (standard 5) was rated to be the most important (Knuth, 2004). Teachers have indicated that principals who deal with matters in professional and ethical manners create high levels of trust between themselves and their staff (Hauserman et al., 2007; Hauserman & Stick, 2013). Additionally, teachers have expressed that those principals who model their expectations directly influence the way they carry themselves (Blaise & Kirby, 2009; Hauserman & Stick, 2013). This practice of modeling has been found to

have a positive effect ($d = 0.54$) on teachers' internal states and behavior (Leithwood & Sun, 2012).

Humility and confidence. Two distinct but complementary traits associated with effective principals are humility (Crum & Sherman, 2008; Oyer, 2015) and confidence (Oyer, 2015; Williams, 2008). These characteristics have been shown to be independent from each other and to be significant predictors of leadership effectiveness (Oyer, 2015). In combination, as rated by teachers, the category of principal who scored the highest effectiveness ratings were those who were highly confident, yet very humble. The category with the smallest effectiveness ratings included those leaders who were highly confident and not humble. Oyer (2015) explained this by concluding that the principals who fell into this category were perceived to be arrogant, while their counterparts were viewed as being honest, credible, and trustworthy. Williams' (2008) found that outstanding principals were coded as having self-confidence at a rate of 92%, which was more than three times greater than the rate of typical principals.

Motivating others. In order for schools to advance, their administrators must be able to provide leadership that fosters confidence and a desire to grow within their faculty (PDE, 1971), because the morale of teachers affects the quality of instruction they deliver in their classrooms (McKinney et al., 2015). The ability of principals to motivate staff members has also shown to be important to teachers in assessing the effectiveness of their principals (Hauserman et al., 2007). Principals who model positive behaviors and core values increase the efficacy of their staff (Stronge, et al., 2008) and encourage "individual and organizational improvement." (Hitt & Tucker, 2016, p. 547). Further, faculty members have reported that they are motivated by principals who have a passion for working with students (Cotton, 2003; Parylo & Zepeda, 2014). Those who possess this quality are more likely to motivate others (Parylo & Zepeda, 2014). By

contrast, principals who attempt to motivate by using authority of their position or coercion have tended to be unsuccessful and ineffective (Whaley, 2002).

Visibility. Effective principals are highly visible within their buildings (Blaise & Kirby, 2009; Cavazos, 2012; Cotton, 2003; Hauserman et al., 2007; Hauserman & Stick, 2013; Rammer, 2007). High school principals have identified visibility as the most important competency in their ratings of Waters et al.'s (2003) 21 responsibilities of leadership (Cavazos, 2012). Principals who make themselves visible generate feelings of respect (Blaise & Kirby, 2009), and receive positive feedback from their teachers (Blaise & Kirby, 2009; Hauserman et al., 2007). Visible principals also contribute to establishing a positive and supportive school climate (Cotton, 2003; Marzano et al., 2005) as their presence decreases the likelihood of disciplinary issues (Blaise & Kirby, 2009) and increases contact time with students and staff (Cavazos, 2012).

Candidate-Specific Attributes Considered in Secondary School Principal Selection Processes

The previous section reviewed the characteristics of effective secondary school principals. With that background, this section reviews the literature related to the candidate-specific (i.e., alternative-specific) attributes that have been found to be important factors in the processes and decisions related to the section of secondary school principals. The attributes that schools and districts seek when selecting a secondary school principal from a pool of candidates reflect the beliefs of those involved in the decision process about the background characteristics, skills, leadership styles, and other qualifications they associate with effective school principals. The body of literature which focuses on principal-selection and the characteristics that are considered by decision makers in selecting principals is limited. Of the relevant literature that

concentrates on secondary school principal selection criteria, the majority of the research has concentrated on the perspectives of district superintendents or other senior school leaders (Arsani, 2010; Baker, 2001; Baltzell & Dentler, 1983; Baron, 1990; Batchelor, Bedenbaugh, Leonard, & Williams, 1987; Cavazos, 2012; Cottrell, 2017; Cruzeiro & Boone, 2009; Doyle & Locke, 2014; Hooker, 2000; Kersten, 2006; Knuth, 2004; Palmer, 2014, 2016, 2017; Palmer, Kelly, & Mullooly, 2016; Palmer & Mullooly, 2015; Pounder, King, Hausman, & Bowles, 2005; Rammer, 2007; Reichhart, 2008; Van de Water, 1988; Weber, 2009; Weber, 2012). The research on the candidate-specific attributes from the perspective of teachers is much smaller (Jaeger, 2001; Winter & Jaeger, 2004; Winter, McCabe, & Newton, 1998). This section discusses the previous research that has identified or analyzed the alternative-specific attributes of candidates for secondary school principal positions.

Baron (1990) identified 32 elements of selection criteria, 18 of which loaded substantially on six broad common factors used in principal-selection. These factors are: (a) local standing of the candidate, (b) local approval of the candidate, (c) advanced preparation of the candidate, (d) advanced degrees held by the candidate, (e) local compatibility of the candidate, and (f) other factors. The elements and the factors they reflect, if applicable, include:

- Administrative practicum [Advanced preparation of candidate]
- Administrator approval [Local approval of candidate]
- Advanced certificate [Advanced preparation of candidate]
- Assistant principal experience
- B.A. in education
- Candidate age
- Candidate gender

- Coaching experience
- Community approval [Local standing of candidate, Local approval of candidate]
- Compatible goals [Local compatibility of candidate]
- Compatible philosophy
- Compatible values [Local compatibility of candidate]
- Dissimilar experience [Advanced degree held by candidate]
- Doctoral degree [Advanced degree held by candidate]
- Ed.S. degree [Advanced preparation of candidate, Advanced degree held by candidate]
- Familiarity with system [Local standing of candidate]
- High graduate GPA [Miscellaneous]
- Marital status
- Master's degree
- Masters in teaching [Local approval of candidate]
- Non-educational experience [Local approval of candidate]
- Personal references
- Physical appearance [Miscellaneous]
- Physical condition
- Presently within system [Local standing of candidate]
- Professional membership [Local approval of candidate]
- Professional references
- Publication [Advanced preparation of candidate]
- Similar experience

- Standard certificate
- Teacher approval [Local approval of candidate], and
- Teaching experience.

Hooker (2000) classified the criteria which superintendents seek in a principal-candidate into seven major themes: (a) previous administrative experience, (b) personal characteristics (e.g., intelligence, perceptiveness, flexibility), (c) organizational skills, (d) human relation skills, (e) educational expertise, (f) ability to fit, and (g) ability to gain support from parents and community. Baker (2001) focused on the criteria that superintendents desire to see in principal-candidates and identified five general categories: (a) experience (administrative and teacher), (b) highly tuned decision-making skills, (c) sense of justice and fair play, (d) focus on community, and (e) management skills with a strong focus on instruction. Baker (2001) also identified "fit" as a desirable characteristic of a principal-candidate, noting that fit was referenced multiple times by superintendents as an important consideration in their decisions in selecting principals.

Palmer (2014) identified the top five criteria which new principals perceived as important factors in their selection. Those criteria are (a) leadership, (b) ability to build relationships, (c) experience, (d) communication, and (e) fit. In a subsequent study, Palmer (2016) elaborated this analysis and identified almost 150 specific characteristics. Among those, he acknowledged the following 12 characteristics as those most frequently emphasized by participants in principal-selection processes (listed in order of greatest agreement):

- Communicator
- Student centered
- People skills
- Curriculum and instruction

- Integrity
- Organized
- Collaborator
- Work ethic
- Instructional leadership
- Leadership
- Vision
- Decisive
- Intelligent
- Ethical
- Humor, and
- Use of data.

Kersten (2006), identified 10 characteristics which superintendents indicated they view as the key qualities they consider when selecting principals. The characteristics are listed below in order of greatest agreement across the individual superintendents' responses:

- Interpersonal skills
- Knowledge of curriculum and instruction
- Educational leadership
- Communication skills
- Previous administrative and teaching experience
- Ethics
- Energy and enthusiasm
- Vision

- Organizational and management skills, and
- Work ethic.

Weber (2009) focused on four specific domains in his research on principal-selection preferences of school superintendents in South Dakota. From a review of literature, he identified: (a) instructional leadership, (b) management, (c) preparation and experience, and (d) communications and external relationships. These themes matched the four categories of (a) background, (b) management, (c) human relations, and (d) instruction, which Arsani (2010) used to guide her survey questions of superintendents of urban school districts in California. Further, a factor analysis of principal-selection criteria by Van de Water (1988) revealed four broad latent factors: (a) human relations (b) instruction, (c) management, and (d) background. This researched focused on the responses of New York State public school superintendents.

In his research on principals in high-performing schools, Cavazos (2012) identified the top competencies that school principals consider when selecting an educational leader. When composing the survey, the 21 responsibilities identified by Marzano et al. (2005) were evaluated as key competencies, and all of those competencies were found to be important. Rammer (2007) reported similar findings when surveying a population of superintendents in Wisconsin, as did Palmer (2017) who used superintendents across the United States as his population. Carvazos (2012) also offered participants an opportunity to express their thoughts on other important competencies that should be considered during a selection process. Eight other competencies were identified in their responses: (a) finance, (b) knowledge about special needs, (c) data-driven decision-making, (d) loyalty, (e) ethics, (f) triage partnering, (g) professional development, and (h) balance.

Additionally, formalized selection processes and programs such as the Administrator Perceiver Interview (Wendel & Breed, 1986), Targeted Selection (Parkay & Armstrong, 1987), and the National Association of Secondary School Principals (NASSP) Assessment Center Model (Baltzell & Dentler, 1983), have identified specific characteristics for the evaluation of candidates for principalships. These characteristics are described in Table 2.1.

Table 2.1

Characteristics Targeted by Corresponding Selection Processes or Programs

Administrator Perceiver Interview	NASSP Assessment Center Model	Targeted Selection
Ambiguity tolerance	Decisiveness	Analysis
Arranger	Educational values	Control
Audience sensitivity	Judgment	Decisiveness and judgment
Catalyzer	Leadership	Impact
Delegator	Oral communication	Initiative
Discriminator	Organizational ability	Job motivation
Group enhancer	Personal motivation	Leadership
Human resources development	Problem analysis	Oral communication
Mission	Range of interests	Planning and organizing
Performance orientation	Sensitivity	Sensitivity
Relator	Stress tolerance	Technical professional knowledge
Work orientation	Written communication	Tolerance for stress

Note. Dimensions identified are what each formal selection process or program uses to evaluate candidates.

Across the many characteristics that have been reported in previous research on principal-selection factors, six broad themes emerged. Five of them provided the organizing framework I employed for the current research. Those themes are: (a) background and experience, (b) ability to be an instructional leader, (c) ability to communicate and build relationships, (d) ability to manage, and (e) ability to lead. The first four are consistent with themes identified by Arsani (2010), Van de Water (1988), and Weber (2009), with leadership being identified as important by Kersten (2006) and Palmer (2014, 2016). Each of these themes are discussed in detail below. The sixth theme is fit, which was identified by Hooker (2000) and Palmer (2014). I deemed this factor to be overly-broad and a factor with great potential for abuse and inappropriate bias, so fit was not employed directly in this study, however, it is discussed in a subsequent section.

Background and Experience

Candidates' backgrounds and experience are frequently identified as important criteria considered by decision makers in the principal-selection process (Baker, 2001; Baron, 1990; Batchelor et al., 1987; Cottrell, 2017; Cruzeiro & Boone, 2009; Doyle & Locke, 2014; Hooker, 2000; Jaeger, 2001; Palmer, 2014; Palmer & Mullooly, 2015; PDE, 1971; Van de Water, 1988; Weber, 2009; Winter & Jaeger, 2004). This element is generally viewed in terms of teaching experience, administrative experience, internal experience (experience specific to a particular school district), academic qualifications and credentials, professional references, and gender.

Teaching experience. A major factor in the evaluation of candidates for school principal positions is their teaching experience (Arsani, 2010; Baker, 2001; Baron, 1990; Batchelor et al., 1987; Cruzeiro & Boone, 2009; Johnston et al., 2010; Painter, 2006; Reichhart, 2008). Principal-candidates who have had teaching experience on the level for which they are being considered for a principalship tend to be favored over those who do not (Arsani, 2010; Baker, 2001;

Cruzeiro & Boone, 2009; Reichhart, 2008). Moreover, superintendents tend to prefer principal-candidates who have experience teaching in schools with characteristics similar to those of the school for which they are interviewing (Baker, 2001; Cottrell, 2017).

Some superintendents have stated that a principal-candidate's teaching experience is more valuable in their view than previous administrative experience (Arsani, 2010; Baron, 1990; Cruzeiro & Boone, 2009). This perspective is not shared by all, however, as other superintendents view previous leadership experiences as more important than a candidate's teaching background (Cruzeiro & Boone, 2009). The weight given to the teaching experience of a candidate varies according to the experience of the superintendent making the selection. Teaching experience was twice as important to superintendents with more than 15 years administrative experience as to those who had less experience in administration (Batchelor et al., 1987).

Superintendents have indicated that the importance given to teaching experience in the principal-selection process varies based on the quality of the teaching experience (Baker, 2001). Although teaching experience is clearly considered in selecting principals, research has shown that principals' teaching experience has a minimal relationship with ratings of their effectiveness as school leaders (Brewer, 1993; Clark et al., 2009; Herriot, 2012; Schulte et al., 2010).

Administrative experience. Administrative experience is also frequently identified as a primary consideration in the school principal-selection process (Baker, 2001; Baron, 1990; Batchelor et al., 1987; Brewer, 1993; Cottrell, 2017; Cruzeiro & Boone, 2009; Herriot, 2012; Hooker, 2000; Jaeger, 2001; Kersten, 2006; Palmer, 2014; Palmer & Mullooly, 2015; Parylo & Zepeda, 2014; PDE, 1971; Reichhart, 2008; Weber, 2009; Winter & Jaeger, 2004). Although not an absolute necessity for securing a position, superintendents have indicated that candidates with

prior administrative experience tend to have an advantage over those who have not previously held administrative positions (Hooker, 2000; Kersten, 2006; Reichhart, 2008). This preference has also been found in the views of teachers involved in the principal-selection process (Jaeger, 2001). This is especially apparent for principal positions on the secondary school level, where administrative experience has been found to receive greater weight than in the selection of elementary principal positions (Baker, 2001; Hooker, 2000).

Research has found that principals tend to become more effective as they gain greater experience in their positions (Clark et al., 2009; Hull, 2012; Kersten, 2006). For that reason, previous administrative experience, and more specifically, previous experience in a principalship, has found to be a desired characteristic in principal-candidates (Arsani, 2010; Baker, 2001; Hooker, 2000). This applies to schools that are well-performing as well as to those that are struggling (Baker, 2001; Cottrell, 2017). Schools that are replacing principals who have been successful in creating a positive working environment and in producing high levels of student achievement tend to prefer candidates who have prior administrative experiences who can seamlessly transition into the position and sustain the school's environment and educational effectiveness (Baker, 2001). By contrast, schools that have low-trust environments or are struggling with academic performance prefer principal-candidates who have previous administrative experience and whom they see as having the administrative skill and knowledge to move them forward at a quicker rate (Baker, 2001). This preference is justified by research that has shown that schools tend to perform better when led by principals with previous principal experience (Clark et al., 2009; Hull, 2012). On the other hand, other research has challenged the appropriateness of considering prior principalship experience and has found little association between a principal's previous leadership experience and effectiveness (Brewer, 1993; Herriot,

2012) or student achievement (Valentine and Prater 2011). It is not surprising, then, that prior administrative experience is weighted differently by superintendents when selecting principals for their schools (Arsani, 2010).

As in the case of the value of teaching experience in the principal-selection process, the quality of a candidate's previous administrative experience is more important than its quantity (Baker, 2001; Hooker, 2000; Kersten, 2006; Parylo & Zepeda, 2014). Those candidates who have been successful in curriculum areas and in supervision tend to be preferred over those who may have had more administrative experience. Cruzeiro and Boone (2009) found that superintendents tend to give greater weight to a candidate's ability to lead professional staff than to the candidate's years of administrative experience. In one study, previous administrative experience was rated next to last in order of importance when compared to other characteristics that superintendents consider during principal-selection (Weber, 2009).

Jaeger's (2001) initial findings indicated that principal-candidates with the greatest amount of experience were preferred by teachers consistently. However, Winter and Jaeger (2004) revealed that in scenarios where teachers were asked to rate least experienced candidates against moderately experienced candidates, and moderately experienced candidates against the greatest experienced candidates, experience level did not matter to teachers. Candidates' previous administrative experience only mattered to teachers when they compared candidates with the most experience to those with the least.

Internal experience. Previous internal experience may also be a valuable asset to candidates in the principal-selection process. Research has found that choosing principals who have previously served as an assistant principal within the same school tends to have a positive effect on student performance (Clark et al., 2009). External candidates have, therefore, often

been at a disadvantage in the principal-selection process (Baltzell & Dentler, 1983; Doyle & Locke, 2014) because they may lack knowledge about the inner workings and culture of the building in which they would provide leadership (Baltzell & Dentler, 1983; Doyle & Locke, 2014). Other disadvantages to external candidates are seen in the fear that they may make changes too rapidly, and that their hiring would negatively affect internal morale (Doyle & Locke, 2014; PDE, 1971). Opportunity awareness presents an additional obstacle that external candidates face in securing a principal position (Doyle & Locke, 2014). Districts that operate under tighter budget constraints are more likely to invest in the appointment of members of their own staff to principalships.

Despite the potential value of previous experience within the district, central office administrators have stated that there is no bias in favor of internal candidates when selecting principals (Palmer, 2016). This claim tends to be supported by the evidence that familiarity in the district for which one is a school principal-candidate is not a major factor in being selected (Arsani, 2010; Baron, 1990; Reichhart, 2008; Weber, 2009). Further, Palmer (2014) reported that less than a quarter of principals believed that having been an internal candidate was a positive factor in their selection for the position.

Academic qualifications and credentials. A candidate's academic qualifications and credentials are reviewed during the principal-selection process not only to determine whether the candidate meets the minimum legal eligibility requirements for education but also to focus on educational achievement beyond the minimum requirements. A bachelor's degree or higher is a minimum eligibility requirement for appointment as a principal in public schools across the United States (Baron, 1990; Painter, 2006). In some states, such as New York, public school principals must hold an advanced certificate or professional diploma beyond the master's degree

and must also pass a series of tests related to school administration and leadership in order to be licensed.

From the perspective of many superintendents, a candidate's holding a higher academic degree may offset having less experience in the selection of a school principal (Batchelor, 1987). When assessing superintendent's preferences in regard to specific degree types, it has been shown that superintendents place a greater value on standard administrative certifications than on advanced degrees such as advanced master's degrees, administrative certificates (or professional diplomas), or doctorates (Baron, 1990; Reichhart, 2008; Weber, 2009).

Bauck (1987) found that the effectiveness of middle school principals was unrelated to their level of formal education, and others have similarly reported that there is minimal evidence that any relationship exists between principals' education levels and the performance of their schools (Clark et al., 2009; Hull, 2012). Herriot (2012) observed an inverse relationship between formal education and teachers' preferences for principals. When rated by teachers, principals who held a master's degree or doctorate received lower ratings than those without a graduate degree. Further, some have even called for a reduction in school administrator licensing requirements (Painter, 2006). Valentine and Prater (2011) have indicated in their research, however, that the education level of principals is linked to their perceived effectiveness as rated by teachers. Their results revealed that principals with the higher levels of education were identified as the most effective, and that teacher perceptions of principals' competence increased with the educational levels of the principals.

Professional references. As part of the selection process, candidates are frequently required to list professional references. When evaluating the place of this factor within the selection process, superintendents have indicated that professional references are an important

consideration (Arsani, 2010; Baker, 2001; Batchelor et al., 1987; Weber, 2009). When rating elements of a candidate's background, superintendents have stated that they value references from previous employers more than either a candidate's previous teaching or the candidate's prior administrative experience (Arsani, 2010). Further, superintendents have indicated that feedback from references help them get a better understanding of candidates, and contribute to their selection (Baker, 2001).

Gender. Considerable attention has been given to the potential effects of gender bias in the principal-selection process (Arsani, 2010; Baron, 1990; Hudson & Rea, 1996; Palmer, 2014; Pounder et al., 2005; Reichhart, 2008). Pounder et al. (2005) found no evidence that central office administrators exhibited a preference for candidates of a specific gender when they compared candidates with otherwise similar qualifications and backgrounds, but Riehchart (2008) found that superintendents of large school districts do tend to consider gender at a greater weight than superintendents in smaller districts. Arsani's (2010) research revealed mixed messages by superintendents as survey responses indicated that gender was not an important consideration, but responses during personal interviews indicated that some do consider gender to be a factor. Teachers, however, have demonstrated preferences for principals based on gender and building level. Middle school teachers have indicated that they prefer to be supervised by female principals, while teachers at the high school level have stated a preference to be led by a male principal (Hudson & Rea, 1996). Other studies have found that gender has little impact in the selection of school principals (Arsani, 2010; Baron, 1990; Reichhart, 2008).

Male principals tend to be perceived by superintendents, other central office administrators, and school board members as better disciplinarians, although there is no empirical evidence to warrant that perception (Pounder et al., 2005). Further, females were rated

higher than males in the ratings of candidates who were labeled as being more management-oriented (Pounder et al., 2005). Superintendents, other central office administrators, and school board members also have been found to consider female principals to be more capable in instructional leadership than males (Arsani, 2010; Pounder et al., 2005).

Ability to be an Instructional Leader

Instructional leadership skills include a candidate's knowledge of curriculum, knowledge of best practices, and ability to plan and implement professional development for teachers. These skills incorporate a candidate's knowledge of curriculum, instructional methods and materials, academic assessment, setting academic goals and expectations, and staff training and development. Building-level management tasks and responsibilities have become less important for principals than their instructional leadership in recent years (Baker, 2001; Hull, 2012; Krasnoff, 2015; Parylo & Zepeda, 2014; Pounder et al., 2005), and instructional leadership ranks as either the first or second most desired characteristic in candidates for principalships in schools of all sizes (Weber, 2009).

Curriculum, instruction, and assessment. Superintendents consider knowledge of curriculum and instruction to be an important qualification for school principals (Arsani, 2010; Baker, 2001; Cruzeiro & Boone, 2009; Kersten, 2006; Palmer, 2016; Reichhart, 2008; Van de Water, 1988; Weber, 2009). They expect candidates to be able to speak to their ideas about improving instruction in a clear manner (Baker, 2001) and to provide evidence of their knowledge of curriculum development, trends, and best practice during the interview process (Baker, 2001; Kersten, 2006). Weber (2012) found that almost all the questions used during the principal-selection interviews she reviewed were aligned with involvement in curriculum, instruction, and assessment. This is consistent with Cavazos's (2012) finding that more than

90% of candidates indicated that their knowledge of curriculum, instruction, and assessment was evaluated during their interview. Candidates who are unable to provide evidence of knowledge in this area are viewed as less viable (Kersten, 2006).

Instructional goals and expectations. Successful principal-candidates understand the value of holding high expectations for students and staff (Arsani, 2010; Cavazos, 2012; Cruzeiro & Boone, 2009; Van de Water, 1988). Superintendents have reported that they attempt to assess a candidate's goals and expectations during the interview process to assist with their decision-making (Cruzeiro & Boone, 2009). They have indicated that the successful candidate provides responses closely aligned to the district vision (Arsani, 2010), as well as identify specific objectives to get there (Van de Water, 1988). Responses that also indicate high expectations for themselves is highly regarded by superintendents (Cruzeiro & Boone, 2009).

Staff development. As discussed above, effective principals are strong staff developers. Superintendents have indicated that a candidate's ability to plan meaningful professional development for staff is an important selection factor (Arsani, 2010; Cruzeiro & Boone, 2009; Kersten. 2006; Reichhart, 2008). Additionally, those candidates for principalships who have facilitated professional development sessions themselves tend to be considered as desirable candidates (Kersten, 2006). Superintendents have also indicated that principal-candidates must have a strong knowledge of the observation and evaluation process (Arsani, 2010; Cruzeiro & Boone, 2009; Painter, 2006; Reichhart, 2008; Weber, 2009). Further, it has been noted that a candidate's skill in these areas can be measured by their knowledge of research-based school reform initiatives (Arsani, 2010).

Ability to Communicate and Build Relationships

The ability to communicate (Baker, 2001; Cavazos, 2012; Palmer, 2014; Rammer, 2007), and develop and maintain effective relationships (Cottrell, 2017; Cruzeiro & Boone, 2009; Hooker, 2000; Palmer, 2016) is an especially important qualification for candidates for school principalships. It is critical, then, that school principals have excellent skills in general communication, collaboration, and community and public relations.

General communication skills. One of the most frequently identified leadership characteristics that appears in the principal-selection process is general communication skills (Arsani, 2010; Baker, 2001; Bennet, 1987; Cavazos, 2012; Cruzeiro & Boone, 2009; Jaeger, 2001; Johnston et al., 2010; Kersten, 2006; Palmer, 2014, 2016, 2017; Rammer, 2007; Reichhart, 2008; Weber, 2009; Weber, 2012). Superintendents have indicated that one of the key expectations they have for their principals is the ability to communicate clearly (Arsani, 2010; Baker, 2001; Kersten, 2006; Palmer, 2017; Reichhart, 2008; Strong et al., 2008), which includes the candidates' ability to communicate effectively in writing (Weber, 2009). In fact, superintendents have been almost unanimous in rating communication skills as an important characteristic to consider in evaluating candidates in principal-selection processes (Palmer, 2017; Rammer, 2007). In assessing candidates' communications skills, superintendents tend to consider their sense of humor, approachability, and confidence (Kersten, 2006). Even when candidates possess excellent knowledge and skills in other areas, those who cannot communicate well are considered unlikely to succeed as school leaders (Arsani, 2010). Principals have stated that communication is the single most important competency required by a candidate for an educational leadership position (Cavazos, 2012). Palmer (2014) reported that more than a third of newly selected principals credited their communication skills as a primary reason that they

were selected for their leadership positions. It is also noted that candidates impede their chances of being selected if they exhibit poor written and verbal communication during the process, as reported by superintendents (Kersten, 2006).

Collaboration and relationship building. The ability to build relationships and work collaboratively with others has been one of the traits most sought in principal-candidates by superintendents (Arsani, 2010; Cottrell, 2017; Cruzeiro & Boone, 2009; Kersten, 2006; Palmer, 2016; Hooker, 2000; Reichhart, 2008; Weber, 2009). It is also one of the top perceived reasons that current principals believe they were selected for their positions (Palmer, 2014). Further, superintendents have reported it was important to them that candidates could provide evidence of working collaboratively and empowering others during the selection process (Kersten, 2006). Kersten (2006) found that principal-candidates who were not perceived as being collaborative or who appeared to be self-centered in interviews were not well received by superintendents. Painter (2006) suggested that candidates should be screened out of the process entirely if they are perceived to be lacking in this area.

Community and public relations. A candidate's ability to engage the school community is also an important consideration by superintendents in the selection of school principals (Arsani, 2010; Baker, 2001; Cruzeiro & Boone, 2009; Hooker, 2000; Rammer, 2007; Reichhart, 2008). In fact, some superintendents have indicated that a candidate's ability to demonstrate how they plan to relate and understand the community can be the deciding factor in the selection process (Baker, 2001). Superintendents have also indicated a preference for candidates who demonstrate the communication skills needed to effectively communicate with diverse community members who value community input (Baker, 2001). The ability to work with the

school community is important in order to gain community support for the building and district (Hooker, 2000; Kersten, 2006).

Ability to Manage

Although a candidate's knowledge of instruction has become a major factor in the principal-selection process, candidates' management skills are still an important factor (Baker, 2001; Jaeger, 2001; Kersten, 2006; Knuth, 2004). Management skills include the ability to make decisions, handle discipline, and manage finances, facilities, and other human and non-human resource management areas. High school teachers have shown a preference for principal-candidates who are stronger in the area of management over those who are stronger in instruction (Winter et al., 1998). Further, research has shown that principal-candidates who are viewed as having strong management skills are more preferred in large, metropolitan schools than in smaller, rural schools (Reichhart, 2008).

Decision making. Arsani (2010) found that superintendents view the ability to make data-informed decisions to be the most important skill desired in principal-candidates. This is consistent with research by Baker (2001) and Kersten (2006), who reported that superintendents prefer principal-candidates whom they perceive to be sound decision-makers. Current principals have also stated that effective decision-making abilities should be considered as an important quality in the principal-selection process (Cavazos, 2012). Moreover, superintendents have indicated that they seek candidates who include others in the decision-making process (Baker, 2001; Van de Water, 1988). Arsani (2010) reported that superintendents also value candidates' abilities to clearly communicate the rationale for their decisions to others. Superintendents also look for "good judgment, a sense of justice, and fair play in dealings with people" in evaluating principal-candidates (Baker, 2001, p. 121; also see Kersten, 2006).

Student Discipline. The ability to maintain order and employ effective discipline practices is also an important managerial skill sought in the principal-candidates (Baker, 2001; Reichhart, 2008; Van de Water, 1988; Weber, 2009; Weber, 2012). Superintendents in South Dakota public schools have indicated that a candidate's ability to handle student discipline is the most important factor within the management area (Weber, 2009). Additionally, Weber (2012) revealed that during principal interviews, candidates are two times more likely to be queried about their discipline practices than not. Schools that experience more disciplinary issues are more likely to emphasize the ability to manage and maintain school discipline in principal-candidates than schools where discipline is not a major problem (Doyle & Locke, 2014).

Human resources management. No prior research was identified that specifically addressed the consideration of human resources management skills as a criterion in the consideration and selection of high school principals. However, as discussed in the previous section, human resources management skills have been found to be a major component in the effectiveness of secondary school principals (Crum & Sherman, 2008; Hitt & Tucker, 2016; Hull, 2012; Krasnoff, 2015; Stronge, 2008; Whaley, 2002). It can be assumed, therefore, by implication that it is likely that this managerial factor is considered in the evaluation of candidates for secondary school principalships.

Financial, facilities, and other non-human resources management. Successful principal-candidates must be perceived as having the ability to manage facilities and other non-human resources (Arsani, 2010; Cavazos, 2012; Kersten, 2006; Reichhart, 2008; Van de Water, 1988; Weber, 2012). During the interview process, central office administrators frequently ask at least one question that focuses on candidates' views on distribution of resources (Weber, 2012). The successful candidate provides responses that center on using resources to support

student learning as reported by superintendents (Kersten, 2006). In addition, the ability to manage fiscal resources has presented as a characteristic considered by superintendents (Arsani, 2010; Reichhart, 2008; Van de Water, 1988). They have indicated successful candidates provide examples of how they would spend funds to enhance learning, as well as articulate a plan to secure additional resources from the community to support school programs (Arsani, 2010). Cavazos (2012) reported sitting principals also perceived a candidate's ability to manage a school budget as a quality to be considered as they view it as an important competency to be successful. Further, superintendents tend to value candidates' who have knowledge of the scheduling process (Arsani, 2010), student-management systems (Arsani, 2010; Reichhart, 2008), and possess strong computer skills (Arsani, 2010; Reichhart, 2008).

Ability to Lead

Choosing the right leader is critical, as an innovative leader can greatly impact an organization's success (McEntire & Greene-Shortridge, 2011; Parkay & Armstrong, 1987). Further, leaders who are perceived as being authentic and dynamic are more likely to have stakeholders who "experience confidence, optimism, and resiliency, and obtain a sense of shared values with their leader," (McEntire & Greene-Shortridge, 2011, p. 267).

Palmer (2014) reported that a majority of sitting principals credited their ability to lead as one of the most influential factors of which led to their selection. When selecting principals, superintendents have indicated that they focus on encompassing qualities of leadership that are needed to be successful in schools (Arsani, 2010). Those leadership characteristics reported by superintendents include experience, decision-making skills, a focus on community, and ethics, integrity and fairness, a focus on instruction, community involvement, awareness of school needs, and the ability to get along with others (Baker, 2001). Hooker (2000) also reported that

superintendents view school leadership as an overarching theme as they recognize that candidates require knowledge of the "basic instructional work of schools, organizational ability, and characteristics that promote internal integration and external adaption of the school," (p. 197). Many of these leadership qualities have been reviewed above, but the following focuses specifically on the importance of a candidate's vison, ethics and integrity, and ability to motivate others.

Vison. The quality and substance of a candidate's vision has been shown to be a key characteristic that superintendents consider important when making principal-selection decisions (Arsani, 2010; Baker, 2001; Cruzeiro & Boone, 2009; Knuth, 2004; Palmer, 2016). Further expanding the value placed on a candidate's vision, which closely associates with their perceptions of model schools (Krasnoff, 2015), districts include questions during the interview process in that area frequently (Weber, 2012). Superintendents have reported that having an appropriate vision is a major attribute considered in principal-selection decisions (Palmer, 2016). Equally important is a candidate's ability to effectively communicate that vision to others (Arsani, 2010; Kersten, 2006).

Personal and professional ethics, integrity, and morality. A candidate's personal and professional integrity (Palmer, 2016) and ethical and moral leadership are traits considered to be important by both superintendents (Arsani, 2010; Baker, 2001; Cruzeiro & Boone, 2009; Kersten, 2006; Knuth, 2004; Palmer, 2016) and sitting principals (Cavazos, 2012) in the principal-selection process. Superintendents have reported that they believe that principals' actions are more important than their words and that candidates who exhibit high ethical and moral values are more likely to be successful (Baker, 2001).

Motivation. Effective principals must have the capability to motivate their staff (Cruziero & Boone, 2009; Kersten, 2006), and this is especially the case in the area of instruction (Weber, 2009). Several studies have found that superintendents give great weight to the ability to motivate staff in evaluating principal-candidates (Arsani, 2010; Cruzeiro & Boone, 2009; Kersten, 2006; Palmer, 2016; Reichhart, 2008).

Fit

The overly-broad term "fit" is frequently discussed in the literature to encompass a variety of characteristics that cross other specific qualities, but this characteristic is often vaguely defined or ambiguous and is difficult to articulate (Arsani, 2010; Baker, 2001; Baltzell & Dentler, 2003; Baron, 1990; Palmer, 2014, 2016; Palmer et al., 2016; Palmer & Mullooly, 2015; Reichhart, 2008). Although fit has been reported as a desired characteristic of principal-candidates (Baker, 2001; Baron, 1990; Palmer et al., 2016; Parylo & Zepeda, 2014; Reichhart, 2008), Palmer et al., 2016 have recommended that "fit" be used only with caution due to its definitional ambiguity and the difficulty in measuring it. Decision makers who rely heavily on fit tend to overlook more objectively measured traits that focus on candidates' measurable and definable abilities (Baron, 1990; Palmer et al., 2016). Baltzell and Dentler (1983) argued that more often than not, fit will prevail over professionalism or merit in selection scenarios. This view was supported in research by Palmer and Mullooly's (2015), who found that relationships, gender, race-ethnicity, pre-selection, and politics were more influential than merit-based characteristics in principal-appointment decisions.

Palmer (2014) has warned that, whether intentional or not, districts may misuse or abuse the consideration of fit to discriminate "on the basis of race, ethnicity, and gender under the guise of factors which may appear appropriate for selection" (p. 118). Additionally, when hiring

principals, high achieving schools attempt to select principals who "fit" by selecting those who have characteristics similar to those of the most recent permanent incumbent, whereas low achieving schools attempt to hire principals whose attributes are different from those of their most recent permanent principal (Cottrell, 2017). This presents as a problem in the selection process as more qualified candidates may be excluded. Even if "fit" did not present philosophical and ethical issues, it would be difficult to include fit as a variable in an experimental design because of its overly broad nature and the lack of a definitive measure for it. To the extent that fit does and should matter in the selection of secondary school principals, the attributes it encompasses are covered indirectly by the candidate-specific elements discussed above.

Baltzell and Dentler (1983) have been credited with the initial identification of this broad characteristic as a factor in the principal-selection process. Baltzell and Dentler (1983) and subsequently Palmer (2014) found that when districts lack clearly defined and articulated selection criteria, decision makers tend to rely on their general perceptions (and intuition) of what qualifies a good principal, which they label ambiguously as "fit." The fundamental concepts itself, however, was derived from the idea that schools use the practice of local tailoring in their hiring practices (Kahl, 1980). That suggests that schools modify their principal-selection procedures and criteria to match (or "fit") their local areas of needs and district values. More recently, fit has been defined as "the specific attributes possessed by a candidate, or a congruence or understanding of certain real or imagined features between the candidate and the school/district community" (Palmer et al., 2016, p. 36).

Case-Specific Attributes of Search Committee Members as Decision Makers in the Principal-Selection Process

The two previous sections reviewed literature focused on characteristics associated with effective principals and the attributes by which principal-candidates are evaluated in principal-selection processes. In this section, I reverse the focus to consider the impact of the characteristics of the individuals involved in evaluating, recommending, or selecting secondary school principals.

It is important to note that principal search processes and selection decisions involve numerous participants and stakeholders. The board of education for each school has the final decision authority in the selection and appointment of school principals, but the recommendations of the search committee and superintendent are generally accepted by boards and the candidates recommended by superintendents are usually appointed (E. Kamler, personal communication, August 16, 2017). This section focuses on understanding the case-specific attributes of search committee members and superintendents because those personal characteristics are believed to influence the decisions they make in recommending a candidate to their board of education for appointment as principal.

This section discusses the case-specific variables that describe the characteristics of search committee members and superintendents. That is, this section focuses on the attributes of those who have primary responsibilities for reviewing candidates for school principalships and for making recommendations to boards of education. Several such case-specific factors have been discussed in the literature and each of them is discussed in turn below.

Age of Search Committee Members

No studies have addressed how the age of teachers on search committees affects their principal-selection recommendations, but Batchelor et al. (1987) found evidence that the age of superintendents may influence their choices for principal. Superintendents younger than age 50 are more likely than older superintendents to give weight to principal-candidates' administrative backgrounds, teaching experiences, and initial impressions (Batchelor et al., 1987). By contrast, superintendents who are at least 50 tend to be more influenced by candidates' previous employment references. The research literature on this factor is now somewhat dated, so the effect of age as a case-specific factor should be treated only as suggestive and not as conclusive.

Experience of Search Committee Members

Weber (2009) reported some effect of superintendents' experience on their decisions in the principal-selection process. In that study, superintendents with less experience themselves tended to give preference to principal candidates who had less previous experience. By contrast, studies of school superintendents in Indiana (Reichhart, 2008) and in urban areas of California (Arsani, 2010) did not find that superintendents' levels of experience was a factor in their decisions to recommend candidates for appointment as principals.

Gender of Search Committee Members

Some studies have found that the gender of teachers and administrators involved in the search process is a significant factor in their judgments of principal-candidates. Arsani (2010) found that the gender of superintendents had no effect on their decisions when they viewed principal-candidates' characteristics in totality and did not focus on specific attributes of the candidates. Gender did have an effect, however, when the superintendents focused on specific factors individually (Arsani, 2010). Female superintendents gave greater weight to candidates'

understanding of accountability, educational philosophy, ability to provide staff development, and ability to work collaboratively with others. By contrast, male superintendents gave more attention to candidates' knowledge of scheduling, ability to engage stakeholders in decision-making, ability to listen, proven success in raising test scores, and ability to manage employee discipline (Arsani, 2010).

The gender of decision makers in principal-selection processes has been found to have an interaction effect with school location. Pounder, King, Hausman, and Bowles (2005) reported that female decision makers in rural school districts tend to prefer female candidates for principalships, largely because they rate women candidates as having stronger instructional leadership abilities. They found that female decision makers in urban or suburban schools tend to assign their lowest ratings to male managers.

Highest Level of Education of Search Committee Members

Weber (2009) reported that the educational level of superintendents may affect their preferences in the selection of principals. Superintendents with higher levels of education tended to give greater weight in principal-selection to candidates who had better instructional skills and who had previous administrative experience.

Batchelor et al. (1987) found that superintendents and assistant superintendents who held doctorates preferred principal candidates who had greater administrative experience, who participated in professional and social associations, and who held higher degrees. Those superintendents and assistant superintendents whose highest educational credential was a master's degree primarily considered previous employer references, specific skills, degrees held, and professional associations when selecting a principal.

Community and Geographic Location of Search Committee Members

The community and geographic location of decision makers has been found to be a factor that plays an important role in the principal-selection process. Pounder et al. (2005) found that urban and suburban school superintendents demonstrated preferences for candidates with attributes in the following order:

1. Male instructional leader
2. Female instructional leader
3. Female manager
4. Male manager

The priorities which rural school superintendents assigned to their preferences were similar to those of urban and suburban superintendents, but those in rural schools reversed the order of the last two items, preferring male managers to female managers. Cruzeiro & Boone (2009) found that superintendents in some rural school districts prefer candidates who are also willing to perform tasks outside the standard scope of employment such as mowing lawns, planting flowers, assisting with graduation, helping with district banquets, as well as other out-of-scope assignments, because rural districts tend to have fewer resources.

School and District Size of Search Committee Members

Committee members and decision makers' views of some traits in principal candidates are influenced by their school and district size. Weber (2009) found that the value given to candidates' level of preparation and previous experience tended to be greater in selecting principals in larger schools and districts. By contrast, Reichhart (2008) concluded that school or district size was not a factor in decision makers' preferences in the selection of school principals.

Chapter Synthesis

This chapter has reviewed the research literature on the characteristics of effective secondary school principals, candidate-specific attributes of effective secondary school principals, and case-specific attributes of principal-selection search committee members and decision makers. Those attributes that have been found to be qualities of effective secondary principals and which have also been found to be factors that are considered in principal-selection processes include candidates' abilities to:

- Be knowledgeable about curriculum, instruction, and assessment
- Construct and communicate instructional goals and expectations
- Facilitate professional development opportunities for staff
- Effectively communicate
- Collaborate and build relationships
- Connect with the community and manage public relations
- Make sound decisions
- Manage student discipline
- Manage financial, facilities, and other non-human resource management
- Build and communicate a vision
- Manage ethical and moral choices, and act consistently with integrity both professionally and personally, and
- Manage interpersonal relations and motivate others.

Additionally, the following professional or personal characteristics of principal candidates are often considered by search committee member and decision makers:

- Teaching experience

- Administrative experience
- Experience in the school or district
- Academic qualifications and credentials
- Qualities highlighted in professional references and recommendations (e.g., integrity, humility, confidence, skills), and
- Gender

As this chapter has demonstrated, there is a considerable body of research about the qualities that have been found to characterize effective secondary school principals. There is a smaller literature on the factors that influence the selection of secondary school principals and which are directly considered in principal-selection processes. Much of the literature in both categories is based on qualitative studies or purely descriptive quantitative research. The next chapter presents the design of a discrete choice experiment and the specific decision methodology this study employed in order to extend the literature on the qualities that are sought in new secondary school principals and to do so within a strong empirical framework.

CHAPTER 3:

METHODOLOGY

As established in the previous chapters, public-school principals play a pivotal role in student and school success. Given the wide range of responsibilities principals are required to manage, and the high expectations attached to the position, it is essential that schools select the right person for the principalship. As part of the principal-selection process, decision makers consider a number of candidate-specific attributes prior to making their final recommendations. This study focused on how selected candidate-specific attributes (i.e., alternative-specific attributes) influence the choices made by decision makers during the principal-selection process in the context of a set of attributes describing the decision makers themselves (i.e., case-specific attributes).

This study was guided by the following research questions:

- RQ1: How and to what extent do selected candidate-specific attributes affect the choices of public-school teachers in New York State in recommending candidates for senior high school principalships?
- RQ2: What is the relative prevalence of each of the sets of preferences for candidates for senior high school principalships as reflected in any latent classes that might be discovered in the discrete choice experiment?
- RQ3: How and to what extent do the backgrounds and experiences of public-school teachers in New York State influence their views of the "best" candidate to recommend for a senior high school principalship and how do they differ across any latent classes discovered in the discrete choice experiment?

To provide a foundation for understanding the research approach and experimental design employed in this study, this chapter begins with a brief, general review of decision and choice theory and a discussion of the research designs and analytic methods associated with studying judgments and choice. I then provide a more detailed and focused description of discrete choice theory and analysis, which underlie the discrete choice experiment conducted as the core of this study. Then I extend the discussion of discrete choice theory and analysis to address the potential for multiple preference sets and emphasize the importance of considering the potential existence of multiple latent classes in the results of any discrete choice experiment. After discussing those fundamental elements and theory, I then present the research design employed in the study. In particular, I describe: (a) the blocked design of the study; (b) the study's participants and sampling plan; (c) the measures (including the choice variables and both alternative-specific attributes and case-specific attributes); (d) the optimal experimental design employed in the study; (d) the data collection method and process; and (e) the statistical analyses used to model the participants' discrete choices and to identify latent classes of preferences. I conclude the chapter with a discussion of the ethical considerations of the study, the study's methodological limitations, and a chapter synthesis.

Overview of Decision and Choice Theory

When choices are made, decision makers must commit to a single alternative and reject any other alternative, even though there may be some aspects of the other alternatives that are appealing. It is through these discrete choices that decision makers' preferences are revealed (Louviere, Hensher, & Swait, 2010; Raghavarao, Wiley, & Chitturi, 2011; Simon, 1997). Understanding how and why decisions are made is the crux of decision and choice theory, and there has been a long history of theory and research devoted to this objective. In this section, I

provide a brief overview of the evolution and development of decision and choice theory, focusing on: (a) rational decision theory, (b) administrative decision theory, (c) expected utility theory, (d) prospect theory, and (e) random utility theory. At the conclusion of this section, I provide a brief discussion of social judgment theory and discrete choice theory as the foundation for the guiding theory and methods employed in this study.

Rational Decision Theory

Rational decision theory, also known as economic decision theory, assumes an unbounded rationality in identifying and evaluating decision alternatives (Beach & Lipshitz, 1993; Simon, 1997). Rational decision theory assumes that individuals have complete and consistent systems in place that enable them to consider all possible options and all possible outcomes of those options in choosing the optimal alternative in every situation (Edwards, 1954). This theory also necessarily assumes that individuals possess the cognitive capacity to be aware of all available alternatives, are able to perform complex calculations in evaluating the alternatives and understand the outcome probabilities associated with each alternative (Edwards, 1954; Simon, 1997). Further, rational decision theory focuses on the process of making decisions correctly, rather than making correct decisions (Beach & Lipshitz, 1993).

In rational decision theory, four key steps are hypothesized to be followed in decision making (Simon, 1997):

1. Specify a measurable goal,
2. List all alternative strategies,
3. Determine all the consequences that follow from each of all those strategies, and
4. Select the strategy that optimizes achievement of the stated goal.

In determining which alternative is optimal, rational decision theory attempts to rank order each alternative-consequence relationship according to its respective means-ends rating, with the highest rated being selected (Edwards, 1954; Simon, 1997). The ratings of these relationships are estimations of the expected degree of goal achievement.

Further, rational decision theory recognizes that there is no single, generalizable form of rationality as it is dependent upon circumstances and situations. To that point, Simon (1997) offered six different types of rationality perspectives when making decisions. A decision may be considered objectively rational if it is the correct choice for maximizing values in a situation. Subjective rationality is applied when a decision maximizes attainment based on the information that was provided. A decision is considered consciously rational to the extent that the means-end evaluation process is a self-aware, conscious process (e.g., someone removing their hand from a hot stove). In contrast, under deliberate rationality, decisions are made more purposefully (e.g., a typist hitting a specific key). Lastly, a decision is organizationally rational to the extent that it is aligned with the goals of the organization, and personally rational to the extent that is aligned to an individual's goals (Simon, 1997).

In the unbounded rational world that rational decision theory assumes, individuals follow a thorough process in deciding on an alternative. Individuals, however, do not have the cognitive capacity nor the resources to generate and consider all the possible alternatives and their consequences. Moreover, the process by which individuals formulate their goals was not described by rational decision theory (Beach & Lipshitz, 1993; Simon, 1953/1997). To address these issues, Simon (1953/1997) proposed the theory of administrative decision making not so much as an alternative to rational decision theory but as a refinement and extension to show how and to what extent rational decision theory is reflected in how decision making actually occurs.

Administrative Decision-Making and the Theory of Bounded Rationality

Rational decision theory, a mainstay of economics, represented the predominant view of decision and choice theory until the 1940s, when it was challenged by Herbert Simon (1945/1997). Simon argued that the rational theory of decision making with all its elegance simply did not reflect the way decisions are or can be made in practice. He suggested that the previous theory, as articulated in economics, reflects an ideal that cannot be achieved, given the limitations of human cognition and the practical constraints (e.g., time and other resources) that are inherent in the circumstances of decisions. Simon (1945/1997) offered the less elegant and somewhat "muddling" (Lindblom, 1959) theory of administrative decision making as a more realistic view of how "rational" decisions are actually made.

This view was not offered to completely replace the theory of rationale decision making but, rather, to describe how the concept of rationality is implemented under conditions of cognitive constraints and other limitations (Kalantari, 2010). Further, administrative decision theory acknowledges that decision makers aspire toward the optimal rationality espoused in the classic rational decision theory of economics, but it asserts that actual decisions are made under conditions of "bounded rationality" (Kalantari, 2010; Simon, 1945/1997) and may better be characterized as "muddling through" (Lindblom, 1959).

Administrative decision theory emphasizes that the rationality in decisions is not unlimited but, rather, is naturally bounded by human cognitive capacity and circumstances (Kalantari, 2010; Simon,1979). The number of possible alternatives available for individuals to consider is limited by circumstances and the individual's own experience and prior knowledge (Simon, 1979). Further, administrative decision theory holds that individuals have only incomplete or fragmented knowledge of the conditions surrounding each decision circumstance

they face. Additionally, the decisions individuals make almost always involve compromise because no selected alternative can be expected to completely satisfy a desired outcome; at best, individuals generally choose that alternative which presents the best possible solution available under a given set of circumstances (Simon, 1997). In short, this theory indicates that decision makers must "satisfice" (Simon 1979, 1997) and that that they choose the first occurring alternative that is deemed "good enough" (Kalantari, 2010; Simon, 1997).

In contrast to the elegant, 4-step decision process described above for rational decision theory that promises to produce optimal choices, the decision process envisioned in the theory of administrative decision making is muddy and tends to satisfice, producing sub-optimal choices (Kalantari, 2010; Simon, 1979). In essence, administrative decision theory holds that decision makers bound their rationality by considering only a limited set of alternatives that are deemed most plausible and also by considering those alternatives in the order in which they come to mind. (Note that, at any given moment, a different set or different order of alternatives may occur to a decision maker, so the alternatives considered by the same decision maker for a given decision circumstance may vary from one moment to the next.)

Then, in judging a limited set of alternatives occurring in a somewhat arbitrary order, the decision maker considers only the most obvious or most likely consequences of those few alternatives, further bounding the rationality of the decision. Finally, the decision maker satisfices in choosing the first acceptable alternative (or one of the first acceptable alternatives) that occurs (Kalantari, 2010; Simon, 1979). This process reflects an attempt at rationality but cannot be expected to produce optimal choices or even choices that are necessarily replicable. While a more accurate depiction of how rational decision making takes place, administrative

decision making does not take into account the role that uncertainty plays in decision making, hence the need to discuss expected utility theory.

Expected Utility Theory

Proposed by Bernoulli in the 1700s, expected utility theory offers an "ideal" (i.e., theoretically pure) model of how rational thinkers make decisions under risk and uncertainty (Edwards, 1954; Kahneman & Tversky, 2000; Tversky, 1975). Expected utility theory asserts that individuals make decisions by selecting alternatives whose outcomes have the greatest values of expected utility (Edwards, 1954; Kahneman & Tversky, 1979/2000; Mongin, 1997; Moscati, 2017). These values are calculated by adding the utility values of outcomes multiplied by their respective probabilities (Mongin, 1997). Thus, there are two components, the numeric value that individuals place on the outcomes of the available choices and the probabilities they assign to the likelihood of their occurring (Briggs, 2014).

Expected utility theory asserts that individuals always prefer certain outcomes rather than uncertain ones whether in loss or gain. Moreover, individuals are rational actors who are in control of their decisions (Moscati, 2017). For instance, expected utility theory would suggest that teachers will choose a candidate for a principalship who has experience as a principal rather than a candidate without such an experience—even if the candidate otherwise has more favorable qualifications. From the perspective of expected utility theory, these teachers would have made such a decision rationally and analytically.

While a breakthrough in considering decision making under uncertainty, expected utility theory has been criticized for its idealistic view. Kahneman and Tversky (1979) rejected the notion that individuals always prefer certain outcomes. Tversky (1975) challenged the idea that individuals are capable of thinking in terms of stated precise probabilities. He also challenged

the notion that individuals simply place values on the available choices without comparing the choices relative to a reference point in their lives. Moreover, individuals can make decisions intuitively as well as analytically (Kahneman, 2011). With that, Kahneman and Tversky (1979) offered prospect theory as a more accurate depiction of how actual decision making occurs under uncertainty.

Prospect Theory

Prospect theory challenges expected utility theory's main tenets about how individuals deal with risk when making decisions (Kahneman & Tversky, 1979/2000). It differs from expected utility theory in that the utility of a prospect is determined by gains and losses rather than final states. For instance, in the scenario where a school is hiring a principal, prospect theory would suggest that while one teacher may view a principal candidate as a gain, another teacher may view that same principal candidate as a loss. It also utilizes decision weights, as opposed to precise probabilities. That is, the utility values of respective outcomes are multiplied by decision weights, which more accurately reflects the cognitive abilities of individuals (Kahneman & Tversky, 2000).

Under prospect theory, decision processes have two phases, an editing phase, followed by an evaluation phase (Kahneman & Tversky, 1979). The editing phase begins with a preliminary analysis of the presented prospects which leads to a modified representation of them. The purpose of the editing phase is to help decision makers rank prospects in the second phase, which ends with the top ranked choice being selected. During the editing phase, operations are applied which adjust the outcomes and probabilities given to the prospects or choices (Kahneman & Tversky, 1979). Coding, combination, segregation, and cancellation are the key operations used during the editing phase.

Coding is the process of which individuals convert given values to gains and losses aligned with a reference point unique to the decision maker (Kahneman & Tversky, 1979). The combination operation occurs when two or more prospects with identical outcomes and probabilities are combined by adding together their probabilities while keeping their outcome constant. Segregation is a process where decision makers view a choice through a lens that separates a baseline outcome, and reframes the decision based on the supplemental prospect information (Kahneman & Tversky, 1979). Cancelation, or the isolation effect, occurs when shared components of prospects are discarded, leaving only the unique elements of the choice for consideration (Kahneman & Tversky, 1979). After all choices have been edited, decision makers evaluate the edited prospects, in what is considered as the evaluation phase, and select the one with the greatest value (Kahneman & Tversky, 1979).

Prospect theory also recognizes that there is a value function that affects how decision makers make choices (Kahneman & Tversky, 1979). This function indicates that the effect of changes in values are not independent, and that initial position matters. For instance, teachers who have worked with a principal who was considered to have average knowledge in curriculum would see lesser value in a principal who is strong in curriculum than teachers who have worked with a principal who held below-average knowledge of curriculum. This concept is referenced as the principle of diminishing sensitivity (Kahneman, 2011). Kahneman and Tversky (1979) proposed that the value function originates from a reference point and is determined by deviations (i.e., gains and losses) from it.

Further, Kahneman (2011) asserted that that the brain uses two systems of thinking. He has labeled these systems as System 1 and System 2, although he acknowledges they are not really systems, but networks of associations within the brain. System 1 thinking is defined as

being more intuitive, instinctual, automatic, and controlling of emotions (Kahneman, 2011). While speed is its strength, analytics is not. System 1 thinking attempts to provide answers by making connections that may be logical and make sense quickly. However, when presented with ambiguous questions, it rejects the ambiguity by attempting to provide a solution to a simpler version, which leads to incorrect interpretations and decisions.

System 2 thinking is more deliberate as it requires conscious attention—including complex computations—in conducting mental activities. System 2 thinking is also described as "lazy," as it often will accept the responses of System 1, especially in low stake situations (Kahneman, 2011). System 2 is likely to be activated in unfamiliar situations, such as when multiplying numbers that do not generate an automatic response or in high stake situations such as turning left into oncoming traffic. Given the attention that System 2 thinking requires when it operates, it is also considered as inefficient as it can only focus on a single task at a time. Given the nature of the two systems, System 1 thinking is known as fast thinking and System 2 thinking is referred to as slow thinking (Kahneman, 2011). Kahneman offered clarity by explaining that System 1 thinking happens to an individual, whereas System 2 thinking is something that an individual consciously does.

A key cognitive characteristic of both systems of thinking that plays a role in the decision process is loss aversion, which is a fundamental principle of prospect theory (Kahneman, 2011). This principle states that that losses carry a greater weight than gains when compared against each other. As an example, consider a hypothetical scenario where teachers might be offered the opportunity to recommend retaining their principal or choosing a principal from a pool of two candidates, where one represents a gain, and the other a loss. System 1 thinking would generate an emotional response of fear of losing. As this intuitive feeling is greater than the hope of

gaining, the decision to not risk selecting a lesser qualified principal would be consciously made under System 2 thinking.

Although prospect theory is driven by immediate emotional responses to gains and losses, it does not consider how individuals consider potential regret and disappointment within their decision making (Kahneman, 2011). Kahneman (2011) described this premise as a flaw within prospect theory, however, he also noted that few predictions would be different if prospect theory considered these thought processes. Next, I present random utility theory, the theoretical foundation of Discrete Choice Experiments (DCE).

Random Utility Theory

Random utility theory suggests that decision makers apply the utility maximization rule when selecting an alternative (Louviere, Hensher, et al., 2010). Utility is a latent construct that can be defined as one's level of satisfaction with an alternative (Hensher et al., 2015). This theory holds that individuals can be expected to select the alternative that offers the greatest utility among competing choices (Hensher et al., 2015; Louviere, Hensher, et al., 2010; Ryan, Gerard, & Amaya-Amaya, 2008).

Random utility theory operationally defines the utility of an alternative's attributes, U, through a process that includes two distinct components: (a) systematic utility, V, and (b) random error, ε (Louviere, Hensher, et al., 2010). This is represented by the following model, where i represents the individual and q represents the alternative (Louviere, Hensher, et al., 2010; Raghavarao et al., 2011):

$$U_{iq} = V_{iq} + \varepsilon_{iq}$$

This model asserts that the utility of an alternative is composed of a systematic component that is a function of the attributes of the candidate and the characteristics of the decision maker plus a

random component. The random component represents unobserved variables such as partiality that affect individual choice and which cannot be detected by a researcher (Louviere, Hensher, et al., 2010; Ryan et al., 2008). These unobserved variables can be accounted for within a population distribution according to random utility theory, but they cannot be identified within it (Louviere, Hensher, et al., 2010). The main assumption is that the random component for each alternative varies across decision makers and situations (Hensher et al., 2015). The systematic components of utility are considered to be the attributes that are observable and can be identified by researchers (Louviere, Hensher, et al., 2010). This component assumes that researchers are knowledgeable about how decision makers' preferences are affected by alternative-specific attributes, case-specific attributes, and the marginal utilities of those factors (amount of satisfaction individuals receive per additional unit).

Random utility theory expands the model for utility to determine the probability that individuals will select a given alternative within a choice set. This is reflected in the random utility model (Louviere, Hensher, et al., 2010), which can be specified as:

$$P_{iq} = P[\{\varepsilon(s, x_j) - (s, x_i)\} < \{V(s, x_i) - (s, x_j)\}], \text{ for all } j \neq i$$

This model indicates that the alternative that consistently generates a difference in random utility that is less than the difference of the systematic utilities, when compared against all other choices, will be the alternative of choice for a decision maker (Louviere, Hensher, et al., 2010).

Continuous and Discrete Choice Approaches to Judgments and Decisions

The outcomes of decisions and choices may be measured either continuously or discretely. Beginning in the 1960s, the social psychologist Kenneth Hammond (Cooksey, 1996; Cooksey & Freebody, 1986)—influenced by the earlier ideas of Egon Brunswick (Adelman, Stewart, & Hammond, 1975; Cooksey, 1996; Cooksey & Freebody, 1986)— recommended

continuously measured decision outcomes in the context of social judgment theory and social judgment analysis. In that approach, decision analysis employs a single continuous measure of utility (e.g., satisfaction, effectiveness, or similar concepts) which is predicted using a general linear model with judgment cues (i.e., independent variables) that are measured either continuously or as binary variables. This approach was later adopted by marketing researchers and relabeled conjoint analysis in marketing and economics (Louviere, Flynn, & Carson, 2010).

Others have challenged the authenticity of the use of continuous outcome measures in operationalizing judgments and decisions (McFadden, 1991; Train, 2009; Train, Ben-Akiva, & Atherton, 1989). Those scholars have argued that, contrary to social judgment theory or conjoint theory, most of the choices that individuals make involve discrete rather than continuous outcomes (Louviere, Flynn, et al., 2010; Louviere, Hensher, et al., 2010; McFadden, 1986; Train et al., 1989). This view led to discrete choice theory, which I adopted as the guiding theory in this study.

In the context of this study, teachers who serve on search committees to recommend candidates for appointment as senior high school principals do not have the luxury of making choices on a continuum of satisfaction or expected efficiency of the candidates. Rather, they must make discrete choices among finite sets of finalists for the position of principal. For that reason, this study employed discrete choice analysis for the identification of teachers' choice preferences. Given the importance of discrete choice theory and analysis to the study's assumptions and design, I devote the next section to a more detailed discussion of this approach to decision and choice analysis.

Discrete Choice Theory and Discrete Choice Analysis

Discrete choice theory and analysis originate from microeconomic theory and marketing theory (Louviere, Hensher, et al., 2010) and have been applied to various subject areas, including, for example, economics, education, energy, health-care, housing, marketing, and transportation (Abd-El-Hafez, 2015; Ben-Akiva & Lerman, 1985; McFadden, 1986; Ryan et al., 2008; Train, 2009; Train, McFadden, & Ben-Akiva, 1987). Although microeconomics holds that utility is driven by the object itself, random utility theory-based discrete choice models account for utility through the qualities or characteristics that are manifested by those objects (Louviere, Hensher, et al., 2010; Ryan et al., 2008). The objective of discrete choice experiments is to evaluate the relative value of predetermined attributes held by alternatives in terms of utility (Ryan et al., 2008).

In this section, I discuss key elements and considerations of discrete choice theory and analysis. This includes: (a) a comparison of stated preference and revealed preference data, (b) a comparison of labeled and unlabeled alternatives, (c) a comparison of discrete choice models and other choice models, and (d) a discussion of full factorial designs, and fractional factorial designs in conducting discrete choice experiments.

Stated Preference Versus Revealed Preference Data

The data collected within discrete choice experiments can be categorized as either stated preference or revealed preference. Discrete choice analysis attempts to use these data to explain the variation in participant responses (Hensher et al., 2015). Stated preference data focus on what participants believe—or at least state—they would choose in a given scenario that has not yet occurred, whereas revealed preference data reflect actual post-facto choices after those choices have been made (Louviere, Hensher, et al., 2010; Ryan et al., 2008). Although revealed

preference data are viewed as having greater reliability and validity by economists, the ability to develop predictability models is limited as the research focuses on alternatives that currently exist or have existed at some point in the past (Louviere, Hensher, et al., 2010; Ryan et al., 2008). Further, even when preferred alternatives exist, factors such as affordability or availability may restrict one's ability to select the top choice (Raghavarao et al., 2011). To this end, stated preference data provide greater insight as such data allow researchers to create more robust designs because they can incorporate a greater number of attributes and levels to better predict future human behavior (Louviere, Hensher, et al., 2010; Ryan et al., 2008).

Although revealed preference studies may be considered to be more reliable indicators of decision behavior, they are limited to the analysis of data on choices that have already been made and alternatives that have actually existed. Revealed preference studies do not, however, necessarily reveal the basis on which actual choices were made. In such studies, the decision makers made choices based on all information available to them, but the revealed preference studies based on those outcomes can consider the attributes incorporated in the analysis and may, therefore, fail to capture the true sources of random utility. That is, revealed preference studies cannot assess the random utility of a factor that was considered by the decision maker but which is not included in revealed preference study design.

By contrast, stated preference studies are used by researchers to predict future behavior when previous choice data are not available or when the choices anticipate new alternatives that do not yet actually exist (e.g., proposed new products in marketing). In this case, unlike revealed preference studies, decision makers can only consider the factors that are presented to them—so the analysis of the utility of the included factors is truly focused on those factors and not a set of other factors that were not included in the experiment.

From a feasibility standpoint, Raghavarao et al. (2011) have asserted that stated preference choice experiments are more cost effective and can be conducted more quickly than revealed preference choice experiments, but the costs and efficiency of choice experiments vary, and I do not believe that either the stated preference approach or the revealed preference approach can be considered more efficient in all circumstances.

Labeled Versus Unlabeled Alternatives in Discrete Choice Studies

The design of a stated preference discrete choice experiment requires participants to select a single alternative from a choice set with hypothetical alternatives described by a specific set of attributes (Hensher et al., 2015; Ryan et al., 2008). The alternatives within choice sets may present either as unlabeled or labeled, dependent upon the objectives of specific choice studies (Hensher et al., 2015; Louviere, Hensher, et al., 2010). Unlabeled alternatives provide no additional information other than that which is provided by the attributes which define the alternatives, forcing the participants (i.e., decision makers) to carefully evaluate alternative profiles prior to making a selection (Ryan et al., 2008), reflecting Kahneman's (2011) System 2 thinking. Unlabeled alternatives are also more likely to satisfy the independence of identically distributed (IID) assumption of traditional discrete choice analysis methods (Hensher et al., 2015). The IID assumption limits studies to designs whose alternatives are independent. Unlabeled alternatives provide the decision maker with no information beyond that contained in the attributes of the alternatives.

Labeled alternatives, on the other hand, provide both manifest and latent information that could influence decision makers' choices by permitting them to infer additional information not directly presented or reflected in the attributes of the alternatives. These inferences align with the random component of utility as defined by the random utility theory (Louviere, Hensher, et

al., 2010). Labeled alternatives may simplify the choice tasks for participants in stated choice discrete choice experiments, but they also may lead participants to focus on the labels of specific alternatives—and, perhaps, unstated factors they associate with the label—rather than the attribute profiles in the choice experiment (Ryan et al., 2008). When participants in a discrete choice experiment focus on the latent attributes they infer from labels rather than on specific attributes, it is difficult to determine their true preferences for specific attributes. Researchers attempt to address this potential problem through the use of nested conditional logistic regression and through the analysis of qualitative narrative responses that may provide insight about the latent attributes that individuals may associate with specific labels.

Choice Models

Each attribute in a discrete choice experimental design is assigned a specific value or level within each alternative, with each level assigned a specific attribute label (Hensher et al., 2015). The combination of the attributes and their assigned levels within a single choice contributes to the utility of the alternative (Ryan et al., 2008). The assignment of two levels to an attribute restricts the interpretation of results to a linear relationship, whereas including additional levels gives researchers the ability to identify non-linear and more complex relationships (Hensher et al., 2015; Ryan et al., 2008). For reasons of practicality, it is important that choice researchers assign a number of levels that can be considered as sufficient rather than an exhaustive set (Hensher et al., 2015). Further, within a design it is important to maintain level balance (Auspurg & Hinz, 2015; Ryan et al., 2008), which requires that all levels of each attribute appear with relatively equal frequency across all profiles, and that the attribute values are orthogonal (Auspurg & Hinz, 2015).

Participants' responses reveal their preferences in comparison to the non-selected options, but they do not provide information about the relative preference rankings of the non-selected alternatives (Louviere, Hensher, et al., 2010). As a result, discrete choice experiments require participants to respond to a series of discrete choices, collect data from a larger sample, or use a combination of both. Through these responses, researchers estimate how the various attributes influence the choices made by decision makers in the study (Louviere, Hensher, et al., 2010).

Discrete choice experiments may also include an "opt out" alternative within each set (Hensher et al., 2015; Ryan, 2008). This approach provides decision makers the ability to choose to not make a selection if they feel that none of the alternatives satisfy them. The decision to include this option is left to the researcher's discretion and is dependent on whether the opt-out option is a realistic choice in the context of the specific decision be studied (Ryan et al., 2008).

Another form of choice model provides a binary approach where participants are asked to state whether they like or do not like an alternative with a "yes" or "no" response (Louviere, Hensher, et al., 2010). An additional version of choice model is the best/worst scaling model (Louviere, Flynn, & Marley, 2015), which requires participants to rank order each alternative. This model increases in difficulty for the participant with the addition of each alternative in a set and results becomes less reliable and valid (Louviere, Hensher, et al., 2010). A similar model requires participants to state a degree of preference for each choice in a set. Given the assumption that humans don't have the capacity to assign ratings in a reliable and valid manner, each of the previous models are suggested to consider prior to implementing this one (Louviere, Hensher, et al., 2010).

Full Factorial Versus Fractional Factorial Designs in Choice Experiments

The design of discrete choice experiments can be based on either a full factorial design or a fractional factorial design. A full factorial design discrete choice experiment encompasses every combination of all levels of the alternative-specific attributes (Hensher et al., 2015; Louviere, Hensher, et al., 2010; Ryan, 2008). The number of attribute combinations or profiles is determined as the product of the number of attribute levels for all attributes. For example, if a discrete choice experiment included two attributes with three levels each, four attributes with two levels, and one attribute with five levels, there would be 720 profiles used in the study (i.e., 3^2 x 2^4 x 5^1 = 720). The benefit of using a full factorial design is that there is no loss of information because every possible combination of attribute levels is considered. Using full factorial designs becomes increasingly problematic, however, with the addition of each attribute level as the number of observations in the design grows exponentially as additional variables and levels are added (Louviere, Hensher, et al., 2010). It is inadvisable, of course, that participants be asked to evaluate a great number of attribute-level combinations because the quality and reliability of their responses diminishes as the burden of the choice task increases (Hensher et al., 2015; Louviere, Hensher, et al., 2010; Ryan et al., 2008).

Most discrete choice research has used between one and 16 choice sets, with an average of 8 (Louviere, Hensher, et al., 2010). Fractional factorial designs are needed, however, when the full factorial design exceeds the practical limits for a survey (Hensher et al., 2015; Louviere, Hensher, et al., 2010). These fractional factorial designs reduce the number of attribute-level combinations by eliminating alias interactions of main effects. Ideally, a fractional factorial design includes all non-confounded main effects and two-way interactions (Hensher et al., 2015). Although fractional factorial designs are more practical for many discrete choice experiments, a

portion of information is lost when such designs are employed. Louviere, Hensher, et al. (2010) have observed, however, that main effects typically account for 70% to 90% of the variance in choices, so the use of fractional factorial designs may be considered a reasonable tradeoff.

The main axiom used in developing choice-based models is the independence-from-irrelevant alternatives (IIA) axiom (Louviere, Hensher, et al., 2010). This axiom assumes that the probability of selecting a given alternative over another is not affected by the presence or absence of other alternatives in the choice set (Louviere, Hensher, et al., 2010; Ryan et al., 2008). The strength of this axiom is that alternatives can be introduced or eliminated without re-estimation of the model. However, when this axiom obtains, other potential issues could arise, including such the case where alternative-specific attributes and random utility are correlated. Louviere, Hensher, and Swait (2010) have asserted that that violations of the IIA assumption need not be of general concern, however, arguing that the IIA is neither necessarily desirable nor undesirable in all decision circumstances.

Unexplained Heterogeneity and Latent Class Analysis

In any decision judgment analysis, there is the possibility that no single, aggregate view is sufficient to reflect the preferences of all subgroups within the population of interest. To identify subgroups with shared preferences, decision studies must employ techniques such as latent class analysis or finite mixture modeling designed to discover patterns of unobserved heterogeneity. It is important to include a latent class analysis component within discrete choice analyses because this additional component allows researchers to account for unexplained variance in the preferences of respondents. Failing to conduct latent class analysis may lead to important information being overlooked or missed, producing results that are incomplete, misleading, or incorrect (Bestard, Font, & Hicks, 2009).

Latent class analysis allows researchers to identify empirically an unseen or hidden categorical latent variable that is reflected by two or more observed variables (McCutcheon, 1987). That categorical latent variable establishes mutually exclusive groups or classes to which respondents are assigned according to the patterns of their responses. The number of classes in latent class analyses are determined by the researcher based on theoretical considerations and statistical evidence provided by the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC). The AIC and BIC are both minimized in selecting the number of classes to analyze (Bestard et al., 2009; Nylund, Asparouhov, & Muthén, 2007). When the BIC and AIC indicate different solutions, the BIC is given a greater priority because it imposes a greater penalty for model complexity than does the AIC (Dziak, Coffman, Lanza, & Li, 2012). However, the final determination of the number of latent classes is based on the theoretical considerations. The formulated groups are then considered to have similar perspectives, views, or preferences.

Design of the Discrete Choice Experiment in This Study

This discrete choice experiment was designed to identify how, and to what extent, selected candidate-specific attributes affect the choices of public senior high school teachers when recommending a candidate for a senior high school principalship in a public school in New York State. This study focused on collecting stated preference data after considering that a revealed preference approach would face both ethical and logistical constraints. These constraints may have influenced the results by skewing the data. From an ethical standpoint, requiring teachers to reveal their preferences for an unlabeled principal lessened the moral burden placed on teachers to respond truthfully in comparison to having them reveal their

judgments of real people. Giving teachers an opportunity to respond without that burden likely increased the study's participation rate and increased the validity of the results.

Logistically, employing a revealed preference approach would have faced challenges in the areas of attaining candidate-specific attribute information from school districts. This may have been a result of districts not being able to release that information, or because they did not collect the requested information. By contrast, those factors were able to be generated using a stated preference design, as well as controlled. Controlling the attribute levels allowed for all levels to be represented for each attribute. Relying on a revealed preference approach may have resulted in an attribute, such as educational level, not being able to be analyzed in the scenario where either all or none of the candidates held a doctorate. Most important, privacy rights and concerns would have made the use of data on real candidates in previous selection processes legally and ethically infeasible.

Blocked Design

This experiment employed a two-block design, with each block consisting of ten choice sets, for a total of 20 choice sets with three alternatives each. Participants were randomly assigned to a survey form presenting one of these choice set blocks. In each choice set, participants were asked to select one of three unlabeled alternatives without an opt-out alternative, so the data included a total of 60 alternatives. I decided to not offer an opt-out alternative because principal-selection committees are almost always required to recommend a candidate.

Sampling Plan

The population for this study was public-school teachers who held a teaching position at a senior high school in the state of New York at the time they completed the survey. Further, this study limited the population to those who worked in public-school districts outside of the "Big 5" city-school districts (i.e., Buffalo, New York City, Rochester, Syracuse, Yonkers). The decision was made to exclude the responses from teachers who worked in a "Big 5" senior high schools due to the fact that their schools' financial and human resources systems are governed by their host cities rather than fiscally-independent school boards. Senior high schools were defined as schools that did not have students in a grade lower than Grade 9. Additionally, participation was limited to teachers who were currently tenured or have previously earned tenure in a senior high school in New York State. This restriction was adopted because untenured teachers are generally less experienced, and, therefore, likely have had limited exposure to principals.

Further, untenured teachers are not likely to serve on principal-selection committees given their non-permanent status. The decision was made not to open the survey to teachers of building types other than senior high schools because their utilities may vary according to the grade level organization of their schools. Working with younger students, lack of departmentalization, and other factors specific to lower levels of educations may have influenced teachers' responses, therefore skewing the data. By limiting participation to those who teach in senior high schools, the data collected were assumed to be drawn from a homogenous sample with respect to school building type.

Participants

This unlabeled discrete choice experiment had 432 participants initiate the survey, with 299 doing so to completion for a completion rate of 69.2%. After cases were removed due to ineligibility (e.g., not tenured or previously tenured, not a senior high school teacher, a teacher in a Big 5 school), declinations to participate, and time of completion being less than 4 minutes (cutoff decided by the amount of time it took for the researcher to complete the survey), 219 responses remained. Of the 219, about 49% (107 responses) and 51% (112 responses) of cases completed survey block 1 and survey block 2, respectively. As each case provided 30 observations there was a total of 6,570 binary observations eligible to be included in the alternative-specific conditional logistic regression and latent class alternative-specific conditional logistic regression analyses.

Of the 219 responses, there were three cases who described an education level with an insufficient amount of information to be assigned into one of the designated categories for that factor. Additionally, there were four cases that identified a perceived school needs level with an insufficient amount of information to be designated as a high-needs school or not. As those two factors were not used to determine eligibility, they were not eliminated from the dataset. These cases were handled differently by the applied conditional logistic regression analyses. This is discussed further in those respective sections in Chapter 4.

As displayed in Table 3.1, of the 219 participants who completed the survey, 107 (48.9%) and 112 (51.1%) completed Block 1 and Block 2, respectively. Overall, 92.2% of teachers were tenured in a public high school in New York State (NYS), leaving 7.8% of teachers being currently untenured but previously tenured in a NYS public high school. As shown in Table 3.2, these proportions were representative of the sample in both blocks.

Table 3.1

Number of Teachers Who Completed the Survey by Block

Block	Frequency	%	Cumulative %
1	107	48.9	48.9
2	112	51.1	100.0
Total	219	100.0	

Table 3.2

Current Positions of Teachers Who Completed the Survey by Block

Job status	B1 freq.	B1 % freq.	B2 freq.	B2 % freq.	Total freq.	Total % freq.
Currently untenured, but previously tenured, teacher in a public senior high school in NYS	8	7.5	9	8.0	17	7.8
Tenured teacher in a public senior high school in NYS	99	92.5	103	92.0	202	92.2
Total	107	100.0	112	100.0	219	100.0

Note. B1 = block 1, B2 = block 2.

Regarding the perceived status of the participants schools as high needs or non-high needs, almost a third (30.1%) of participants indicated that they were teachers in high-needs schools. More than a third (34.6%) of the teachers that completed Block 1 indicated that they were from high-needs schools, and more than a quarter (25.9%) in Block 2 indicated that they work in a high-needs high school. All three of these proportions exceed the proportion of all teachers (K-12) who work in school districts being designated formally as a high-needs district by the New York State Education Department (NYSED) that were included in this study (23.2%). Additionally, as shown in Table 3.3, 68% of participants indicated that they were from non-high-needs high schools.

Table 3.3

School Needs Levels of High School Teachers Who Completed the Survey by Block

School needs level	B1 freq.	B1 % freq.	B2 freq.	B2 % freq.	Total freq.	Total % freq.
High needs	37	34.6	29	25.9	66	30.1
Non-high needs	69	64.5	80	71.4	149	68.0
Not specified	1	0.9	3	2.7	4	1.8
Total	107	100.0	112	100.0	219	100.0

Note. B1 = block 1, B2 = block 2.

About 5.5% of teachers in this study had earned doctorates, as displayed in Table 3.4. This is substantially greater than the proportion of all teachers (K-12) who held doctorates (.07%) in school districts included in this study. The greatest proportion of teachers included in this study were those who had earned credits above a master's degree (63.5%), followed by those who earned an advanced certificate, and then those who have earned a master's degree. Block 1 had a proportion of teachers who held an advanced certificate that was 8 percentage points greater than the teachers who held advanced certificates in Block 2. On the other hand, Block 2 had more teachers (9 percentage points) who had a master's degree plus additional credits complete its survey than Block 1. In total, three teachers (all in Block 1) did not specify enough information to assign them to a category with confidence.

Table 3.4

Education Level of Teachers Who completed the Survey by Block

Highest degree	B1 freq.	B1 % freq.	B2 freq.	B2 % freq.	Total freq.	Total % freq.
Adv. Cert.	21	19.6	13	11.6	34	15.5
Doctorate	5	4.7	7	6.3	12	5.5
MA/MS	15	14.0	16	14.3	31	14.2
MA/MS plus credits	63	58.9	76	67.9	139	63.5
Not specified	3	2.8		0.0	3	1.4
Total	107	100.0	112	100.0	219	100.0

Note. B1 = block 1, B2 = block 2.

The combinations of these teacher-specific characteristics and their frequencies are displayed in Table 3.5. This table indicates that when combining school-needs level with job status, the greatest number of teachers (138) in the study sample were from non-high-needs schools and were currently tenured. Less than half that number (60) were from high-needs schools and were currently tenured.

Overall, as displayed in Table 3.6, the median years of teaching experience of the study sample is 18 (M = 17.8, SD =7.3), which closely approximates those statistics for the districts from which the study was recruited. Further details of teaching experience by block are presented in the table. Table 3.7 presents additional detail, reporting the frequencies counts by year and block.

Measures Employed in the Study

This section describes the outcome variable and both the alternative-specific and case specific attributes used as independent variables and covariates in this study. It provides details about how each variable is measured and discusses the rationale for the various measurement judgments made in designing the study.

Outcome variable. The outcome variable in this experiment was a measure of the choices each participant made for each of the 10 choice sets. Initially, this measure was collected as a 3-level multinomial, categorical variable reflecting one choice (Candidate A, B, or C) from each of the 10 choice sets in a given block (i.e., survey form). Thus, each respondent provided 10 outcome decisions or observations for this multinomial outcome variable.

Table 3.5

Frequencies of Combined Teacher-Specific Characteristics of Teachers in This Study

Teacher-specific factor(s)	B1 freq.	B1 % freq.	B2 freq.	B2 % freq.	Total freq.	Total % freq.
Non-high-needs school	69	64.5	80	71.4	149	68.0
Tenured teacher in a NYS high school	63	91.3	75	93.8	138	92.6
Doctorate	3	4.8	5	6.7	8	5.8
Adv. Cert.	13	20.6	11	14.7	24	17.4
MA/MS	5	7.9	9	12.0	14	10.1
MA/MS plus credits	40	63.5	50	66.7	90	65.2
Education level not specified	2	3.2			2	1.4
Currently untenured, but previously tenured, teacher in a NYS High School	6	8.7	5	6.3	11	7.4
Doctorate						
Adv. Cert.	2	33.3	1	20.0	3	27.3
MA/MS			2	40.0	2	18.2
MA/MS plus credits	4	66.7	2	40.0	6	54.5
High-needs school	37	34.6	29	25.9	66	30.1
Tenured teacher in a NYS high school	35	94.6	25	86.2	60	90.9
Doctorate	2	5.7	2	8.0	4	6.7
Adv. Cert.	5	14.3			5	8.3
MA/MS	10	28.6	3	12.0	13	21.7
MA/MS plus credits	17	48.6	20	80.0	37	61.7
Education level not specified	1	2.9			1	1.7
Currently untenured, but previously tenured, teacher in a NYS High School	2	5.4	4	13.8	6	9.1
Doctorate						
Adv. Cert.	1	50.0	1	25.0	2	33.3
MA/MS			1	25.0	1	16.7
MA/MS plus credits	1	50.0	2	50.0	3	50.0
School need level not specified	1	0.9	3	2.7	4	1.8
Tenured teacher in a NYS high school	1	100.0	3	100.0	4	100.0
MA/MS			1	33.3	1	25.0
MA/MS plus credits	1	100.0	2	66.7	3	75.0
Total	107		112		219	

Note. B1 = block 1, B2 = block 2.

Table 3.6

Summary of Teachers' Years of Teaching Experience by Block

Statistic	B1	B2	All
M	18.2	17.5	17.8
SD	7.7	7.0	7.3
25th percentile	12	12	12
Mdn	18	16	18
75th percentile	23	21.8	22
Minimum	4	6	4
Maximum	42	43	43

Note. B1 = block 1, B2 = block 2.

The levels of this initial multinomial categorical choice variable were then extracted to create three binary choice variables for each choice set. That resulted in 30 binary observations representing the respondents' choices for each alternative in the 10 choice sets with three alternatives each. Thus, each respondent provided 30 observations (i.e., choices) for analysis in the study. Because multiple observations were obtained from each participant, it was necessary for the analysis to adjust for correlated responses, as described in the Analysis of the Discrete Choice Experiment section below.

Candidate-specific attributes. The candidate-specific attributes that were included in this study included: (a) teaching experience, (b) administrator experience, (c) highest level of education, (d) instructional leadership skills, (e) managerial leadership skills, and (f) interpersonal leadership skills. Teaching experience was measured as a continuous variable with values measured at five specified points including 5, 7, 10, 16, and 21 years. Highest level of education was operationalized as a binary condition reflecting whether a hypothetical candidate holds a doctorate (1) or not (0). The other four candidate-specific attributes were measured as factor variables with three levels each. To operationalize those factor variables, a series of 2 (*k*-1) dummy variables was created for each factor in the design as shown in Table 3.8.

Table 3.7

Frequency, Percent, and Cumulative Frequency of Participants Teaching Experience (Years)

Years	B1 freq.	B1 % freq.	B1 cum. % freq.	B2 freq.	B2% freq.	B2 cum. % freq.	Total freq.	Total freq.	Total cum. % freq.
4	1	0.93	0.93		0.00	0.00	1	0.46	0.46
5	1	0.93	1.87		0.00	0.00	1	0.46	0.91
6	2	1.87	3.74	1	0.89	0.89	3	1.37	2.28
7	2	1.87	5.61	2	1.79	2.68	4	1.83	4.11
8	5	4.67	10.28	4	3.57	6.25	9	4.11	8.22
9	4	3.74	14.02	6	5.36	11.61	10	4.57	12.79
10	4	3.74	17.76	7	6.25	17.86	11	5.02	17.81
11	6	5.61	23.36	3	2.68	20.54	9	4.11	21.92
12	6	5.61	28.97	8	7.14	27.68	14	6.39	28.31
13	1	0.93	29.91	8	7.14	34.82	9	4.11	32.42
14	2	1.87	31.78	5	4.46	39.29	7	3.20	35.62
15	7	6.54	38.32	7	6.25	45.54	14	6.39	42.01
16	5	4.67	42.99	6	5.36	50.89	11	5.02	47.03
17	2	1.87	44.86	2	1.79	52.68	4	1.83	48.86
18	9	8.41	53.27	4	3.57	56.25	13	5.94	54.79
19	4	3.74	57.01	4	3.57	59.82	8	3.65	58.45
20	7	6.54	63.55	11	9.82	69.64	18	8.22	66.67
21	8	7.48	71.03	6	5.36	75.00	14	6.39	73.06
22	3	2.80	73.83	7	6.25	81.25	10	4.57	77.63
23	8	7.48	81.31	2	1.79	83.04	10	4.57	82.19
24	2	1.87	83.18	3	2.68	85.71	5	2.28	84.47
25	1	0.93	84.11	3	2.68	88.39	4	1.83	86.30
26	1	0.93	85.05	2	1.79	90.18	3	1.37	87.67
27	1	0.93	85.98	3	2.68	92.86	4	1.83	89.50
28	3	2.80	88.79	1	0.89	93.75	4	1.83	91.32
29	3	2.80	91.59		0.00	93.75	3	1.37	92.69
30	2	1.87	93.46	1	0.89	94.64	3	1.37	94.06
31	2	1.87	95.33	2	1.79	96.43	4	1.83	95.89
32	1	0.93	96.26	2	1.79	98.21	3	1.37	97.26
34	1	0.93	97.20		0.00	98.21	1	0.46	97.72
36	1	0.93	98.13		0.00	98.21	1	0.46	98.17
38	1	0.93	99.07		0.00	98.21	1	0.46	98.63
40		0.00	99.07	1	0.89	99.11	1	0.46	99.09
42	1	0.93	100.00		0.00	99.11	1	0.46	99.54
43		0.00	100.00	1	0.89	100.00	1	0.46	100.00
Total	107	100.00		112	100.00		219	100.00	

Note. B1 = block 1, B2 = block 2.

Table 3.8

Operationalization of Candidate-Specific Factor Variables

Candidate-specific attribute	Variable
Administrator experience	
No school administrator experience	adminexplo
Administrator experience	(Omitted - reference category)
School administrator experience as a principal	adminexphi
Instructional leadership skills	
Below average	instrleadlo
Average	(Omitted - reference category)
Above average	instrleadhi
Managerial leadership skills	
Below average	mgrleadlo
Average	(Omitted - reference category)
Above average	mgrleadhi
Interpersonal leadership skills	
Below average	intprleadlo
Average	(Omitted - reference category)
Above average	intprleadhi

Note. Each of the non-omitted/reference categories is represented as a binary dummy, where 0 = *not present* and 1 = *present*.

Table 3.9 presents details of the candidate-specific attributes, their assigned attribute levels (based on the optimal experimental design described below in Optimal Experimental Design), and their sources. The rationales for including each of the selected attributes are discussed in greater detail below Table 3.9. I assumed that any other candidate-specific factors not included in the choice sets were held constant at the time of the experiment or were not considered by the respondents.

Table 3.9

Candidate-Specific Attributes and Attribute Levels Selected for the Discrete Choice Experiment

Alternative-specific attribute	Attribute level and code	Source
Teaching experience	*5 years teaching experience* (1), *7 years teaching experience* (2), *10 years teaching experience* (3), *16 years teaching experience* (4), *21 years teaching experience* (5)	Arsani, 2010; Baker, 2001; Baron, 1990; Batchelor et al., 1987; Cruzeiro & Boone, 2009; Johnston et al., 2010; Painter, 2006; Reichhart, 2008
Administrator experience	*no school administrator experience* (1), *school administrator experience but not as a principal* (2), *school administrator experience as a principal* (3)	Baker, 2001; Baron, 1990; Batchelor et al., 1987; Brewer, 1993; Cottrell, 2017; Cruzeiro & Boone, 2009; Herriot, 2012; Hooker, 2000; Jaeger, 2001; Kersten, 2006; Palmer, 2014; Palmer & Mullooly, 2015; Parylo & Zepeda, 2014; PDE, 1971; Reichhart, 2008; Weber, 2009; Winter & Jaeger, 2004
Highest level of education	*advanced certificate* (1), *doctoral degree (*2)	Batchelor, 1987; Baron, 1990; Herriot, 2015; Reichhart, 2008; Valentine & Prater, 2011; Weber, 2009
Instructional leadership skills	*below average* (1), *average* (2), *above average* (3)	Arsani, 2010; Baker, 2001; Cavazos, 2012; Cruzeiro & Boone, 2009; Kersten, 2006; Painter, 2006; Palmer, 2016; Reichhart, 2008; Van de Water, 1988; Weber, 2009; Weber, 2012
Managerial leadership skills	*below average* (1), *average* (2), *above average* (3)	Arsani, 2010; Baker, 2001; Cavazos, 2012; Jaeger, 2001; Kersten, 2006; Knuth, 2004; Reichhart, 2008; Van de Water, 1988; Weber, 2009; Weber, 2012; Winter et al., 1998
Interpersonal leadership skills	*below average* (1), *average* (2), *above average* (3)	Arsani, 2010; Baker, 2001; Cavazos, 2012; Cottrell, 2017; Cruzeiro & Boone, 2009; Hooker, 2000; Kersten, 2006; Palmer, 2014, 2016; Rammer, 2007; Reichhart, 2008; Weber, 2009

Note. Code values of responses are shown in parentheses.

Alternative-specific attribute 1: Teaching experience. A principal-candidate's teaching experience has been found to be an important consideration to those making hiring decisions (see Chapter 2). This study operationalizes principal-candidates' teaching experiences according to longevity. The levels selected were: (a) *5 years teaching experience*, (b) *7 years teaching experience*, (c) *10 years teaching experience*, (d) *16 years teaching experience*, and (e) *21 years teaching experience*. These specific benchmarks were chosen as attribute levels as they represent the 10th, 25th, 50th, 75th, and 90th percentile of the amount of teaching experience secondary principals of public schools in the United States held prior to securing their positions (Goldring, Gray, Bitterman, & Broughman, 2013). It was determined to not go beyond five levels as each additional level increases the complexity of the design, and because the selected levels were a balanced representation of the amount of teaching experience potential candidates may have.

Alternative-specific attribute 2: Administrator experience. Previous administrative experience has also demonstrated to be a characteristic of principal candidates to be important (see Chapter 2). This is not only true for central office administrators serving on selection committees, but for teachers as well. The three levels selected for this attribute were: (a) *no school administrator experience*, (b) *school administrator experience but not as a principal*, and (c) *school administrator experience as a principal*. These levels were selected as they encompass the different types of administrative experience that potential principal candidates may have when applying for a position. The second level would include positions such as department chairs, assistant principals, deans, and any other administrative position other than a principalship. The decision to not operationalize previous administrative experience in the form of years was considered but was determined to be less interpretable.

Alternative-specific attribute 3: Highest level of education. A principal candidate's highest level of education is another important characteristic that is often considered by selection committee members (see Chapter 2). Although holding the highest level of education is not a necessity to be hired to a principalship, holding a degree such as a doctorate may provide an advantage to candidates who may not rank as high in other areas. This attribute consists of two levels: (a) *advanced certificate*, and (b) *doctoral degree*. These levels were selected as they generally represent the only two scenarios that hiring committees experience in New York State when evaluating candidates to fill a principal position. This is the case as to hold an administrative license, one must have earned an advanced certificate. This restricts potential candidates to be holders of either an advanced certificate, or a doctorate, as their highest level of education.

Alternative-specific attribute 4: Instructional leadership skills. The ability to be a strong instructional leader has been described as an important quality of an effective secondary school principal and has been found to be highly valued during principal-selection processes (see chapter 2). This factor is expected to be greatly considered by participants in this study given that schools are largely evaluated based on academic performance. The attribute levels assigned to the instruction leadership factor are: (a) *below average*, (b) *average*, and (c) *above average*. It was determined to restrict the number of levels to three to limit the cognitive burden on the decision maker. Further, these levels were deemed to be sufficient for this study.

Alternative-specific attribute 5: Managerial leadership skills. Although a principal's perceived ability to operate and manage a building successfully has been described as less important than the ability to lead instruction, it still has been demonstrated to be highly regarded by decision makers (see Chapter 2). Previous research has found that a principal-candidate's

ability to successfully manage a school is important to administrators and teachers (see Chapter 2). The attribute levels assigned to the managerial leadership factor are: (a) *below average*, (b) *average*, and (c) *above average*. I decided to restrict the responses to three levels in order to limit the cognitive burden on the respondents. Further, these levels were deemed to be sufficient for this study.

Alternative-specific attribute 6: Interpersonal leadership skills. Another factor likely to be important to decision-makers is a principal-candidate's ability to effectively communicate and work collaboratively with others (see Chapter 2). This is a trait that is sought in a candidate as principals directly interact with students, teachers, central office administrators, parents, and community stakeholders daily. It was expected that this factor would highly influence the choices made by decision makers as individuals want to recommend a candidate with whom they can work productively. The attribute levels assigned to the interpersonal leadership factor are: (a) *below average*, (b) *average*, and (c) *above average*. I limited the number of levels to three in order to limit the cognitive burden on the respondents. Further, these levels were deemed to be sufficient for this study.

Alternative-specific attributes considered but not selected for study. In addition to fit not being included as a factor (see chapter 2), the following other candidate-specific attributes were excluded from the experiment in this study: (a) experience in school or district, (b) gender, (c) quality of recommendations or references, (d) vision for school, (e) motivation, and (f) ethics, integrity, and morality. The decision not to include whether a candidate has worked in the district before was determined as a result of it being minimally represented in the literature in comparison to the attributes that were selected. While it was given great consideration, the complexity of DCE did not permit me to include it given its relative importance. Gender was not

included as this study only included characteristics that could be controlled for by the candidate. The quality of a candidate's recommendations was not included as it was determined that including them would not provide participants with any new information to base their decision.

Additionally, vision was excluded because I believed that the included alternative-specific attributes of instructional leadership, managerial leadership, and interpersonal leadership were necessary skills needed to formulate, communicate, and carryout an appropriate vision. As those skills are assumed to be precursors to developing a vision, it was not necessary to include it as an attribute within this study. Lastly, the latent variables for motivation and integrity were not included as they are not easily measurable or identifiable during a selection process.

Figure 3.1 displays one example of one of the choice sets included in one of the blocks of the survey. The candidates in each choice set are unlabeled and are identified only by random alphabetic characters, A, B, or C.

	Candidate A	Candidate B	Candidate C
Teaching experience	10 years teaching experience	21 years teaching experience	16 years teaching experience
Administrator experience	School administrator experience as a principal	No school administrator experience	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Above average	Below average	Average
Managerial leadership skills	Above average	Below average	Average
Interpersonal leadership skills	Above average	Below average	Average

Figure 3.1. Example choice set from the online, anonymous survey. The survey included two blocks of 10 choice sets with three alternatives, each of which included six alternative-specific attributes as shown in this example. Participants were randomly assigned to one of two blocks.

Table 3.10

Decision Maker-Specific Attributes and Attribute Levels Selected for the Discrete Choice Experiment

Case-specific attribute	Attribute level and code	Source
Experience of search committee member	Continuous whole years	Arsani, 2010; Reichhart, 2008; Weber, 2009
Highest level of education of search committee member	*bachelor's degree* (1), *master's degree* (2), *master's degree plus additional college credits* (3), *advanced certificate* (4), *doctoral degree* (5), *other [please specify]* (6)	Batchelor et al., 1987; Weber, 2009
School of search committee member is one of high need	*Yes* (1) *No* (2) *other [please specify* (3)	Cruzeiro & Boone, 2009; Pounder, 2005

Note. Code values of responses are shown in parentheses.

Case-specific attribute 1: Experience of search committee member. The years of teaching experience held by teachers making principal hiring decisions is a factor that has received little attention by previous researchers. How this attribute affects recommendations is not known, but I believe these decisions potentially vary across the teaching experience continuum as the utilities of more experienced teachers differ than those who are newer to the profession. This factor was designated to be continuous in the form of whole years. Additionally, participants who designated this to be three or less years were not included in the study, as this study was designed for tenured teachers only.

Case-specific attribute 2: Highest level of education of search committee member. The highest level of education attained by superintendents has been found to have an influence on the choices they make when hiring principals (see Chapter 2). This factor has also been

considered in little prior research. I assumed, however, that the education level of teachers would affect their choices in recommending a principal candidate. The attribute levels assigned to this factor were: (a) *bachelor's degree*, (b) *master's degree*, (c) *master's degree plus additional college credits*, (d) *advanced certificate*, (e) *doctoral degree*, and (f) *other [please specify]*. The designated levels are exhaustive, because a bachelor's degree is the lowest degree allowed for teachers in a public school in New York State (and that is only for those who were certified in an earlier era). All other earned degree levels above the bachelor's degree were included. The response categories also allowed participants to specify a non-listed degree when selecting the *other* option.

Case-specific attribute 3: School of search committee member is one of high need. Another factor that has been found to influence the choice of decision makers during the principal hiring process has been the community and geographic location of the school seeking a principal (see Chapter 2). An aspect embedded within respective communities and geographic locations of schools is their level of need. Considering the level of need a school requires to be successful was an important characteristic to consider within this study as it was expected that teachers who work in high-need areas valued candidate-specific attributes differently than those who do not due to the different obstacles and issues they encounter as a result of the contrast. The attribute levels assigned to this factor were: (a) *Yes*, (b) *No,* and (c) *other [please specify]*. Although this attribute in binary in the sense that schools are either of high need or not, I felt it was important to provide participants who were unsure about which selection to choose an opportunity to describe the school setting of which they work. This allowed me to review their responses and make judgments about how to code them.

Case-specific attributes considered but not selected for study. Of the attributes identified in Chapter 2, age, gender, and school size of the selection committee members were excluded from this study. Age was excluded as it was determined that the information derived from it would have been similar to that of teaching experience. Gender was excluded as this study because I did not expect it to have a statistically significant impact on the teachers' choices. It was also determined to not include school size as a case-specific variable because respondents might have varying levels of knowledge about this factor and the responses might not reflect an acceptable degree of reliability.

Semi-structured, open-ended, narrative-response. In order to obtain additional, qualitative insights not reflected in the quantitative results of the experiment, respondents were provided an optional opportunity to provide additional comments about the candidate characteristics they would consider important as members of a senior high school principal selection committee. These qualitative, narrative data were important for interpreting, corroborating, and enhancing the quantitative findings produced by the discrete choice analysis.

Optimal Experimental Design

This study was designed as an unlabeled DCE with one attribute with five levels, four attributes with three levels, and one attribute with two levels. The full factorial design would therefore include 810 ($5^1 \times 3^4 \times 2^1 = 810$) alternatives. In determining that employing the full fractional factorial design in a survey was unreasonable, I employed a 2-block fractional factorial design with design points selected using optimal experimental design techniques (Hensher et al., 2015). The design of this study is considered to be experimental as the independent variables (candidate-specific attributes) were manipulated to identify their effects on the outcome measure (respondent's choice).

I developed the fractional factorial design for this study using the user-written dcreate program for Stata (Hole, 2015) along with Stata/IC version 14.2. The design included 60 alternatives across 2 blocks, comprising 20 choice sets. Each block contained 10 choice sets with three alternatives for a total of 30 alternatives in each block. This design had a D-efficiency of 3.2 (best possible for the number of alternatives and alternative levels in the design). The correlation matrix, presented in Table 3.11, confirmed that the attribute specific factors in this design satisfied the criterion for orthogonality. Other analyses confirmed that the design was balanced, had adequate coverage of all combinations of attributes and attribute levels, and that all the design points were unique.

Table 3.11

Orthogonality of the Alternative-Specific Attributes as Demonstrated by Pearson Correlation

	Candidate-specific (CS) attribute				
CS Attribute	Teaching experience	Previous admin. experience	Highest level of education	Instructional leadership skills	Managerial leadership skills
Previous admin. experience	.014 (.913)				
Highest level of education	.024 (.857)	.000 (1.000)			
Instructional leadership skills	.000 (1.000)	.050 (.704)	.000 (1.00)		
Managerial leadership skills	-.058 (.661)	-.075 (.569)	.000 (1.000)	-.050 (.704)	
Interpersonal leadership skills	.000 (1.000)	.025 (.850)	-.041 (.756)	-.050 (.704)	.025 (.850)

Note. Statistical significance levels (p) are shown in parentheses below each correlation coefficient. None of the correlations are statistically significant at $p \leq .05$.

Table 3.12 indicates that this design covers all levels of the alternative-specific attributes. Table 3.13 displays the paired levels in the design's choice sets and indicates an acceptable degree of balance.

Table 3.12

Coverage Levels of Candidate-Specific Attributes Within the Experimental Design

	Candidate-specific attribute					
Level	Teaching experience	Previous admin. experience	Highest level of education	Instructional leadership skills	Managerial leadership skills	Interpersonal leadership skills
1	12	20	27	20	20	20
2	12	20	33	20	20	20
3	12	20		20	20	20
4	12					
5	12					
Total	60	60	60	60	60	60

Note. See Table 3.9 for the level descriptions.

Data Collection

The data for this study were collected using an online, voluntary, anonymous survey, using a standard form of discrete choice survey. This study employed two different forms of the survey. Each form of the survey included 10 specific sets of choice questions that did not appear on the other. Other than the choice questions, the two survey forms were identical. The first form of the survey is attached as Appendix A1. The second form of the survey is attached as Appendix A2. The survey was initially administered to two randomly selected blocks with one block receiving the email link to one form of the survey, and the other block receiving the link to the other form of the survey.

Table 3.13

Paired Levels in the Choice Sets by Candidate-Specific Attribute

		Previous administrative experience			
	Levels	1	2	3	Total
Teaching experience	1	5	3	4	12
	2	3	5	4	12
	3	4	4	4	12
	4	4	4	4	12
	5	4	4	4	12
	Total	20	20	20	60

		Highest level of education		
	Levels	1	2	Totals
Teaching experience	1	6	6	12
	2	5	7	12
	3	5	7	12
	4	6	6	12
	5	5	7	12
	Total	27	33	60

		Instructional leadership skills			
	Levels	1	2	3	Totals
Teaching experience	1	4	4	4	12
	2	4	4	4	12
	3	4	4	4	12
	4	4	4	4	12
	5	4	4	4	12
	Total	20	20	20	60

		Managerial leadership skills			
	Levels	1	2	3	Totals
Teaching experience	1	4	4	4	12
	2	4	4	4	12
	3	3	4	5	12
	4	4	4	4	12
	5	5	4	3	12
	Total	20	20	20	60

	Interpersonal leadership skills			
Levels	1	2	3	Totals
1	4	4	4	12
2	4	4	4	12
3	3	4	5	12
4	4	4	4	12
5	5	4	3	12
Total	20	20	20	60

	Highest level of education		
Levels	1	2	Totals
Previous administrative experience 1	9	11	20
2	9	11	20
3	9	11	20
Total	27	33	60

	Instructional leadership skills			
Levels	1	2	3	Totals
Previous administrative experience 1	7	7	6	20
2	6	8	6	20
3	7	5	8	20
Total	20	20	20	60

	Managerial leadership skills			
Levels	1	2	3	Totals
Previous administrative experience 1	6	7	7	20
2	7	5	8	20
3	7	8	5	20
Total	20	20	20	60

	Interpersonal leadership skills			
Levels	1	2	3	Totals
Previous administrative experience 1	7	6	7	20
2	7	7	6	20
3	6	7	7	20
Total	20	20	20	60

	Instructional leadership skills			
Levels	1	2	3	Totals
Highest level of education 1	9	9	9	27
2	11	11	11	33
Total	20	20	20	60

		Managerial leadership skills			
	Levels	1	2	3	Totals
Highest level of education	1	9	9	9	27
	2	11	11	11	33
	Total	20	20	20	60

		Interpersonal leadership skills			
	Levels	1	2	3	Totals
Highest level of education	1	9	8	10	27
	2	11	12	10	33
	Total	20	20	20	60

		Managerial leadership skills			
	Levels	1	2	3	Totals
Instructional leadership skills	1	5	8	7	20
	2	8	6	6	20
	3	7	6	7	20
	Total	20	20	20	60

		Interpersonal leadership skills			
	Levels	1	2	3	Totals
Instructional leadership skills	1	6	7	7	20
	2	6	8	6	20
	3	8	5	7	20
	Total	20	20	20	60

		Interpersonal leadership skills			
	Levels	1	2	3	Totals
Managerial leadership skills	1	7	6	7	20
	2	7	7	6	20
	3	6	7	7	20
	Total	20	20	20	60

Note. See Table 3.9 for the level descriptions.

The survey instrument was created and administered using the hosting service at http://esurv.org. This survey host was comprised of a consortium of universities located in the United States, Canada, the United Kingdom, and France. The United States university sponsors of this research survey service included Indiana University, Ohio State University, and the University of Tennessee. The survey included the following four sections: (a) introduction to the survey and

informed consent, (b) candidate choice sets based on the optimal experimental design discussed above, (c) additional insights, and (d) experience and general background.

I contacted all principals of public senior high schools in New York State, except for those who worked in a "Big 5" city school, through personalized emails or phone calls and requested that they distribute the survey link to their secondary teachers using the text in Appendix B. The list of senior high schools, and school leader contact information, were accessed through the New York State Education Department's Public Report Portal through separate reports (http://eservices.nysed.gov/sedreports/list?id=1). Microsoft Excel version 365 was used to match the contact information of principals with their senior high schools through the included Basic Educational Data System (BEDS) code listed on each database. Excel's VLOOKUP formula was used on the BEDS codes to identify exact matches.

In total, there were 404 senior high schools, and each of their principals were listed in the directory. The information that was distributed to these school leaders included an explanation and purpose of the study, a link to be shared with teachers, and an offer to receive an executive summary of the study at its completion were included. Participants were given one month to fill out the survey.

Additionally, representatives of K-12 public school teacher unions in New York State (e.g., American Federation of Teachers, New York State United Teachers, United Federation of Teachers) were asked by email or phone to distribute the survey link to their members who were teachers in public senior high schools in New York State. The text of this email or phone request can be found in Appendix C.

Lastly, a brief description of the survey was posted to various social media platforms (e.g., Facebook, Twitter, etc.) and relevant online forums with a request for those senior high

school teachers who met the stated eligibility criteria to participate. The text of those postings is shown in Appendix D. The survey link included in the social media postings was varied between the link to the first form of the survey and the link to the second form of the survey to better balance responses from the two blocks.

The survey was designed to take about 15-20 minutes to complete. Table 3.14 presents the actual completion times by block. As the table shows the median completion time (*Mdn* = 8.3 minutes) was considerably lower than anticipated in the design.

Table 3.14

Summary of Teachers' Survey Completion Time in Minutes by Block

Statistic	B1	B2	All
M	13.11	15.57	14.36
SD	19.31	40.01	31.59
25th percentile	6.40	6.29	6.35
Mdn	8.80	7.98	8.30
75th percentile	11.88	11.85	11.87
Minimum	4.25	4.07	4.07
Maximum	186.10	397.75	397.75

Note. B1 = block 1, B2 = block 2.

Analysis of the Discrete Choice Experiment

Stata/IC version 14.2 and user-written add-on programs for Stata (described below) were used to analyze the discrete choice experiment data. The analysis of the DCE data was conducted in two states, each reflecting different fundamental assumptions. In the first stage, the DCE data were analyzed using alternative-specific conditional logistic regression (asclogit), which assumed that the judgments of all the teacher-participants in the study could be modeled as those of a single-rational actor. To incorporate an analysis of the case-specific factors (reflecting the effects of teacher-related characteristics on teachers' judgments of candidate-specific factors), the asclogit model included a series of interaction terms, calculated as the

products of each of the six candidate-specific terms and the three case-specific terms. No direct effects of the case-specific terms were included, so the case-specific effects were represented in the asclogit model exclusively in the interaction terms. Because four of the candidate-specific variables were operationalized as factor variables (as described above), Wald X^2 tests of linear composites (with 2 *df*) were performed to determine the statistical significance of the combined levels in the interaction terms of the case-specific variables.

In the second stage of the analysis, the assumption of an overall single-rational actor representing all the teacher-participants in the study as a single class was challenged and the analysis sought evidence of a multiple-latent-class solution. Latent class alternative-specific conditional logistic regression (lclogit) with alternative-specific and case-specific factors was used to identify unobserved heterogeneity within participants' responses. This was accomplished with the following user-written programs for Stata: (a) lclogit (Pacifico & Yoo, 2013), (b) fmlogit (Buis, 2010), (c) gllamm (Rabe-Hesketh, Pickles, & Skrondal, 2011), and (d) and rowranks (Cox, 2000). As described above for asclogit, Wald X^2 tests of linear composites were conducted to test the joint statistical significance of factor variables included in the best-fitting lclogit model.

To identify the best-fitting latent class model, the AIC and BIC statistics were calculated for models specifying varying numbers of latent classes. The model that produced the smallest BIC or AIC was considered to be a candidate for the best fitting model, but the final determination was based on theoretical considerations. To classify participants into one of the unobserved classes identified in the previous step, latent class conditional logistic regression with posterior probabilities was estimated using lclogit's lclogitpr with the cp option in Stata.

The qualitative, narrative data from the free response question was analyzed using both traditional qualitative data analysis hermeneutic techniques and quantitative textual-analysis techniques. KH Coder version 3.a.14b (2018), which is a public domain software (http://khc.sourceforge.net/en), was used to implement the quantitative textual analyses in the form of word and phrase frequencies and geospatial, computer-aided content analysis based on co-occurrence matrices (e.g., multidimensional scaling dimensions and maps, dendrograms, and semantic networks). KH Coder was also used to produce the figures associated with the content analysis of the data derived from the open-ended questions. The results of these qualitative analyses were used to provide additional insight in the interpretation of the quantitative choice models produced by latent class conditional logistic regression. Additional figures and tables presented in Chapter 4 were produced by using Microsoft Excel version 365 and Stata/IC version 14.2. Several user-written ado programs for Stata were used to produce various graphs in Chapter 4.

In conducting this discrete choice experiment, two key assumptions were made. The first assumption was that the study assumed that the IIA axiom was satisfied. As discussed above, this assumption states that probability of selecting one alternative over another is not affected by the presence or absence of other alternatives in the choice set (Louviere, Hensher, et al., 2010; Ryan et al., 2008). The second assumption, the IID, requires that the alternatives be independent and identically distributed (Hensher et al., 2015). As displayed in Table 3.11, the alternatives are uncorrelated, and Table 3.13 shows that they are evenly distributed.

Statistical significance of the choice models was based on the Wald X^2. An a priori acceptance criterion of $\alpha \leq .05$ was established. Tjur's R^2 was calculated and accepted over McFadden's R^2 and the Cox-Snell R^2. This choice was made because Tjur's R^2 has an upward

bound of 1.0, whereas the others do not, limiting their ability to closely relate to a linear R^2 model (Allison, 2013).

Ethical Considerations and Protections of Human Subjects

Within this study there were numerous considerations taken to ensure that the rights of the participants who completed their surveys were protected. In the first section of the survey, participants were informed about the study's purpose and provided general information about the study. Additionally, they were provided with information about their specific rights and protections, and they were advised that completion of the survey was voluntary. Lastly, they were assured that their participation was anonymous and thus, neither the respondents nor their schools could or would be identified.

In the second part of the survey, participants were informed that the choice sets they were presented included only hypothetical candidates. This was done to ensure that participants, as well as school administrators who were asked to distribute the survey, understood that they were not choosing among real candidates.

The fourth section of the survey was created to collect information about respondents' previous experiences and general background information. This section consisted of five questions pertaining to the following: (a) current employment situation, (b) number of years of teaching, (c) highest level of education, (4) perceived school need level, and (5) whether participants taught in a "Big 5" city-school district or not. The purpose of collecting this information was to be able to describe the sample. In the last section, participants were given the opportunity to confirm their participation in the study or decline to have their responses used as part of the analysis and have their responses deleted. The survey did not auto collect email addresses of the respondents. The study and survey were exempted by the Long Island

Institutional Review Board (IRB) prior to collection of any data analyzed in the survey (Appendix E).

Methodological Limitations

This discrete choice experiment was conducted in New York State based on a voluntary, self-selected, purposive sample of tenured high school teachers. As such, it does not employ a probability sample and is limited to a single geographic region. Additionally, participation was limited to teachers who were employed, at the time of the study, at public senior high schools. Therefore, the results of this study cannot be transferred to private schools or other public secondary school models (i.e., middle schools, junior high schools, K-12 schools, junior/senior high schools, etc.). Additionally, due to the increasing complexity of DCEs, the number of attributes and attribute levels that could be included were limited to ensure the design was practical.

Further, this discrete choice experiment used stated preference data rather than revealed preference data. This limits the explanation of the data to what people believe they would which might not be accurate. This could not be avoided, however, because legal and ethical factors related to privacy would not allow the collection of data from actual previous principal selection processes.

Chapter Synthesis

This chapter has reviewed several decision theories with an emphasis on discrete choice theory. I also explained each aspect of my proposed discrete choice experiment, which is being conducted to determine the characteristics that teachers most value when hiring a new principal at senior high schools in New York State. This approach has not been used before in attempting to understand what these characteristics are, and how they interact with each other, from any

school hiring perspective. In the next chapter, I present the results of the discrete choice experiment by discussing how both candidate-specific and case-specific attributes affect the decisions made by teachers serving on principal-selection committees in senior high schools in New York State.

CHAPTER 4:

RESULTS

This chapter describes the results of the study based on a careful implementation of the methodology and experimental design described in Chapter 3. Part One of the chapter presents the results of the unlabeled discrete choice experiment that formed the core of the study. That first section begins with a discussion of the results of the alternative-specific conditional logistic regression (asclogit), which reflects a traditional, single-rational-actor perspective in that it assumed a single, observed class. The section then describes a series of statistical procedures using the Akaike and Bayesian Information Criteria (AIC and BIC) to test for the potential presence of unobserved heterogeneity in the form of multiple latent classes, challenging the single, observed class assumption inherent in asclogit. That section then discusses the results of a latent class logistic regression (lclogit) model, based on a 3-latent class specification determined from both the AIC/BIC testing and consideration of the model's conceptual alignment with existing theory.

Part Two of this chapter presents my findings from a systematic, qualitative and mixed-methods analysis of responses to an open-ended, semi-structured, narrative-response question. That section discusses the results of both an application of traditional, hermeneutic qualitative data analysis techniques and computer-aided, quantitative content analysis with geospatial statistical modeling, including multidimensional scaling, co-occurrence network analysis and mapping, and hierarchical, agglomerative cluster analysis. That section reveals and discusses five emergent subthemes reflecting two broader major themes. It concludes by relating the findings of that qualitative and mixed-methods analysis to the quantitative results of the discrete choice analysis.

This chapter concludes with a synthesis of the study's findings, which provide an empirically-grounded foundation for a discussion of the formal responses to the research questions that guided this study and for the conclusions and implications I present in Chapter 5.

PART ONE

RESULTS OF THE UNLABELED DISCRETE CHOICE EXPERIMENT

In this first part of the chapter, I discuss the discrete choice analyses that were conducted. I first describe the results of an alternative-specific, conditional logistic regression, which assumed a single, observed class and which reflects the views and perspectives generally associated with a single-rational-actor perspective. I then describe the results of a series of latent class, alternative-specific, conditional logistic regression analyses, focusing in detail on the 3-latent class model that was determined to represent the best statistical and theoretical fit to the data observed in the experiment.

Results from the Alternative-Specific, Conditional Logistic Regression

The results from the alternative-specific, conditional logistic regression, which produces a single-class model, are shown in Table 4.1a and Table 41b. This model was found to be highly statistically significant (Wald $X^2_{(40)} = 1142.74$, $p < .001$, Tjur's pseudo $R^2 = .47$, $N = 212$) and produced an AIC of 2665.10 and a BIC of 935.41. Holding all other factors constant, the analysis indicates that the odds of a candidate's being selected are reduced by 42% ($p = .03$) if the candidate has had no previous administrative experience, compared to a candidate who has had administrative experience but has not previously served as a principal. With 95% confidence, the odds of a candidate who lacks any administrative experience being selected over one who has had administrative but not principal-level experience may be reduced by as much as 64% and are reduced by at least 7%. By contrast, if candidates have previously held a

principalship, the odds of their being selected are 82% ($p = .01$) greater than the odds for candidates who have had previous administrative experience but have not served as a principal. Holding all other factors constant, with 95% confidence, the odds that candidates who have served as a principal before will be recommended are at least 20% greater than those of a candidate with non-principal-level experience and may be as much as 174% greater.

Candidates with below-average instructional leadership abilities were found to be at a highly statistically significant ($p < .001$) disadvantage, with the odds of their receiving a recommendation being 62% lower than those of candidates with average abilities in instructional leadership. The odds of candidates with below-average instructional leadership skills being selected may be reduced by as much as 77% compared to those of candidates who have average instructional leadership skills and will almost certainly (95%) be at least 36% lower. Candidates with above-average instructional leadership skills were not found, however, to have any advantage over those with average skills in that area.

On average, the odds of being recommended for candidates who have below-average managerial skills are 85% ($p < .001$) lower than the odds of their competitors who have average managerial skills. With 95% confidence, the odds of a candidate with less-than-average managerial skills being selected may be reduced by as much as 92% but are at least 72% lower than those of candidates with average managerial skills, when all other factors are held constant. The odds of being selected for candidates with above-average managerial skills are 49% ($p = .01$) higher than for candidates with average managerial skills. With 95% confidence, the odds for selection have at least a 10% advantage over candidates with average managerial skills, but that advantage can be as high as 103% greater.

Table 4.1a

Results From the Alternative-Specific Conditional Regression

	b	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*
Teaching experience	0.015	0.016	0.90	.370	-0.02	0.05	1.01	0.98	1.05
No administrative experience	-0.544	0.242	-2.25	.025	-1.02	-0.07	0.58	0.36	0.93
Experience as a principal	0.597	0.210	2.84	.005	0.18	1.01	1.82	1.20	2.74
Doctorate	-0.241	0.179	-1.35	.177	-0.59	0.11	0.79	0.55	1.12
Below-average instructional skills	-0.960	0.261	-3.68	< .001	-1.47	-0.45	0.38	0.23	0.64
Above-average instructional skills	0.154	0.181	0.85	.395	-0.20	0.51	1.17	0.82	1.66
Below-average managerial skills	-1.905	0.321	-5.93	< .001	-2.53	-1.28	0.15	0.08	0.28
Above-average managerial skills	0.400	0.157	2.54	.011	0.09	0.71	1.49	1.10	2.03
Below-average interpersonal skills	-2.291	0.383	-5.99	< .001	-3.04	-1.54	0.10	0.05	0.21
Above-average interpersonal skills	0.340	0.186	1.83	.067	-0.02	0.70	1.41	0.98	2.02

Note. Bayesian Information Criterion = 2935.41; Akaike Information Criterion = 2665.10. Wald $X^2_{(40)}$ for the overall model = 1142.74. $p < .001$. Tjur's pseudo $R^2 = .47$. Upper and lower limits were calculated using confidence intervals of 95%.

Table 4.1b

Case-Specific Effects From the Alternative-Specific Conditional Regression

	b	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*	Wald test *p*
teachXtchexp	0.001	0.001	1.65	.100	0.00	0.00	1.00	1.00	1.00	
teachXadminexplo	0.007	0.012	0.56	.577	-0.02	0.03	1.01	0.98	1.03	.705
teachXadminexphi	-0.004	0.012	-0.35	.728	-0.03	0.02	1.00	0.97	1.02	.705
teachXedlevel	0.004	0.010	0.46	.649	-0.01	0.02	1.00	0.99	1.02	
teachXinstrleadlo	0.004	0.013	0.26	.791	-0.02	0.03	1.00	0.98	1.03	.576
teachXinstrleadhi	0.009	0.009	1.05	.294	-0.01	0.03	1.01	0.99	1.03	.576
teachXmgrleadlo	0.013	0.015	0.90	.366	-0.02	0.04	1.01	0.98	1.04	.512
teachXmgrleadhi	0.006	0.008	0.79	.428	-0.01	0.02	1.01	0.99	1.02	.512
teachXintprleadlo	0.021	0.017	1.25	.212	-0.01	0.05	1.02	0.99	1.06	.097
teachXintprleadhi	0.017	0.009	1.80	.071	0.00	0.03	1.02	1.00	1.04	.097
hicredXtchexp	0.008	0.018	0.43	.667	-0.03	0.04	1.01	0.97	1.04	
hicredXadminexplo	-0.306	0.239	-1.28	.200	-0.77	0.16	0.74	0.46	1.18	.417
hicredXadminexphi	-0.171	0.213	-0.81	.421	-0.59	0.25	0.84	0.56	1.28	.417
hicredXedlevel	0.259	0.170	1.52	.128	-0.07	0.59	1.30	0.93	1.81	
hicredXinstrleadlo	0.213	0.214	0.99	.320	-0.21	0.63	1.24	0.81	1.88	.038
hicredXinstrleadhi	0.441	0.177	2.50	.013	0.09	0.79	1.55	1.10	2.20	.038
hicredXmgrleadlo	0.244	0.269	0.90	.366	-0.28	0.77	1.28	0.75	2.16	.338
hicredXmgrleadhi	-0.153	0.138	-1.11	.267	-0.42	0.12	0.86	0.66	1.12	.338
hicredXintprleadlo	-0.369	0.273	-1.35	.176	-0.90	0.17	0.69	0.41	1.18	.158
hicredXintprleadhi	0.184	0.141	1.30	.192	-0.09	0.46	1.20	0.91	1.58	.158

(Continued)

Table 4.1b (continued)

Case-Specific Effects From the Alternative-Specific Conditional Regression

	b	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*	Wald test *p*
needsXtchexp	0.003	0.014	0.23	.816	-0.02	0.03	1.00	0.98	1.03	
needsXadminexplo	0.188	0.200	0.94	.347	-0.20	0.58	1.21	0.82	1.78	.317
needsXadminexphi	-0.117	0.195	-0.60	.546	-0.50	0.26	0.89	0.61	1.30	.317
needsXedlevel	-0.021	0.158	-0.13	.895	-0.33	0.29	0.98	0.72	1.34	
needsXinstrleadlo	-0.476	0.223	-2.13	.033	-0.91	-0.04	0.62	0.40	0.96	.044
needsXinstrleadhi	0.030	0.134	0.22	.825	-0.23	0.29	1.03	0.79	1.34	.044
needsXmgrleadlo	-0.084	0.264	-0.32	.750	-0.60	0.43	0.92	0.55	1.54	.769
needsXmgrleadhi	0.086	0.146	0.58	.559	-0.20	0.37	1.09	0.82	1.45	.769
needsXintprleadlo	0.231	0.285	0.81	.419	-0.33	0.79	1.26	0.72	2.20	.697
needsXintprleadhi	0.046	0.135	0.34	.733	-0.22	0.31	1.05	0.80	1.36	.697

Note. teach = case-specific variable (CSV) representing teaching experience (years); hicred = CSV representing those who hold either an advanced certificate or a doctorate; needs = CSV variable representing perceived need level of school; tchexp = principal-candidate specific variable (PCSV) representing teaching experience (years); adminexplo = PCSV representing no previous administrative experience; adminexphi = PCSV representing previous experience as a principal; instrleadlo = PCSV representing below-average instructional leadership abilities; instrleadhi = PCSV representing above-average instructional leadership abilities; mgrleadlo = PCSV representing below-average managerial leadership abilities; mgrleadhi = PCSV representing above-average managerial leadership abilities; intprleadlo = PCSV representing below-average interpersonal leadership abilities; intprleadhi = PCSV representing above-average interpersonal leadership abilities. Wald $X^2_{(2)}$ for hicredXinstrlead = 6.56; Wald $X^2_{(2)}$ for needsXinstrlead = 6.24. Upper and lower limits were calculated using confidence intervals of 95%.

The interpersonal skills of a candidate also are an important factor in the selection process. The odds of candidates who have below-average interpersonal skills being selected over a candidate with average interpersonal skills are reduced on average by 90% ($p < .001$). With 95% confidence, this disadvantage could be as great as 95% but it would not be expected to be less than 79%.

The analysis revealed only two statistically significant case-specific factors in the single-class, asclogit model—and both factors were found to affect the way the teacher participants view the candidates' instructional leadership skills. Teachers with higher educational credentials (i.e., advanced certificates or doctorates) were found to assign greater value ($p = .01$) to above-average instructional leadership skills. Further, teachers in high-needs schools expressed great concern ($p = .03$) for principal candidates who have below-average skills in instructional leadership. No other teacher-specific characteristics were found to affect the teachers' preferences at a statistically significant level in judging the characteristics of candidates for principalships.

Results of the Latent Class Conditional Logistic Regression

To determine the number of latent classes that might exist within the choice data from the experiment, a series of three latent class conditional logistic regression analyses (all $N = 219$) were conducted, specifying 2-, 3-, and 4-latent classes. AIC and BIC statistics were calculated for each model, as shown in Table 4.2, and they were considered along with the AIC and BIC from the asclogit in determining the model specification that provides the best statistical fit.

Table 4.2

Akaike and Bayesian Information Criteria for Latent Class Models in the Study

Number of Classes	Source	AIC	BIC
1	asclogit	2665.10	2935.41
2	lclogit	2572.73	2654.07
3	lclogit	2508.56	2637.35
4	lclogit	2467.35	2643.59

Note. asclogit = alternative-specific conditional logistic regression. lclogit = latent class conditional logistic regression.

As described in Chapter 3, a model presenting the lowest AIC and BIC would generally be deemed the best fit as long as it is also theoretically meaningful. As the table shows, in this case the AIC would suggest a 4-latent class specification, whereas the BIC would suggest a 3-latent class specification. When the AIC and BIC suggest specifying different numbers of latent classes, I generally give the BIC a higher priority in model selection because it imposes a greater penalty for model complexity than does the AIC (Dziak, Coffman, Lanza, & Li, 2012). Accordingly, I determined that (a) the single-class model produced by asclogit is inadequate to capture the richness and diversity within the choice data, and (b) the 3-latent class model is the best fitting model based on both the statistical evidence, its theoretical meaningfulness, and the general goal of parsimony in science.

Analysis of the Best-Fitting Conditional Logistic Regression Model

The 3-latent class lclogit model selected as the best fit was found to be highly statistically significant ($p < .001$, Tjur's pseudo $R^2 = 0.46$). The candidate-related factor preferences and the potential effects of the teacher-related factors are discussed for each of the three latent class models in turn below.

Alternative-specific, candidate-related preferences within Latent Class 1. As presented in Table 4.3, all of the candidate-specific attributes were found to have statistically significant effects (all $p \leq .03$) on the teachers' choices among candidates with the sole exception of whether a candidate holds a doctoral degree, which did not have a statistically significant impact on the selection decisions ($p = .62$). The Wald chi-square tests of linear composites revealed that the joint effects were highly statistically significant for administrative experience (Wald $X^2_{(2)} = 28.19$, $p < .001$), instructional skills (Wald $X^2_{(2)} = 75.22$, $p < .001$), managerial experience (Wald $X^2_{(2)} = 27.5$, $p < .001$), and interpersonal skills (Wald $X^2_{(2)} = 135.09$, $p < .001$).

Additionally, the years of teaching experience held by a candidate had a statistically significant ($p = .002$) effect on the teachers' recommendations of candidates for principalships. For each additional year of teaching experience that a candidate possesses, the odds of being selected increase by about 4.7% (compounded). For example, the odds of being selected for a candidate with 15 years of teaching experience would be 73.3% greater than for one with only five years teaching experience (calculated as $1.047^{15} - 1.047^{5}$). With 95% confidence, the increase in odds can be as high as 8% per year of experience would not be less than as 2% per year, holding all other factors constant.

Administrative experience is also a substantial consideration in Latent Class 1. Candidates with no administrative experience have odds of being recommended that are 33% ($p = .03$) lower than those of candidates with some administrative experience who have not served in a principalship. With 95% confidence, those odds might be reduced by as much as 54% or as little as 3%. Further, the odds of a candidate who has previously served as a principal being selected are 48% ($p = .03$) higher than those with some administrative experiences who have not

held a principalship. With 95% confidence, the advantage in odds could be as little as 4% or as great as 111%, holding all other factors constant.

Candidates who have below-average instructional skills have odds of being selected that are 70% ($p < .001$) less than the odds of candidates with average instructional skills. With 95% confidence, the odds of being selected may be reduced as much as 78% or as little as 58% for candidates with below-average instructional skills. In comparison, having above-average instructional skills increases candidates' odds of being selected by 103% ($p < .001$). With 95% confidence, the increase in the odds would not be less than 49% and might be as great as 176%.

On average, the odds of being selected for candidates whose managerial skills are below-average are 60% ($p < .001$) lower than for those who have average skills in that area. With 95% confidence, the odds of being selected may be reduced by as much 74% and would be at least 38% lower than the odds for a competitor with average managerial skills. There is also a statistically significant effect on candidate selection when candidates have above-average managerial skills in contrast to having average managerial skills. The odds of candidates with above-average managerial skills being selected increase by about 68% ($p = .01$) in comparison to candidates whose managerial skills are average. With 95% confidence, the odds advantage of having above-average managerial skills would be no less than 23% and might be as high as 129%.

Interpersonal skills are also a major factor in the principal selection process under Latent Class 1. The odds of candidates with less-than-average interpersonal skills being selected decrease by 94% ($p < .001$) compared to the odds of candidates with typical interpersonal skills. With 95% confidence, for a candidate with below-average interpersonal skills, the odds of being selected may fall as much as 97% but would be reduced by at least 89%. By contrast,

candidates' odds of being selected are 186% ($p < .001$) greater when they have above-average interpersonal skills compared to those with average interpersonal skills, holding all other factors constant. Within Latent Class 1, having above-average interpersonal skills increases the odds of selection by at least 129% and perhaps as much as 259% over candidates with average interpersonal skills.

The candidate-preferences for Latent Class 1 are summarized graphically in Figure 4.1. As that figure shows, Latent Class 1 places the greatest value on candidates' interpersonal skills followed by instructional leadership skills, managerial skills, and administrative experience. The impact of teaching experience varies by the number of years of experience, and holding a doctorate does not have a statistically significant effect on the odds of being selected. For a candidate with a substantial amount of teaching experience, that factor may indeed be the most important, but for those with less teaching experience, that factor may be less important than the others.

Case-specific, teacher characteristics associated with Latent Class 1. As shown in Table 4.4, no statistically significant inferences may be drawn in Latent Class 1 about the effects of the characteristics of the teacher participants on their judgments about the candidate-specific factors in selecting a principal. No teacher-specific characteristic distinguishes Latent Class 1 from either of the other two latent classes at a statistically significant level.

Although no inferences can be drawn from the lclogit results about how the teacher characteristics included in the model affect teachers' likelihood of selecting specific candidates, the findings do indicate the prevalence of the preferences set represented as Latent Class 1. The first latent class includes almost half (47.6%) of the cases and is larger than Latent Class 2 by a factor of 1.53 and larger than Latent Class 3 by a factor of 2.25.

Table 4.3

Latent Class 1 From the 3-Latent Class Model

Candidate-specific attribute	*b*	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*	Wald test *p*
Teaching experience	0.05	0.01	3.10	.002	0.02	0.07	1.05	1.02	1.08	
No administrative experience	-0.40	0.19	-2.13	.033	-0.77	-0.03	0.67	0.46	0.97	< .001
Experience as a principal	0.39	0.18	2.16	.031	0.04	0.75	1.48	1.04	2.11	< .001
Doctorate	0.07	0.15	0.49	.623	-0.22	0.36	1.08	0.81	1.43	
Below-average instructional skills	-1.19	0.17	-6.98	< .001	-1.53	-0.86	0.30	0.22	0.42	< .001
Above-average instructional skills	0.71	0.16	4.48	< .001	0.40	1.01	2.03	1.49	2.76	< .001
Below-average managerial skills	-0.91	0.22	-4.14	< .001	-1.34	-0.48	0.40	0.26	0.62	< .001
Above-average managerial skills	0.52	0.16	3.30	.001	0.21	0.83	1.68	1.23	2.29	< .001
Below-average interpersonal skills	-2.84	0.34	-8.31	< .001	-3.51	-2.17	0.06	0.03	0.11	< .001
Above-average interpersonal skills	1.05	0.12	9.13	< .001	0.83	1.28	2.86	2.29	3.59	< .001

Note. Upper and lower limits were calculated using 95% confidence intervals.

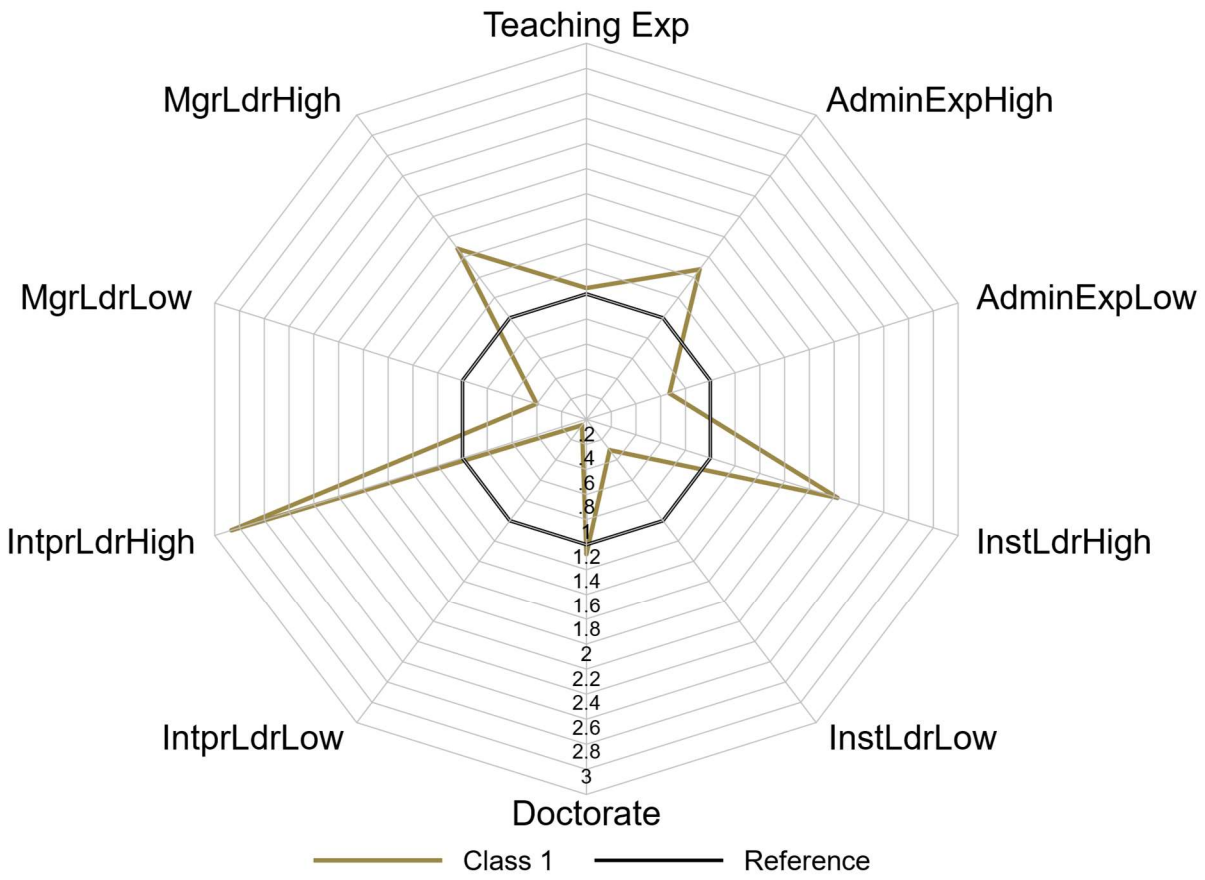

Figure 4.1. Radar graph of candidate-specific attributes by odds ratio for Latent Class 1. Teaching Exp = teaching experience; AdminExpHigh= previous principal experience; AdminExpLow = no previous administrative experience; InstLdrHigh = above-average instructional leadership skills; InstLdrLow = below-average instructional leadership skills; Doctorate = doctorate earned; IntprLdrLow = below-average interpersonal leadership skills; IntprLdrHigh = above-average interpersonal leadership skills; MgrLdrLow = below-average managerial leadership skills; MgrLdrHigh = Above-average managerial leadership skills. Teach Exp is a continuous variable, the effect of the variable increases with each additional year of teaching experience. See Table 4.3 for the *p*-values of the odds ratios for Latent Class 1.

Table 4.4

Case-specific Attributes From the 3-Latent Class Model

Case-specific attribute	*b*	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*
Class 1									
Teaching experience	0.02	0.03	0.93	.353	-0.03	0.08	1.02	0.97	1.08
Hi credential	1.84	1.14	1.62	.106	-0.39	4.07	6.29	0.68	58.40
Need level of school	-0.54	0.49	-1.09	.275	-1.50	0.43	0.59	0.22	1.53
constant	0.09	0.59	0.15	.884	-1.07	1.24	1.09	0.34	3.45
Class 2									
Teaching experience	-0.01	0.03	-0.46	.643	-0.07	0.04	0.99	0.93	1.04
Hi credential	0.92	1.17	0.79	.431	-1.37	3.21	2.51	0.25	24.82
Need level of school	-0.44	0.48	-0.90	.366	-1.38	0.51	0.65	0.25	1.66
constant	0.67	0.57	1.19	.236	-0.44	1.79	1.96	0.64	5.99
Class 3									
Reference class									

Note. Hi credential = advanced certificate or doctorate. Upper and lower limits were calculated using confidence intervals of 95%.

Alternative-specific, candidate-related preferences within Latent Class 2. Each of the candidate-specific attributes in Latent Class 2, as displayed in Table 4.5, were found to be statistically significant (all $p \leq .04$), except for below-average instructional skills ($p = .09$) and holding a doctorate ($p = .49$). The results of Wald chi-square tests revealed that the joint effects for administrative experience (Wald $X^2_{(2)} = 14.4$, $p < .001$), instructional skills (Wald $X^2_{(2)} = 15.59$, $p < .001$), managerial experience (Wald $X^2_{(2)} = 31.13$, $p < .001$), and interpersonal skills (Wald $X^2_{(2)} = 83.23$, $p < .001$) were highly statistically significant.

The effect of candidates' teaching experience within Latent Class 2 was found to be statistically significant ($p = .01$). For each additional year of teaching experience, the odds of being selected increase by about 5% (compounded), when all other factors in the analysis are taken into account. For example, the odds of being selected for a candidate with 15 years of teaching experience would be 80.3% greater than for a candidate with only five years teaching experience (calculated as $1.05^{15} - 1.05^{5}$). Considering the 95% confidence interval, the odds of being selected would be expected to increase no less than 1% and might be as high as 9% for each year of teaching experience, holding all other factors constant.

In the view of Latent Class 2, the odds of candidates' being selected decrease by 37% ($p = .04$) when they have no previous administrative experience compared to other candidates who have had administrative experience but not as a principal. With 95% confidence, the odds of being selected may be as much 59% lower or as little as 3% lower for candidates with administrative experience other than having served as a principal, holding all other variables in the experiment constant. Conversely, candidates who have previously served as a principal have odds of being selected that are 93% ($p = .02$) greater than candidates who have some administrative experience but have not been a school principal. With 95% confidence, the odds

of being selected will be at least 9% better and may be as much as 241% better for candidates who have been a principal before.

Instructional skills have a highly statistically significant effect (Wald $X^2_{(2)} = 15.59$, $p < .001$) on the choice preferences of members of Latent Class 2. Specifically, there is a statistically significant effect on the choices that teachers make when candidates perceived instructional skills are above-average compared to just average. In fact, candidates who have above-average instructional skills double their odds of selection over those with average skills in that area ($p = .02$). With 95% confidence, candidates who have above-average instructional skills, compared to average instructional skills, would see their odds of being selected increase by as much as 261%, and by no less than 11%. These relationships provide evidence that the teachers whose views are reflected by Latent Class 2 only give significant attention to candidates' instructional leadership abilities when the candidates have above-average sills in that area. The difference between below-average and average in this area was not found to be statistically significant ($p = .09$).

The odds of being selected for candidates who have below-average managerial skills are 99% ($p < .001$) lower than those for candidates who have average managerial skills. With 95% confidence, candidates with below-average managerial skills have odds of being selected that are at least 89% lower and perhaps as much as 100% lower than those with average managerial skills. Conversely, the odds of being selected for candidates who have above-average managerial skills, compared to those with average managerial skills, are more than double (108% increase, $p < .001$). With 95% confidence, the odds of candidates being selected when they have above-average managerial skills compared to average managerial skills are as least 48% higher and might be as much as 192% higher.

Candidates' interpersonal skills have a highly statistically significant effect (Wald $X^2_{(2)} = 135.09$, $p < .001$) on the recommendations that the members of Latent Class 2 make. When candidates have below-average interpersonal skills, their odds of being selected are 94% ($p < .001$) lower than the odds of those who have average interpersonal skills. With 95% confidence, the odds of being selected could drop as much as 97% and would decrease by at least 89%. On the other hand, if candidates have above-average interpersonal skills, in contrast to average, their odds of being selected by a member of Latent Class 2 increase by 145% ($p < .001$). With 95% confidence, the odds of candidates who have above-average interpersonal skills being selected compared to those with average interpersonal skills are at least 52% greater and might be as much as 278% higher.

Figure 4.2 summarizes the candidate-specific preferences for Latent Class 2 graphically. As this figure shows, the preferences reflected by Latent Class 2 give the greatest attention to candidates' interpersonal skills. Subsequently, the managerial skills of candidates are the second most important, followed by instructional skills, and lastly previous administrative experience. Candidates' teaching experience is important, but the degree of its importance is dependent on the number of years they have had in the classroom. Therefore, teaching experience becomes a greater factor for those candidates who have been a teacher for longer periods of time. Finally, the education level of candidates—specifically whether they hold a doctorate—does not have a marked (i.e., statistically significant) impact on candidates' likelihoods of being recommended by teachers for a principalship.

Table 4.5

Latent Class 2 From the 3-Latent Class Model

Candidate-specific attribute	*b*	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*	Wald test *p*
Teaching experience	0.05	0.02	2.46	.014	0.01	0.09	1.05	1.01	1.09	
No administrative experience	-0.46	0.22	-2.09	.037	-0.89	-0.03	0.63	0.41	0.97	< .001
Experience as a principal	0.66	0.29	2.26	.024	0.09	1.23	1.93	1.09	3.41	< .001
Doctorate	0.20	0.29	0.70	.486	-0.36	0.76	1.22	0.70	2.15	
Below-average instructional skills	-0.46	0.27	-1.72	.086	-0.98	0.06	0.63	0.38	1.07	< .001
Above-average instructional skills	0.69	0.30	2.31	.021	0.11	1.28	2.00	1.11	3.61	< .001
Below-average managerial skills	-4.26	1.05	-4.06	< .001	-6.31	-2.20	0.01	0.00	0.11	< .001
Above-average managerial skills	0.73	0.17	4.20	< .001	0.39	1.07	2.08	1.48	2.92	< .001
Below-average interpersonal skills	-2.85	0.33	-8.73	< .001	-3.48	-2.21	0.06	0.03	0.11	< .001
Above-average interpersonal skills	0.90	0.22	4.04	< .001	0.46	1.33	2.45	1.58	3.78	< .001

Note. Upper and lower limits were calculated using 95% confidence intervals.

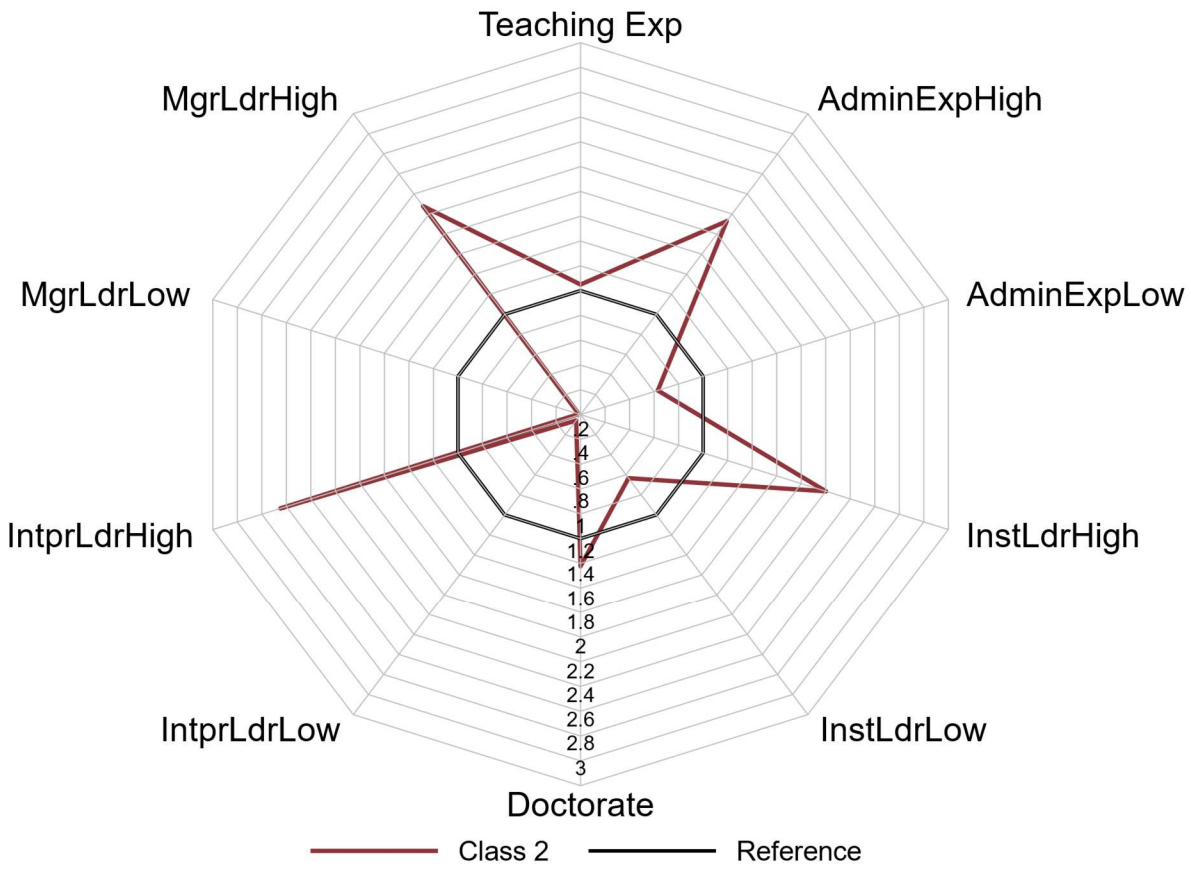

Figure 4.2. Radar graph of candidate-specific attributes by odds ratio for Latent Class 2. Teaching Exp = teaching experience; AdminExpHigh= previous principal experience; AdminExpLow = no previous administrative experience; InstLdrHigh = above-average instructional leadership skills; InstLdrLow = below-average instructional leadership skills; Doctorate = doctorate earned; IntprLdrLow = below-average interpersonal leadership skills; IntprLdrHigh = above-average interpersonal leadership skills; MgrLdrLow = below-average managerial leadership skills; MgrLdrHigh = Above-average managerial leadership skills. Teach Exp is a continuous variable, the effect of the variable increases with each additional year of teaching experience. See Table 4.5 for the *p*-values of the odds ratios for Latent Class 2.

Case-specific, teacher characteristics associated with Latent Class 2. As shown in Table 4.4 above, no case-specific variable was found to have a statistically significant effect on teachers' evaluations of any candidate-specific factor when considering the preferences reflected by Latent Class 2. Latent Class 2 does not have any teacher-specific characteristics that distinguish it from either of the other two latent classes at a statistically significant level. Although no teacher-specific factor was able to predict membership in Latent Class 2, this latent class was found to be the second largest class with just under a third (31.1%) of cases classified into the second latent class. This class is larger than Latent Class 3 by a factor of 1.47 and is about two-thirds (68.1%) the size of Latent Class 1.

Alternative-specific, candidate-related preferences within Latent Class 3. As shown in Table 4.6, all of the candidate-related attributes except above-average interpersonal skills (p = .20) were found to have a statistically significant effect (all $p \leq .04$) on the probability of being selected in the preferences modeled by Latent Class 3. Specifically, the Wald chi-square tests of linear composites revealed that the joint effects were highly statistically significant for administrative experience (Wald $X^2_{(2)} = 28.19$, $p < .001$), instructional skills (Wald $X^2_{(2)} = 75.22$, $p < .001$), managerial experience (Wald $X^2_{(2)} = 27.5$, $p < .001$), and interpersonal skills (Wald $X^2_{(2)} = 135.09$, $p < .001$).

The number of years teaching experience that candidates have was found to have a statistically significant impact on the odds of being selected under the preferences reflected in Latent Class 3. For each additional year of teaching experience, a candidate's odds of being selected increase by about 3.2% compounded (p = .04) when all other factors are held at their means. For example, the odds of being selected are 43.3% greater for a candidate with 15 years of teaching experience than for a competitor with only five years teaching experience (calculated

as 1.032^{15} - 1.032^{5}). With 95% confidence, the odds of a candidate's being selected may not increase at all or may increase by as much as 7% (compounded) for each additional year of teaching experience.

The odds of being selected for candidates' who hold a doctoral degree, are almost one-third (32%, $p = .02$) worse than for those without a doctorate. With 95% confidence, the odds of candidates with doctorates being selected may be cut in half (51%) compared to those whose highest credential is less than a doctorate, holding all other factors in the experiment constant. At best, candidates with doctorates face odds of being selected that are 6% lower than those without doctoral degrees.

In the preferences set reflected in Latent Class 3, candidates who have no previous administrative experience have odds of being selected that are 49% ($p = .01$) lower than those of candidates who have had administrative experiences other than a principalship. With 95% confidence, candidates with no previous administrative experience have odds of being selected that may be as much as about two-thirds (68%) lower but at least about one-fifth (19%) lower than their competitors who have some administrative experience but have not been a principal, holding all other factors constant. Conversely, candidates who have been a principal before have odds of being selected that are 78% ($p = .001$) greater than candidates with some administrative experience who have not been a principal. With 95% confidence, the odds of being selected can increase as much as 153% if a candidate has been a principal before compared to those who have not served as a principal but have had some administrative experience. That advantage would be at least a quarter (25%) under any circumstance, after accounting for all other factors in the experiment.

A highly statistically significant effect was found when teachers whose preferences are modeled by Latent Class 3 made choices between candidates with below-average instructional skills and those with average instructional skills. The odds of being selected for candidates with below-average instructional skills are 80% ($p < .001$) lower than those with average instructional skills. With 95% confidence, the odds of being selected for candidates with below-average instructional skills may decrease by as much as 88% or as little as 66% compared to those with average instructional skills, holding all other variables in the experiment constant. For candidates with above-average instructional skills, the odds of being selected are 36% ($p = .04$) greater than those with average instructional skills. With 95% confidence, the odds of candidates with above-average instructional skills being selected may be as much as 82% higher and would be no less than 1% higher than those of their competitors with average instructional skills.

Candidates who have below-average managerial skills have odds of being selected that are 80% ($p < .001$) lower than the odds of candidates who are perceived to have average managerial skills. With 95% confidence, these odds may be as much as 87% lower and would be at least 68% lower. The odds of candidates with above-average managerial skills being selected are 67% ($p < .001$) higher than those of candidates with average managerial skills. With 95% confidence, candidates who have above-average managerial skills, compared to those with average managerial skills, have increased odds of selection of at least 25% and perhaps as much as 123%, holding all other factors in the model constant.

Interpersonal skills have a highly statistically significant effect on the odds of selection in the preferences set reflected in Latent Class 3. When candidates with below-average interpersonal skills were compared to candidates with average interpersonal skills, their odds of being selected were found to be 49% ($p = .002$) lower. With 95% confidence, the odds of being

selected for candidates with below-average interpersonal skills, compared to competitors with average skills in this area, may be as much as about two-thirds (66%) lower or as little as about a quarter (23%) lower, with all remaining factors held constant. No statistically significant difference in the odds of being selected between candidates with average and those with above-average interpersonal skills were found in the experiment for Latent Class 3.

In summary, the managerial skills of candidates were found to be the most important factor considered in the preference priorities of Latent Class 3. The value of this characteristic relative to the other factors is represented graphically in Figure 4.3. The second most important candidate-specific attribute for this class was previous administrative experience, followed by instructional skills, and then interpersonal skills. The education level of candidates also was found to be of value to teachers, as those candidates without doctoral degrees having better odds of selection that those with doctorates. Lastly, candidates teaching experience was found to be an influential factor in the recommendation process. The consideration of this factor is exponentially more important for candidates for each additional year of teaching experience.

Case-specific, teacher characteristics associated with Latent Class 3. The teacher-specific factors of Latent Class 3, as shown in Table 4.4, do not reveal any statistically significant effects on the decisions that teachers make when recommending candidates for principalships. Additionally, Latent Class 3 does not have any teacher-specific characteristics that distinguish it from either of the other two latent classes at a statistically significant level. With just over a fifth (21.2%) of the teachers classified as members of Latent Class 3, this class ranks as the smallest of the latent classes. In fact, Latent Class 3 is less than half (45%) the size of Latent Class 1 and is only about two-thirds (68%) the size of Latent Class 1.

Table 4.6

Latent Class 3 From the 3-Latent Class Model

Candidate-specific attribute	*b*	*SE*	*z*	*p*	*LL-b*	*UL-b*	*OR*	*LL-OR*	*UL-OR*	Wald test *p*
Teaching experience	0.03	0.02	2.05	.040	0.00	0.06	1.03	1.00	1.07	
No administrative experience	-0.67	0.24	-2.83	.005	-1.14	-0.21	0.51	0.32	0.81	< .001
Experience as a principal	0.58	0.18	3.20	.001	0.22	0.93	1.78	1.25	2.53	< .001
Doctorate	-0.39	0.17	-2.32	.020	-0.72	-0.06	0.68	0.49	0.94	
Below-average instructional skills	-1.60	0.27	-5.95	< .001	-2.12	-1.07	0.20	0.12	0.34	< .001
Above-average instructional skills	0.30	0.15	2.04	.041	0.01	0.60	1.36	1.01	1.82	< .001
Below-average managerial skills	-1.61	0.23	-6.91	< .001	-2.06	-1.15	0.20	0.13	0.32	< .001
Above-average managerial skills	0.51	0.15	3.45	< .001	0.22	0.80	1.67	1.25	2.23	< .001
Below-average interpersonal skills	-0.67	0.21	-3.16	.002	-1.09	-0.26	0.51	0.34	0.77	< .001
Above-average interpersonal skills	0.21	0.16	1.28	.199	-0.11	0.53	1.23	0.90	1.69	< .001

Note. Upper and lower limits were calculated using 95% confidence intervals.

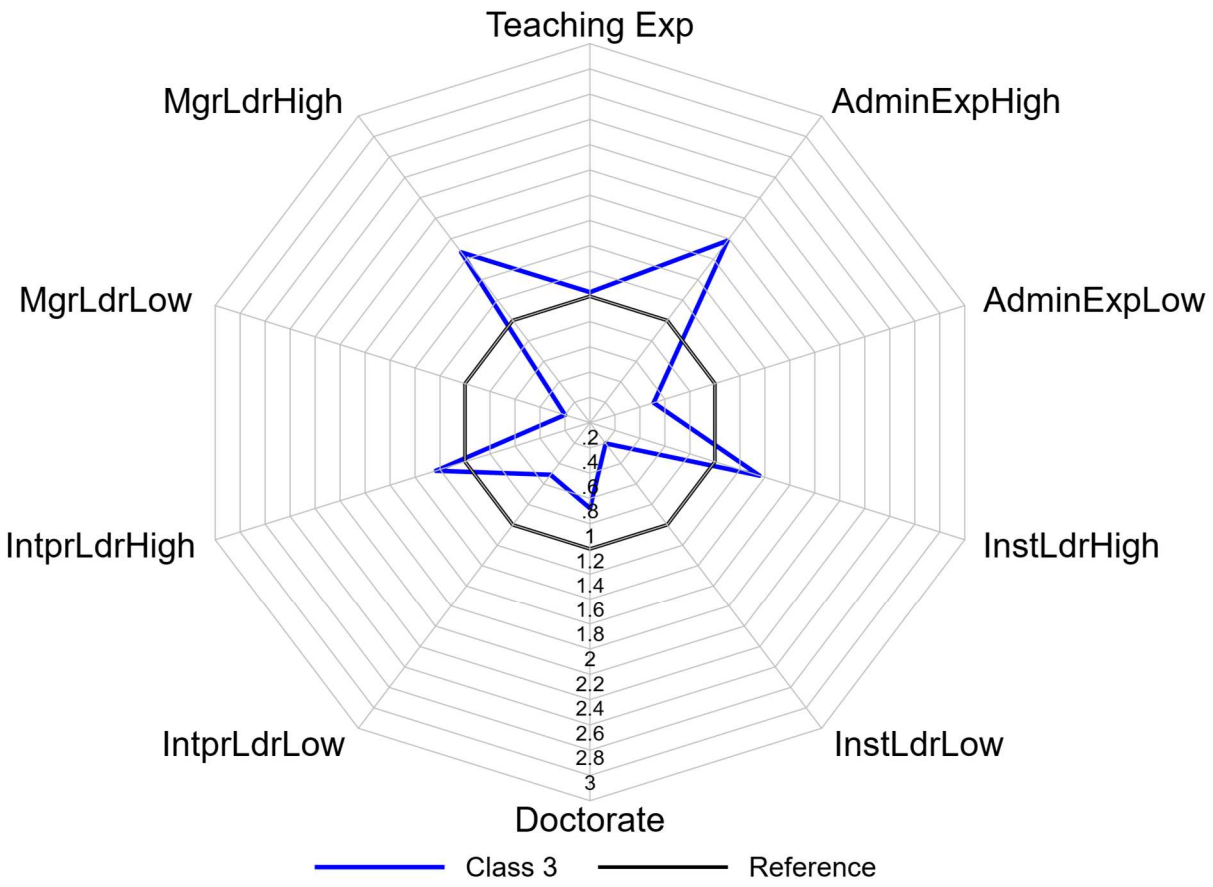

Figure 4.3. Radar graph of candidate-specific attributes by odds ratio for Latent Class 3. Teaching Exp = teaching experience; AdminExpHigh= previous principal experience; AdminExpLow = no previous administrative experience; InstLdrHigh = above-average instructional leadership skills; InstLdrLow = below-average instructional leadership skills; Doctorate = doctorate earned; IntprLdrLow = below-average interpersonal leadership skills; IntprLdrHigh = above-average interpersonal leadership skills; MgrLdrLow = below-average managerial leadership skills; MgrLdrHigh = Above-average managerial leadership skills. Teach Exp is a continuous variable, the effect of the variable increases with each additional year of teaching experience. See Table 4.6 for the *p*-values of the odds ratios for Latent Class 3.

Preferences for Alternative-Specific, Candidate-Related Characteristics

Figure 4.4 presents a series of line graphs that summarize the alternative-specific candidate related effects for all three latent classes. Each of the latent classes agreed that the overall effects of candidates' previous administrative experiences, instructional skills, managerial skills, and interpersonal skills are highly statistically significant. However, the degree to which they matter is dependent on the latent class. Additionally, as shown in Table 4.7, there is complete agreement among the classes that candidates' teaching experience is important, but again the weights of its value differ among the three classes. The education level of candidates revealed that only one of the classes viewed this candidate-specific trait to be important in their decisions, and that was found to be a negative effect. Comparisons of these factors are discussed below.

Teaching experience. Teaching experience was found to be statistically significant across each of the latent classes. This is a direct contrast to the findings of the alternative-specific conditional regression (see Table 4.1a), which indicates that this factor is not a statistically significant factor in the decision-making process of teachers. Across latent classes, the odds ratios for teaching experience appear to be very close, especially between Latent Class 1 (OR = 1.047) and Latent Class 2 (OR = 1.050). It is important to recognize that the value of teaching experience increases exponentially with each additional year. This means for each year of teaching experience a candidate has, the assigned odds ratio is exponentiated by a factor represented by the number of years. This calculation is carried out for 20 years in Table 4.8.

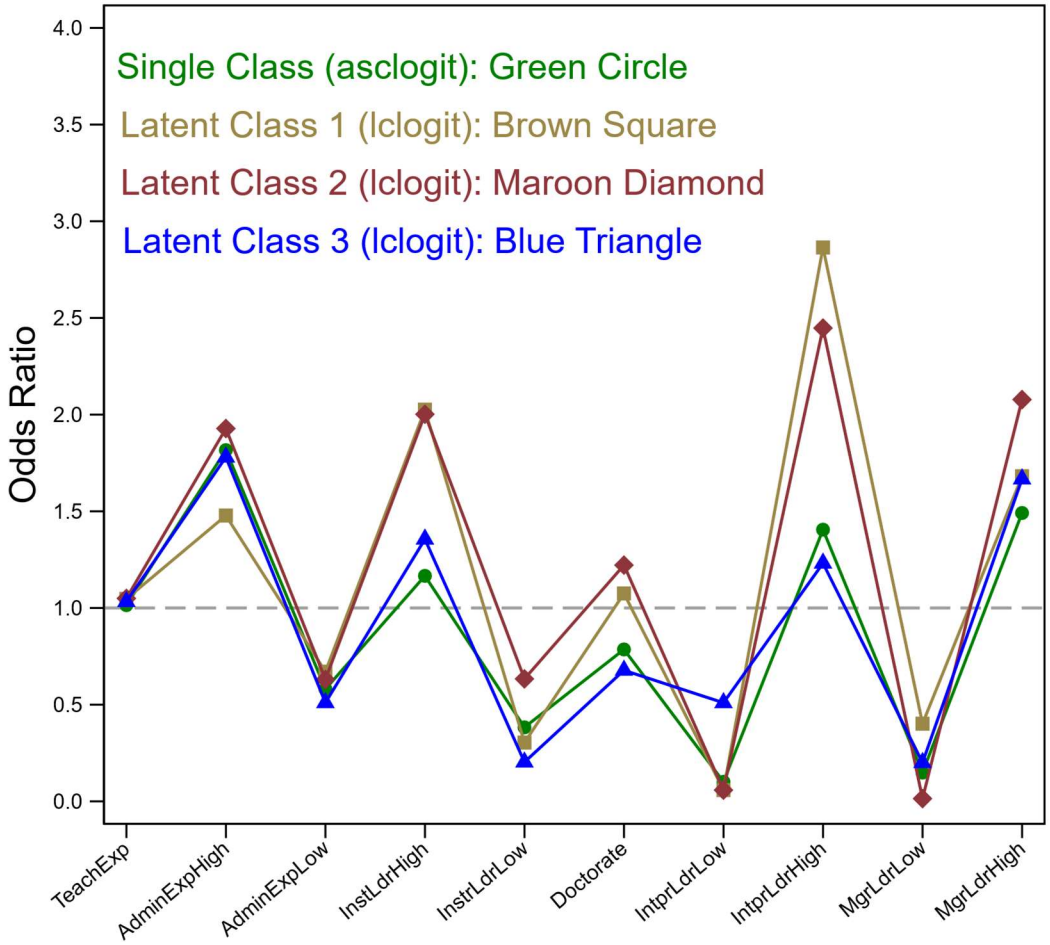

Figure 4.4. Line graph comparing the odds ratios of the single-rational-actor model and the three latent classes across each candidate-specific attribute. The key to the variable names is provided in the note to Figure 4.3. See Tables 4.3, 4.5, and 4.6 for *p*-values of the odds ratios in Latent Classes 1, 2, and 3, respectively. In Latent Class 1, Doctorate is not statistically significant. In Latent Class 2, Doctorate and below-average instructional skills (InstrLdrLow) are not statistically significant. In Latent Class 3, above-average interpersonal skills (IntprLdrHigh) is not statistically significant.

Figure 4.5 presents a graphical representation of these odds ratios. This figure also suggests that the single-rational-actor model is not an accurate indication of the effect that candidates' teaching experience has on teachers' recommendations. Additionally, it can be observed that for the first few years of teaching experience a candidate has, there is a small difference of the effect on teachers across all the latent classes. However, as candidates accumulate additional years past 4 or 5, their previous teaching experience has a greater effect on Latent Class 1 and Latent Class 2 than Latent Class 3.

Table 4.7

Odds Ratios of All Three Latent Classes

	Latent Class 1		Latent Class 2		Latent Class 3	
Candidate-specific attribute	*OR*		*OR*		*OR*	
Teaching experience	1.047	**	1.050	*	1.033	*
No administrative experience	0.671	*	0.630	*	0.510	**
Experience as a principal	1.478	*	1.928	*	1.780	**
Doctorate	1.075		1.222		0.678	*
Below-average instructional skills	0.304	***	0.633		0.203	***
Above-average instructional skills	2.026	***	2.002	*	1.356	*
Below-average managerial skills	0.402	***	0.014	***	0.200	***
Above-average managerial skills	1.682	**	2.078	***	1.667	***
Below-average interpersonal skills	0.058	***	0.058	***	0.510	**
Above-average interpersonal skills	2.864	***	2.448	***	1.232	

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. Exact p values are shown in Tables 4.3, 4.5, and 4.6.

.

Table 4.8

Odds Ratio of Recommendation by Years of Teaching Experience

Teaching experience (years)	*Single class	**Latent Class 1	**Latent Class 2	**Latent Class 3
1	1.015	1.047	1.050	1.033
2	1.030	1.096	1.101	1.067
3	1.045	1.147	1.156	1.102
4	1.060	1.201	1.213	1.138
5	1.075	1.258	1.273	1.175
6	1.091	1.317	1.336	1.214
7	1.107	1.378	1.403	1.254
8	1.123	1.443	1.472	1.295
9	1.140	1.511	1.545	1.337
10	1.157	1.582	1.622	1.381
11	1.174	1.656	1.702	1.426
12	1.191	1.733	1.786	1.473
13	1.208	1.815	1.875	1.522
14	1.226	1.900	1.967	1.571
15	1.244	1.989	2.065	1.623
16	1.262	2.082	2.167	1.676
17	1.281	2.180	2.274	1.731
18	1.299	2.282	2.387	1.788
19	1.319	2.389	2.505	1.847
20	1.338	2.501	2.629	1.907

Note. * $p > .05$; ** $p < .05$. For exact p values see Tables 4.1a, 4.3, 4.5, and 4.6.

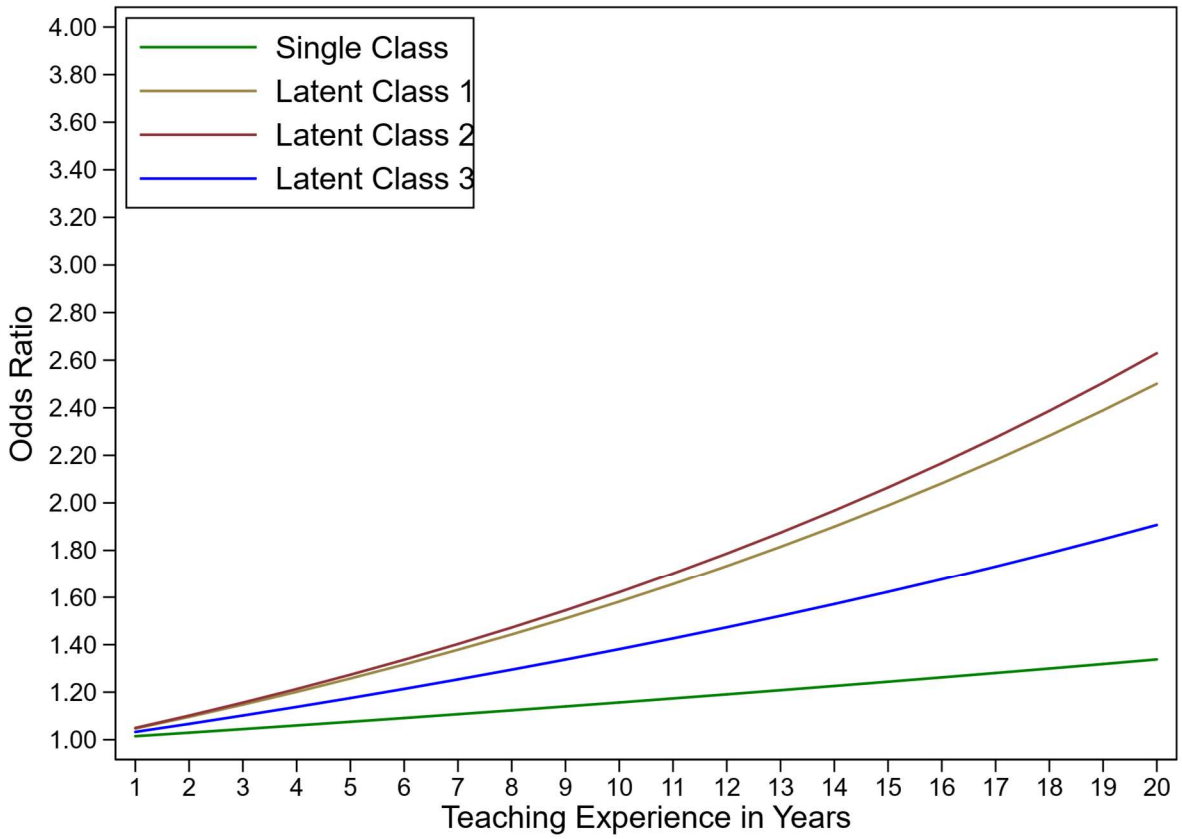

Figure 4.5. Line graph comparing the odds ratios of the three latent classes and the single-rational-actor model across candidates' previous teaching experience measured by years.

Previous administrative experience. Candidates' previous administrative experience is a statistically significant factor for each of the latent classes. In fact, Latent Class 3 views this factor as the second most important factor as presented in Figure 4.6. The views that define Latent Class 2 indicate that candidates' previous administrative experience is the fourth most important factor overall. This factor also was the fourth most important in Latent Class 1.

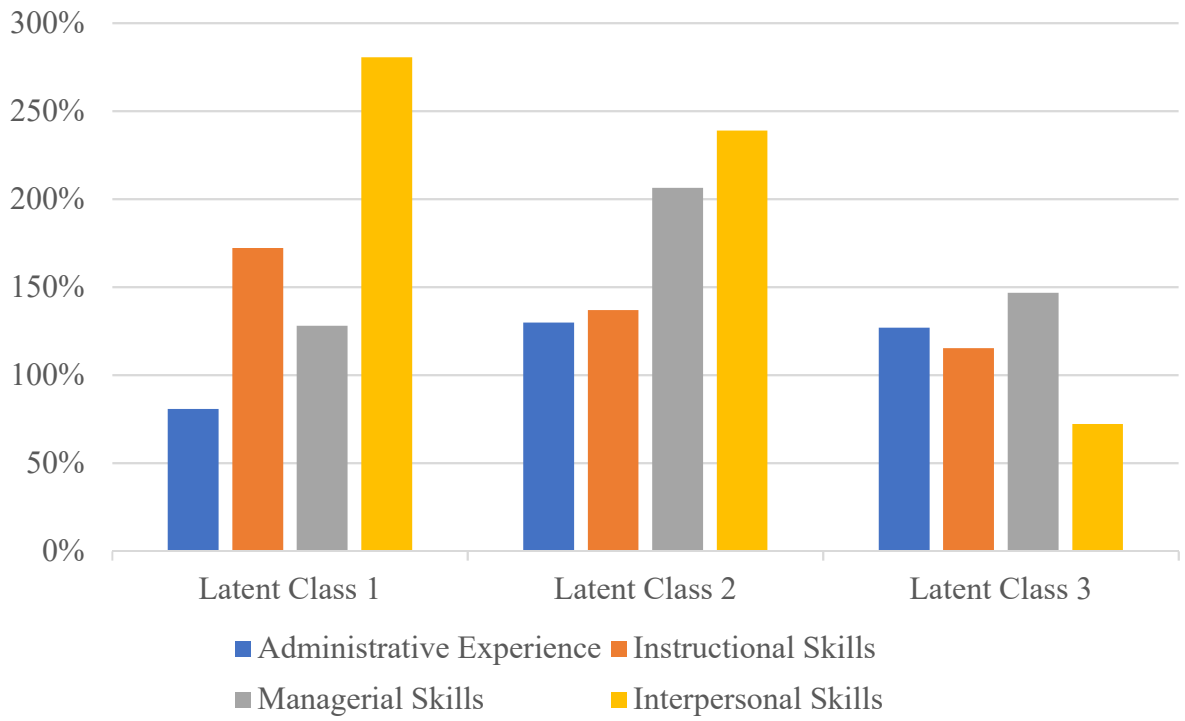

Figure 4.6. Bar graph that displays the absolute values of the distances between the odds ratios of the lowest and highest categories of the four factors shown.

Education level. There was insufficient evidence to conclude for Latent Class 1 and Latent Class 2 that holding a doctorate had any effect on the selection recommendations. In Latent Class 3, on the other hand, holding a doctorate presents a statistically significant disadvantage. In the view of this latent class, the odds of being selected are about a third lower (32%) for candidates who have a doctoral degree versus those who do not.

Instructional skills. Overall, Latent Class 1 views instructional skills as the second most important factor to consider when hiring a candidate, as shown in Figure 4.6. Instructional skills of candidates are ranked as the third most important factor for Latent Class 2. Latent Class 3 also views candidates' overall instructional abilities as the third most important.

Further, in direct contrast with the single-rational-actor model, each of the three latent classes revealed that there is a statistically significant effect on the recommendations that teachers make when comparing candidates who have above-average instructional skills with

those who have average instructional skills (see Table 4.7). This is contrasted with the single-rational-actor model, which indicated that this factor is not statistically significant (see Table 4.1a).

Managerial skills. In the view of Latent Class 3, managerial skills are the most important factor overall as shown in Figure 4.6. Latent Class 2 viewed these skills as being the second most important. In contrast to Latent Classes 2 and 3, the managerial abilities of candidates are ranked as the third most important factor overall for Latent Class 1.

Interpersonal skills. Latent Class 1 and Latent Class 2 views interpersonal skills as the most important consideration, as shown in Figure 4.6, with its influence being greater within Latent Class 1. Latent Class 3 ranks interpersonal skills as one of the least important factors. Additionally, Latent Class 3 is the only class in which no statistically significant difference in effect was found between average and above-average interpersonal skills.

PART TWO

ANALYSIS OF SEMI-STRUCTURED, OPEN-ENDED, NARRATIVE-RESPONSES

After completing the discrete choice components of the survey, participants were offered an optional opportunity to respond to a semi-structured, open-ended, narrative-response question. The question asked participants to respond to the following prompt: *I would also appreciate learning any other insights you would like to share with me about the characteristics you value in candidates seeking to become a high school principal.* Of the 219 eligible responses, a total of 124 (56.6%) participants provided personalized insights and comments. The complete list of the narrative responses can be found in Appendix F.

KH Coder version 3.a.14b was used to produce a univariate frequency table of the occurrences of single words (excluding common words such as prepositions and direct and

indirect article). From that word list, I then used the software to generate code frequencies based on qualitative codes that I developed using a continuous comparative analysis process. The coding scheme that I created is available in Appendix G.

From my review of and reflection on the codes and code frequencies, I classified the seven most frequently appearing codes as initial themes. Each of these selected initial themes appeared in at least one quarter of the 124 narrative responses, and some appeared in more than half of the responses. The initial themes identified in this first stage of the qualitative data analysis and their relative frequencies (as percentages of occurrence within separate responses) are:

- Skills (50.8%),
- Teaching and instruction (50.8%)
- Interpersonal skills (37.1%),
- Experience (36.3%),
- Faculty (26.6%),
- Leadership (25.8%), and
- Management (25.0%).

The next stage of the textual analysis, which was also performed with KH Coder, was to conduct a series of geospatial analyses and to produce visualizations of the statistical relationships (i.e., co-occurrences between codes or words). Those analyses created a multidimensional scaling map based on the co-occurrences of codes, a dendrogram from hierarchical, agglomerative cluster analysis based also on code co-occurrences, and a co-occurrence network graph based on co-occurrence of the 80 most frequent individual words

(excluding common forms such as prepositions and articles). Each of these analyses and their visualizations, along with the perspectives they suggested, is discussed in turn below.

Multidimensional Scaling Analysis of Code Co-occurrences

Multidimensional scaling (MDS) analysis of code co-occurrences revealed four broad clusters, as seen in Figure 4.7. Cluster 1 (highlighted in green) contains code patterns that identify components which deal with building a positive climate or work environment. Codes such as building, inspiring, climate, community, accessibility and visibility, among others, are seen as being closely related in the MDS map. Cluster 2 (highlighted in yellow) reflects code patterns that highlight the seven initial themes described above and related concepts. This cluster represents all the key characteristics that the it appears the "ideal" principal candidate would hold based on my analysis of the open-ended, narrative responses in the survey.

Cluster 3 (highlighted in purple) in the MDS map in Figure 4.7 highlights the importance of candidates' backgrounds in affecting the choices teachers make in their evaluation of candidates. This cluster also suggests that teachers see a relationship between principal-candidates' backgrounds and their abilities to listen, collaborate, be innovative, manage finances, and develop a vision and mission for the schools they will lead. Cluster 4 (highlighted in orange) brings attention to the expectations that teachers hold for how they hope principals will relate to them and how they will be treated. Key words in this further cluster include such terms as consistency, fair, involve, interested, and diverse.

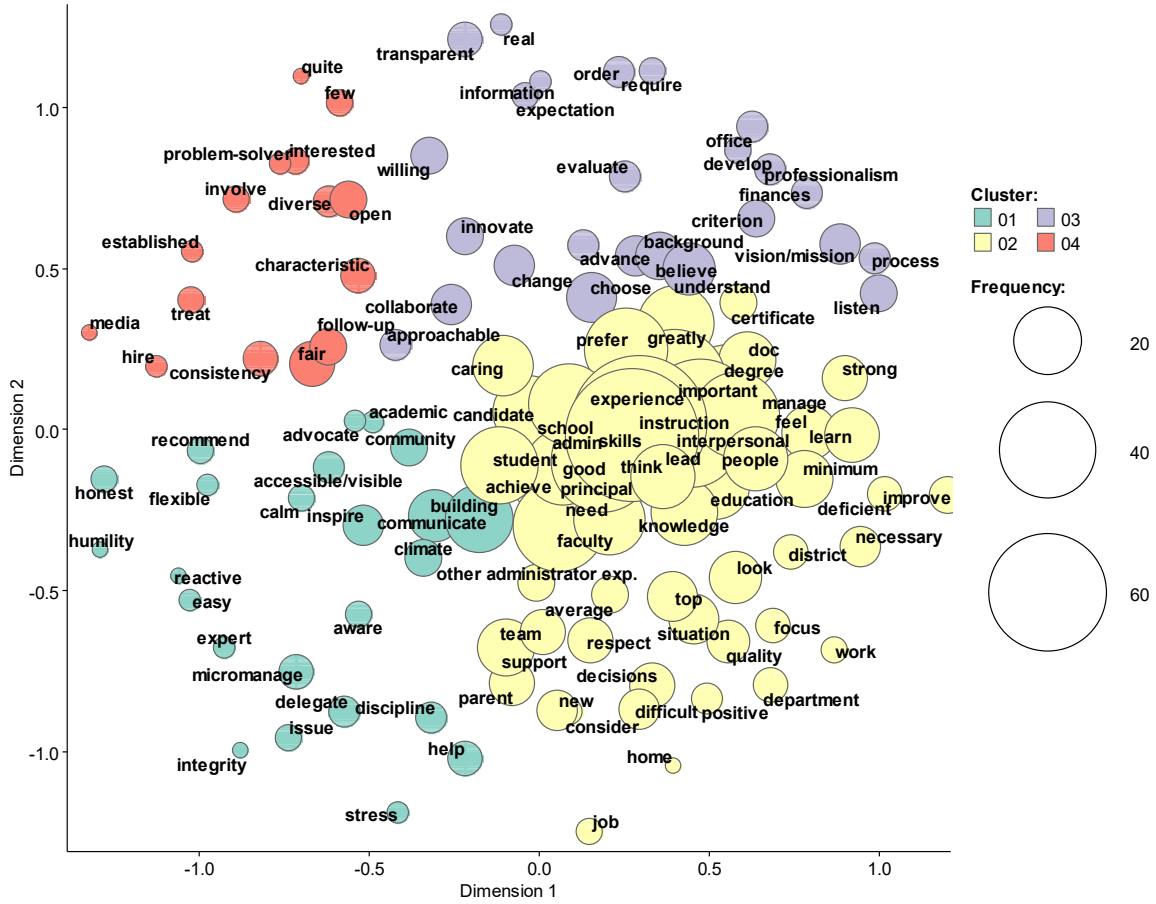

Figure 4.7. Multidimensional scaling map with 4 clusters and bubbles sized by words or minimal code frequencies.

Hierarchical/Agglomerative Cluster Analysis of Code Co-occurrences

To provide another perspective into the insights provided in the responses to the narrative-response question, I conducted hierarchical/agglomerative cluster analysis on the co-occurrences of the codes I described above. After experimenting with multiple approaches specifying varying numbers of clusters to be extracted, I determined the most informative dendrogram was produced when three clusters were specified for codes with a minimum frequency of occurrence of 8 times. The resulting dendrogram is shown in Figure 4.8. That graph also combines histograms of the code frequencies by cluster, and those histograms were used in assessing the relative importance that each cluster held for the teacher participants.

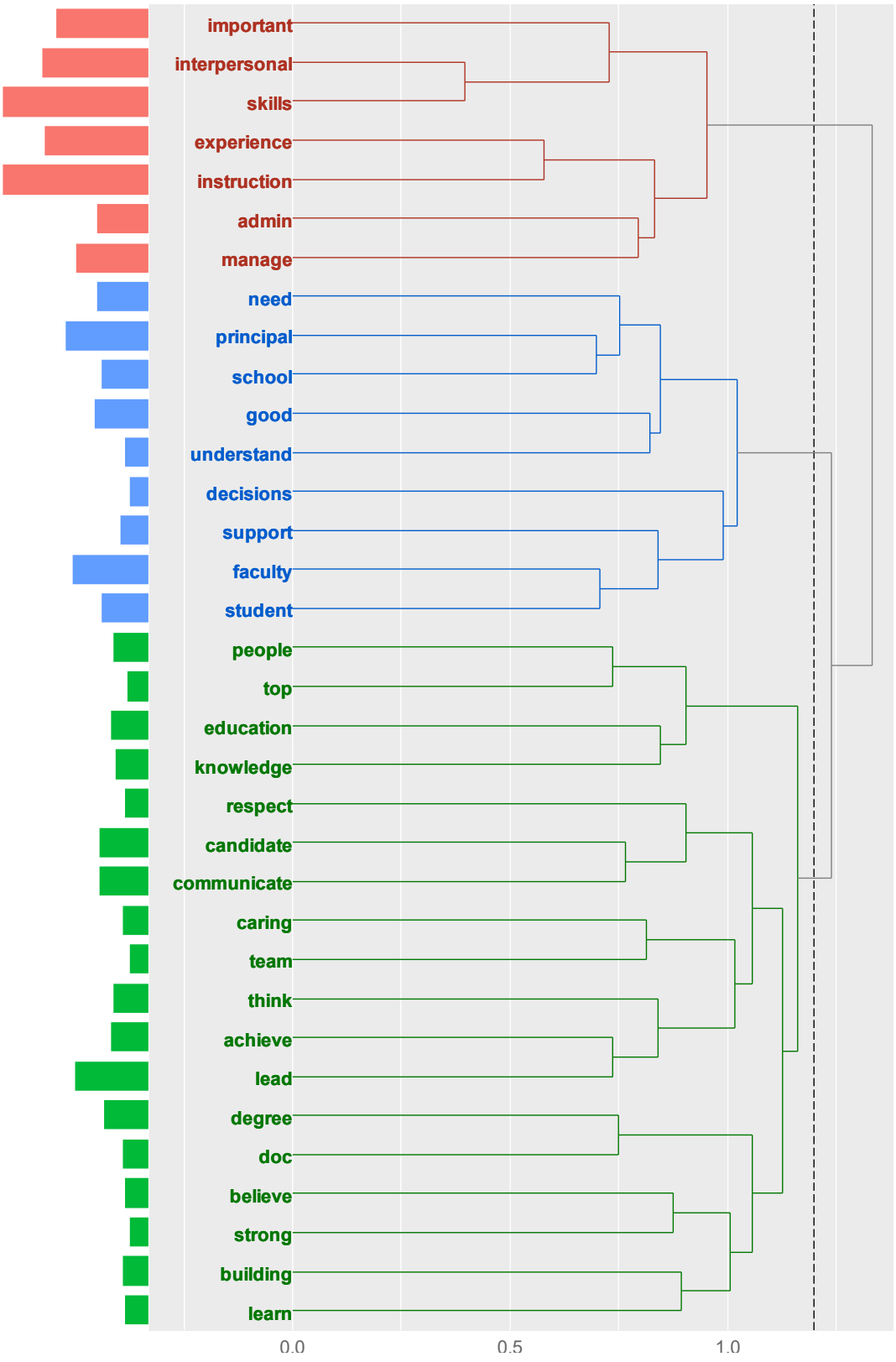

Figure 4.8. Hierarchical/agglomerative cluster analysis of codes with frequency >7 after specifying extraction of 3 clusters.

The first code cluster revealed by the cluster analysis, which is shown in red in the dendrogram, emphasizes the importance of the core qualities of candidates for principalships which were identified in the literature review and included in the discrete choice experiment. This conceptual cluster highlights several essential dimensions of leadership expected of high school principals, including: instructional experience and interpersonal skills—which are given relatively comparable emphasis—plus abilities related to management and administration.

The second cluster (shown in blue) focuses on the preference that the teacher participants have for candidates who, as principals, will be supportive of students and faculty. The third cluster (shown in green) describes the leadership style and approaches the teachers seek in a high school principal. That dimension emphasizes such characteristics as leadership, communication, caring and respect for people, team approaches, and a willingness to learn new things.

Semantic Network Analysis of Word Co-occurrences

Yet another perspective on the qualitative insights provided in the open-ended narrative responses in the survey was obtained through the creation of the co-occurrence network map presented as Figure 4.9. This approach, which provides perspective on common phrases and the co-occurrences of word pairs, was based on the original words of the participants rather than on the qualitative codes employed in the MDS and cluster analyses described above. The words included in this analysis represent the 80 most frequently occurring words in the narrative responses after exclusion of common words such as prepositions and articles. The number of components (i.e., subgraphs) in this network graph was not specified and was determined by the algorithm. That process resulted in nine subgraphs as shown in the key in the figure. The word occurrence frequencies are reflected in the relative sizes of the bubbles for each included word.

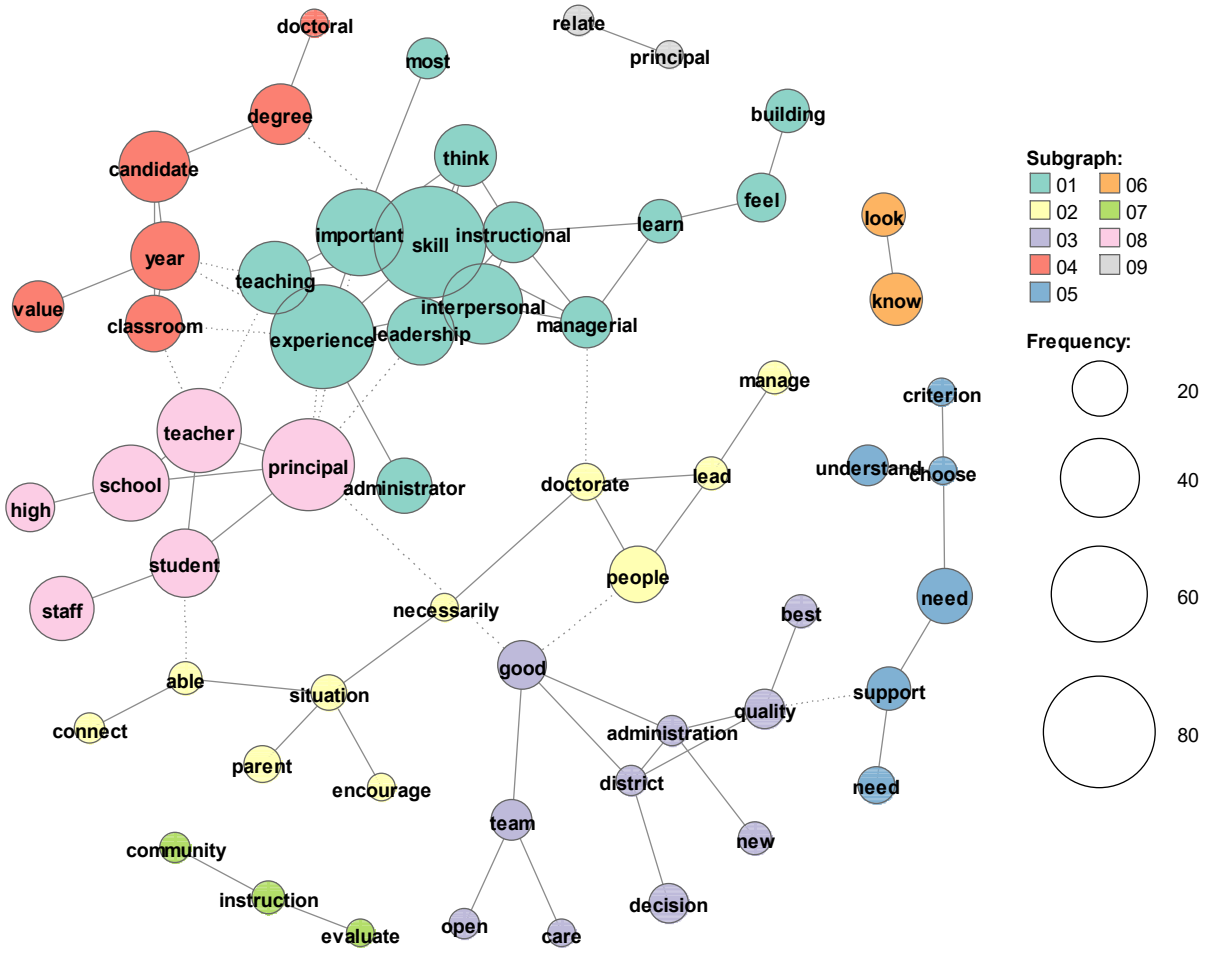

Figure 4.9. Co-occurrence network of 80 words with the highest co-occurrences.

Although this network analysis found nine distinct subgraphs, two subgraphs clearly stand out for their theoretical importance in this study. The first of these two critical subgraphs is shown in turquoise and indicates that there are two major conceptual dimensions—skills and experience. Both of these dimensions have numerous interconnected relationships. With regard to skills, three types of abilities co-occurred quite frequently: instructional abilities, interpersonal abilities, and managerial abilities. This network map highlights a connection between "learn" and both managerial and instructional skills. This relationship reveals that the teachers felt that although instruction and management could be learned, interpersonal skills

could not. Experience displays two distinct connections, linkages with both teaching and administration.

The applied analyses on the semi-structured, open-ended, narrative-responses provide evidence that not only are the three subthemes of leadership skills, and the two subthemes of experience are important in isolation, but they are also important factors in combination. Each of the themes and subthemes are discussed below.

The second important subgraph (as reflected in the word frequencies shown in the bubble sizes) in the co-occurrence network emphasizes the relationships and linkages between the principal and the teachers, students, and staff within the high school. It should be noted that the word that connects the first and subgraphs is "principal." This suggests that the two subgraphs could be conceived as a single broad description of teachers' views of the characteristics they seek in selecting a high school principal.

Conclusions from the Qualitative Analyses

Upon further analysis of the word and code frequencies, maps, and each of the narrative responses, two overarching themes emerged: leadership skills and experience. As shown in the MDS map, the dendrogram from cluster analysis, and the co-occurrence network maps, three subthemes related to leadership skills and two subthemes related to experience were identified. The three subthemes related to leadership skills include instructional skills, interpersonal skills, and managerial skills. The two subthemes related to experience reflect teaching experience and administrative experience. In the following sections, I discuss each of the broad themes and their subthemes.

Leadership Skills

The most common overarching themes found in the narrative responses related to the candidates' leadership skills in terms of instructional, interpersonal, and managerial skills. More than half of the teachers who contributed responses to the open-ended question addressed the skills or abilities of principal candidates or principals. Each of the leadership skills emphasized in the qualitative analysis is discussed below.

Instructional leadership skills. The subtheme of instructional skills appeared in more than 50% of the responses provided by participating teachers. According to the co-occurrence analyses (Figure 4.9), instruction closely related to the term leadership. In the hierarchal cluster analysis (Figure 4.8), instruction most closely associated with the theme of experience in the responses of participating teachers.

Although the instruction subtheme occurred most often, the degree of its occurrence or co-occurrence was not an accurate indicator of the relative importance of that skill compared to the other two leadership skill subthemes. For instance, one participant stated, "I prefer strong interpersonal and managerial skills over instructional knowledge. I believe you can learn more of the instructional information than altering your personality." Another participant stated,

> I don't hold a tremendous value in instructional leadership but would prefer a principal who is willing to allow professional staff the latitude of using the instructional styles that they feel most comfortable with, provided they are effective teachers.

This view contrasts with that of other participants who felt that instructional knowledge is paramount. One teacher who represented this view stated, "Instructional expertise. Schools where the principal is the instructional leader and the principal is effective in growing teacher capacity are the schools that produce best learning outcomes for students."

Interpersonal leadership skills. Within the narrative responses, the subtheme of interpersonal skills appeared in more than a third (37.1%) of the participant responses. As one participant shared, "I have not found however that individuals who are deficient in interpersonal skills improve in this area over time. It is for this reason that I value interpersonal skills over the other criteria." Another asserted, "I believe that interpersonal skills are extremely important in a principal, and that is what I look at most."

One participant even suggested that interpersonal skills can compensate for deficiencies in other areas. That subject explained, "If a leader knows how to relate to the people working with him, he can lack in other areas because the experience and professionalism of his staff and faculty will do whatever it takes to make him a successful leader." In fact, a review of each the responses revealed that none of the narratives that contained the subtheme of interpersonal skills reflected on these abilities in a negative manner, or as not important.

Managerial leadership skills. Although it may be common outside of schools to view principals primarily as managers, comments about managerial skills occurred in only a quarter (25.0%) of the teachers' open-ended narrative responses. Additionally, participants' insights rarely indicated that managerial skills were the single-most important characteristic that they would consider when selecting a principal. When managerial skills were referenced, the comments were frequently in combination with other skills and mostly with interpersonal skills. For example, one teacher shared, "As you can see from my answers, interpersonal and management skills were much more important to me than degree earned." Another asserted, "I value interpersonal and managerial skills the highest. Other things can be learned." A third stated, "As a teacher, I appreciate administrators that have great interpersonal skills and managerial skills above all other criteria."

Experience

As discussed above, experience was the second of the two broad themes that emerged in the qualitative analyses of the narrative responses. This broad theme appeared in more than a third (36.3%) of the respondent's narratives. The two subthemes that make up this category are teaching experience and administrative experience.

Teaching experience. No specific number of years of teaching experience emerged consistently from the open-ended responses as an essential criterion for a principal candidate, but the minimum standard described in several responses appears to be about 5 years. For example, one teacher stated, "I value skill as a teacher and manager more than length of teaching but cannot imagine someone with less than 5-10 years in various high schools being a viable candidate." Another teacher shared, "I would have a difficult time with a high school principal who only had 5 years teaching experience." Yet another teacher stated, "Although I think a certain number of years teaching experience is necessary, I don't place much value in number of years after a certain minimum (5 to 7 years) is achieved."

Administrative experience. The administrative experience subtheme also appeared frequently (at least 17%) in the narrative responses, but it was often mentioned in comparison to the importance of teaching experience or instructional leadership skills. As one teacher explained, "I would prefer a candidate with teaching experience and no experience as an administrator over a candidate who taught for fewer years but had administrative experience." As another teacher summarized, "Teaching experience is more meaningful than admin experience when teachers look."

Although the analysis revealed that teaching experience and instructional skills are valued above administrative experience, it was still clear that prior administrative experience

does have value in the eyes of the teacher respondents. As one teacher stated, "I don't think it's necessary to have prior principal experience, but I do think that having some administrative experience is important."

Synthesis of the Results of the Quantitative and Qualitative Findings

The quantitative results of the discrete choice experiment and analysis and the findings from the traditional and computer-aided qualitative analyses provide a clear picture of what teachers' value in considering candidates for high school principalships. The discrete choice analysis revealed that there are three distinct model viewpoints that teachers hold in judging principal candidates. The first emphasizes interpersonal and instructional skills. The second focuses on interpersonal skills and managerial skills. The third focuses on managerial skills and prior administrative experience, emphasizing the importance of previous experience as a principal. Common across all three latent class models from the discrete choice experiment, it was also clear that experience in teaching is important to teachers in judging candidates. Also shared across the three models, there is insufficient evidence that holding a doctoral degree provides a statistically significant advantage to candidates for high school principalships; but there is evidence to support that having a doctorate presents a statistically significant disadvantage in the views of teachers whose views are reflected in one of the three latent class models.

The findings from the qualitative analyses mirror the quantitative results and provide important corroboration of the findings from the discrete choice experiment. The analysis of the open-ended, narrative responses emphasized leadership skills and experience, putting into words views that are quite consistent with the statistical evidence from the discrete choice analysis. The qualitative findings also reinforce the value teachers place on teaching experience

and interpersonal skills. Finally, the narrative responses revealed that the teacher respondents almost universally give little or no weight to a candidate's having earned a doctoral degree. Even stronger than the non-statistically significant evidence in the discrete choice latent models, every response except one that mentioned doctoral education did so in a way that questioned the importance of a doctoral degree for a high school principal and some suggested that it would be a negative factor in their decisions.

The one area in which the quantitative results of the discrete choice experiment appear to be inconsistent with those of the qualitative component of the study relates to whether a candidate has previous experience as a principal. Whereas the discrete choice results provide strong evidence that prior experience as a principal is a very important factor, the narrative responses suggest that any prior administrative experience—but not necessarily experience as a principal—is critical to teachers in recommending candidates for high school principalships.

Chapter Synthesis

This chapter found evidence in the discrete choice experiment that teachers hold varying but identifiable sets of views about the candidate-specific characteristics they seek in recommending a candidate for a high school principalship. The diversity of these views was also evident in the several qualitative analyses that were conducted on the open-ended narrative responses.

In the final chapter, I discuss my interpretations of the results of the study presented in this chapter and provide formal responses to the three research questions (see Chapter 3) that guided my research. I also offer my conclusions and the implications I infer from the evidence presented in Chapter 4 for educational research and theory, educational leadership and policy, and educational practice.

CHAPTER 5:

CONCLUSIONS AND IMPLICATIONS

Ensuring that our schools are headed by individuals who are capable of leading students, faculty, and communities in a manner that realizes sustainable success in the areas of academic achievement, social-emotional well-being, and community relations is of the utmost importance. As teachers have the greatest direct impact on students in our schools (Hattie, 2009), their voices should be given great weight in principal-selection processes. Unfortunately, to this point, teachers' perspectives on the characteristics they believe to be important when recommending a candidate for a principalship have been given relatively little attention (see Chapter 2).

This study was designed to give high school teachers of public schools in New York State (NYS) that voice in an empirically-grounded manner that considered both quantitative and qualitative findings to produce the answers to the three research questions that guided this study. Additionally, unlike any other research that focuses on the effects that candidate-specific traits have on those (e.g., teachers, school administrators, board of education members) who may find themselves on principal-selection committees, this study employed a latent class analysis to determine whether a single-rational-actor model is sufficient. As such, this study and its results, are unique in both their purpose and design.

This experiment revealed three distinct latent classes reflecting different perspectives or viewpoints that teachers hold in considering principal candidates with respect to the six included candidate-specific attributes that the literature has suggested are important in principal-selection processes. This study also found that, although previous literature has asserted that the teacher-specific characteristics of teaching experience, education level, and school-need level

are important influences on the choices that teachers make (see Chapter 2), those factors did not have a substantial impact on the candidate recommendations the teacher-participants made.

This chapter begins by responding to each of the three research questions described in Chapter 3. The second section presents the implications for educational research, educational theory, and educational policy and leadership that I believe follow from the results of this study. The next section provides recommendations on principal-selection practices and professional development based on the information provided in this research. The chapter concludes with suggestions for future research and presents my concluding thoughts.

Responses to Research Questions

This research was driven by the three research questions identified in Chapter 3. This section addresses these research questions by providing responses that incorporate the results of both the quantitative of the discrete choice experiment and the qualitative findings based on the open-ended, narrative responses. Responses to each of the three research questions are provided in turn below.

Discussion of Research Question 1

The first research question asked:

How and to what extent do selected candidate-specific attributes affect the choices of public-school teachers in New York State in recommending candidates for senior high school principalships?

The unlabeled discrete choice experiment provides evidence that there is no single model that can sufficiently explain how candidate-specific attributes influence the choices of tenured teachers in public high schools in NYS. In fact, the results of this research indicate that there are three distinct models (or latent classes) that describe the preferences of teachers.

Teaching experience. Teaching experience is an important consideration for teachers who serve on selection committees, as confirmed by both the discrete choice analysis and the qualitative analyses. This is true for teachers, regardless of the latent class with which they are associated from the discrete choice experiment. The number of additional years of teaching experience a candidate has in comparison to another candidate becomes a greater factor for teachers associated with Latent Class 1 and Latent Class 2 than for teachers whose views and preferences are modeled by Latent Class 3. However, the narrative insights provided evidence that the consensus of teachers was that any candidate offering less than 5 years teaching experience would be at a substantial disadvantage when viewed by teachers in the principal hiring process.

Administrative experience. Each of the latent classes found administrative experience to be a factor that influences the decisions of high school teachers in judging candidates for high school principalships. The qualitative analyses found administrative experience to be a strong consideration of teachers when recommending principals (but not as strong as teaching experience). The majority of teachers who commented about administrative experience indicated that it was not important to them that a candidate had previously served as a principal, but many indicated that at least some prior administrative experience would be an asset. This appears to be inconsistent with the results of the discrete choice analysis, which found strong evidence that prior experience as a principal is important across all latent classes.

Education level. It was an unstated assumption of this study that the education levels of candidates would affect the decisions of teachers in their recommending principal candidates. However, the result of this study shows that this was only partially supported. Of the three latent classes, only Latent Class 3 indicated that the education level of candidates influenced the

choices of its members. It was also evident from both the discrete choice analysis and the qualitative analysis that candidates who held doctorates are at a disadvantage in the eyes of the teachers. More globally the results of this study show that those principal-candidates who hold doctorates have, at best, an equal chance of being selected, when all other factors are held constant. These findings were supported by the narrative responses, as only one teacher reflected that a candidate holding a doctorate had a positive influence on them.

Instructional skills. The study found strong evidence that the instructional skills of principal candidates have a positive impact on teachers' choices in all three of the latent class models, but none of the three latent classes ranked this factor as the most important quality of a candidate. The narrative responses corroborated these findings. Many of the narrative responses described instructional skills as important but typically not as the most important candidate-specific factor to be considered.

Managerial skills. A candidate's managerial skills influence teachers' recommendations for principalships. The discrete choice analysis indicates that managerial skills were considered important in all of the latent classes. The narrative responses again supported the importance of managerial skills as many of the teachers' insights reflected that view. This was especially true for Latent Class 3 as the managerial skills of principal candidates revealed to be the most important.

Interpersonal skills. Interpersonal skills of a candidate greatly influence the decisions of teachers in evaluating candidates for principalships. Indeed, the discrete choice analysis ranked interpersonal skills as the single most important factor for both Latent Class 1 and Latent Class 2. The importance of a candidate's interpersonal skills to teachers was corroborated by

the evidence in the co-occurrence network analysis and the hierarchical cluster analysis, and was articulated in many of the open-ended narrative responses.

Discussion of Research Question 2

Following logically from the assumption in Research Question 1 of the possibility of varied views reflected by latent classes, the second research question asked:

What is the relative prevalence of each of the sets of preferences for candidates for senior high school principalships as reflected in any latent classes that might be discovered in the discrete choice experiment?

The discrete choice analysis found three distinct latent classes reflecting varying sets of preferences placing different values on the candidate-specific attributes. As depicted visually in Figure 4.10, these models are not equally prevalent among teachers. The first latent class reflects the view of almost half (47.6%) of the teachers, while almost a third (31.1%) share the preference set described in the second latent class and more than a fifth (21.2%) have preferences best modeled by the third latent class.

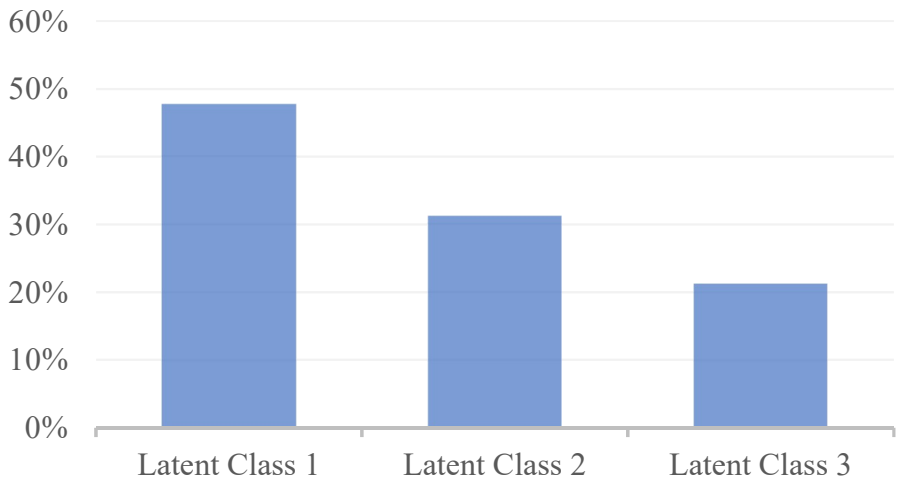

Figure 5.1. Bar graph of class membership proportions for the participants in this study. Latent class 1 = 47.6%; Latent class 2 = 31.1%; Latent class 3 = 21.2%; *N* = 212.

Discussion of Research Question 3

Finally, I turn to a discussion of the third research question, which asked: *How and to what extent do the backgrounds and experiences of public-school teachers in New York State influence their views of the "best" candidate to recommend for a senior high school principalship and how do they differ across any latent classes discovered in the discrete choice experiment?*

The response to this question depends upon whether one adopts the single-rational actor assumption inherent in the alternative-specific, conditional logistic (asclogit) regression analysis or whether one believes it is more appropriate to view teachers as holding different shared views about principal candidates as reflected in the three latent class models revealed by the latent class, conditional logistic (lclogit) regression analyses. In the former case, the asclogit analysis suggests that two teacher-specific characteristics affect how they view and value the candidate-specific characteristic associated with instructional skills. That analysis revealed that teachers who hold higher academic credentials (defined as either an advanced certificate or a doctoral degree) tend to give greater weight to above-average instructional skills of principal candidates than do their colleagues who do not hold higher academic credentials. Further, asclogit found that teachers who work in high needs schools consider below-average instructional skills a statistically significant disadvantage for principal candidates. The asclogit analysis found that none of the other teacher-specific characteristics were found to affect their judgments related to any of the other candidate-specific attributes.

The lclogit analysis tells a very different story about the potential effects of teacher-related characteristics on their judgments in evaluating candidates for high school principalships. No teacher-related (i.e., case-specific) factor was found to be statistically

significant in any of the three latent classes found by lclogit. That is not necessarily surprising, because Simpson's paradox suggests that relationships that appear in overall distributions are often deceptive and that different or even opposite statistical relationships may be found in subgroups that compose a larger, overall distribution. I believe that is the case in this study, and I believe this evidence supports the view that the single-rational actor assumption does not hold when all teachers are assumed to hold a single set of preferences in their judgments of candidates for high school principalships.

Implications for Educational Research and Theory

The design of my study was rooted in decision theory, and more specifically discrete choice theory and methods. Traditionally, discrete choice methods have been reserved primarily for studies in economics, healthcare, and transportation, among other fields (Ben-Akiva & Lerman, 1985; McFadden, 1986; Ryan et al., 2008; Skedgel, Wailoo, & Akehurst, 2014; Train, 2009; Train, McFadden, & Ben-Akiva, 1987). However, DCE has recently been introduced into the field of education focusing on different aspects of teacher retention (Abd-El-Hafez, 2015) and teacher transfers from well-performing to low-performing schools (Chagares, 2016). My implementation of discrete choice methods is the first of its kind in the area of principal selection.

An additional element of my study that makes it distinct in the area of principal selection is that it employs an experimental design, which has not been used previously. This study adapts for principal selection processes the use of DCE by marketing researchers who identify attributes and evaluate attribute levels for alternatives in a stated preference discrete choice experiment to determine consumers' preferences. By establishing and controlling the

candidate-specific attributes for each alternative within choice sets, this study evaluated teachers' preferences for senior high school principals.

Further, as the majority of studies completed in education, especially in principal-selection research have been based on qualitative or descriptive methods, this research provides responses to the research questions from a different empirically-based, inferential viewpoint. This research was extended to account for unobserved heterogeneity in teachers' views by the additional application of latent class analysis. Latent class analysis has been used primarily in education, healthcare, sociology, and psychology (Abd-El-Hafez, 2015; Greene & Hensher, 2003; Klonsky & Olino, 2008; Kolodnicki, 2017; Lemke, 2013; Skedgel et al., 2014; Whelan & Maitre, 2006).

General Conclusions and Implications

Several conclusions and implications are suggested by the findings in this study. As discussed below, the findings of this study offer important insights for educational research, for educational policy, educational leadership, and for administrators like myself who aspire to become school principals. I discuss these implications and my conclusions from them below.

From the research perspective, this study suggests that scholars in education should not be limited to traditional quantitative or qualitative methods that have dominated educational research in the past. Rather, we should seek out and employ innovative and appropriate methods from other disciplines and professional fields. This study extends the relatively recent application of discrete choice experimental designs and analysis in studies of teacher retention (Abd-El-Hafez, 2015) and teacher recruitment (Chagares, 2016) by focusing on the factors that teachers consider important in considering candidates for high school principalships. Through the use of formal experimental design, this study has moved our understanding of teachers'

views about the selection of principals beyond basic descriptive quantitative research and qualitative approaches to an approach in which the operant decisions of teachers could be observed and modeled. Further, through the use of computer-aided content analysis and geospatial multivariate statistical techniques such as multidimensional scaling, semantic (i.e., co-occurrence) network analysis, and hierarchical/agglomerative cluster analysis this study has demonstrated how critical qualitative research can be enriched and used to provide systematic, empirical corroboration of the findings from quantitative research. It is my position that scholars in education must continue to reach out to find and apply methodological advances in other disciplines and professional fields if we hope to find new solutions to the enduring problems we face in schools.

This research also suggests important implications for educational policy and policy makers with regard to the recruitment, credentialing, and selection of school leaders. In New York State, members of the Board of Regents, the Commissioner of Education, and senior policy advisors in the Department of Education should seek out and heed the expertise and insights of teachers in designing qualifications, credentialing requirements, and leadership certification programs for school principals and other administrators. For example, the requirements policy makers have established for appointment to a principalship require only three years of teaching experience—but the findings of this study would suggest that the teachers who are the backbone of our schools believe that teaching experience should be given far greater weight in the recruitment and appointment of principals. My study found that the single most important factor that almost 8 in 10 teachers (i.e., those associated with the views of Latent Class 1 and Latent Class 2) consider in their assessments of candidates for high school principalships is interpersonal leadership ability—yet the New York State policy on that factor

is silent. Similarly, based on what my study revealed, I believe New York State still does not have fully adequate requirements (i.e., a video-simulated teacher observation, short performance tasks, and multiple-choice questions on instructional leadership as part of the certification test) related to the instructional leadership skills of those the State certifies for positions of school principals. I recommend that state policy makers and policy advisors review the requirements they have established for school principals to incorporate a greater voice for teachers—and that they start that process by appointing teachers to serve in that process.

The implications of the results of this study for educational leadership and organization are equally clear. Local school boards, board members, school superintendents, and other elected and appointed officials in school districts who are responsible for or have a major role in the appointment of school principals should take note of the factors that the teachers in this study deemed important in evaluating candidates for high school principalships. They should also ensure that teachers have a voice in the evaluation of principal candidates in their districts and that their insights and advice be accorded substantial attention and consideration. It is reasonable to expect that by affording teachers a greater role in the evaluation and recommendation of principal candidates, those who are appointed will enjoy greater levels of respect and support from the teachers they lead.

Finally, this study has very important implications for current and future administrators—like me—who aspire to lead schools as principals. I found the insights of the teachers who participated in this study to be enlightening in my own preparation for career advancement. First, interpersonal skills are far more important than might have been expected and that they can offset the effects of other factors in the selection process. Second, I found that managerial skills, while very important for school principals, are not necessarily viewed as

substantially more important than teaching experience or instructional skills. For example, the median teaching experience for all public-school principals nationally is about 10 years. That level of experience would produce an odds ratio of 1.582 in Latent Class 1, an odds ratio of 1.622 in Latent Class 2, and 1.381 in Latent Class 3. By contrast, above-average managerial skills have odds ratios of 1.682 in Latent Class 1, 2.078 in Latent Class 2, and of 1.667 in Latent Class 3. Further, the odds ratios for above-average interpersonal skills are greater than those for above-average managerial skills in two of the three latent classes (accounting for 47.6% and 31.1% for a total of 78.7% of the teachers in the study). Perhaps most surprising to me is the relatively low—and perhaps negative—value that the teachers in this study place on doctoral degrees as a qualification for high school principalships. In two of the three latent classes, there was insufficient evidence to conclude that a doctoral degree had any effect on the likelihood of being recommended for a principalship, whereas in one of the latent classes it had a statistically significant negative effect that would reduce a candidate's chances of selection. This suggests caution by candidates who might otherwise have thought that a doctoral degree is an essential qualification or a substantial advantage to be competitive for a high school principalship today.

Several of the findings in this study challenge previous notions about what is and should be expected of candidates for school principalships. I look forward to future studies that may extend this research to other states and to consider additional candidate- and case-specific factors in the selection of high school principals.

A Personal Reflection in Conclusion

Although the findings and conclusions from my study do not paint the kind of simple, straightforward, unambiguous picture we might hope to discover, their validity lies in the fact that the views of teachers about the qualities they hope to see in those who would serve as high

school principals are neither simple nor straightforward. Rather, teachers' views about this critical issue are as diverse as the population of teachers on whose opinions and preferences this study depended. Reality is seldom simple, but its beauty lies in the richness of its diversity—and I believe this study has found some of that.

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APPENDIX A1:

SURVEY – FORM 1

Teachers' Perspectives on Search Committees

LIU Post

LONG ISLAND UNIVERSITY/LIU POST

Introduction to the Survey and
Informed Consent Form for Human Research Subjects

Dear Teacher,

You are being invited to volunteer in a research study called Teachers' Preferences in the Selection of High School Principals in New York State, conducted by Paul M. Guzzone, a doctoral candidate in the School of Education. The purpose of this research is to understand the characteristics that teachers value in recommending hypothetical candidates for principalships in public high schools in New York State.

The study seeks participation from tenured teachers in senior high schools in all New York State public school districts other than the "Big 5" city school districts. If you participate, you will be asked to consider 10 sets of three hypothetical candidates for a principalship and to indicate which candidate you would recommend from each set. You will also be asked to answer five brief questions about your professional background, which are not personally-identifying and which will only be used to understand the responses from teachers with similar backgrounds. While there is no direct benefit for your participation in the study, the results may provide information of value for the field of Education.

This survey will take only about 10-15 minutes to complete. If you agree to participate in this study, your participation will be on an anonymous basis, and you will not be asked for any information that could identify you or your school individually. Your participation in this research is voluntary. There are no known or anticipated risks from participating in this study, and declining to participate (or discontinuing participation) will involve no penalty or loss of any benefits.

If you have questions about the research you may contact me, Paul Guzzone, at (631) 833-0706 or my dissertation advisor, Dr. R. H. Red Owl, at (516) 299-4111. If you have questions concerning your rights as a subject, you may contact the Institutional Review Board Administrator, Dr. Lacey Sischo, at (516) 299-3591.

By checking the "Agree to Participate" box below, you can indicate that you have fully read the above text and have had the opportunity to ask questions about the purposes and procedures of this study. If you choose not to participate, please check the "Decline to Participate" box below or simply close your browser.

Thank you for your consideration.

Paul M. Guzzone (**paul.guzzone@my.liu.edu**)
Doctoral Candidate and Study Director

*

- ○ I Agree to Participate
- ○ I Decline to Participate

Reviewing Previous Pages in This Survey

LIU Post

Before you begin the survey, I need to caution you not to use the regular back arrow or page refresh button on your browser. That would reset the survey and cause your responses to be lost.

To return to a previous page at any point in this survey, you may press the << Back button located on the bottom of each page.

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Directions For Part 1

LIU Post

In the first part of this survey, I am interested in learning your preferences as a teacher for candidates for a hypothetical senior high school principalship.

Assume that you are a teacher-representative on a search committee charged with recommending candidates for the principalship of a hypothetical senior high school. In this part of the survey, I ask you to make just ten choices.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 1 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	5 years teaching experience	16 years teaching experience	7 years teaching experience
Administrator experience	No school administrator experience	School administrator experience as a principal	School administrator experience but not as a principal
Highest level of education	Doctoral degree	Doctoral degree	Advanced certificate
Instructional leadership skills	Below average	Above average	Average
Managerial leadership skills	Average	Above average	Below average
Interpersonal leadership skills	Above average	Average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 2 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	21 years teaching experience	7 years teaching experience	16 years teaching experience
Administrator experience	School administrator experience as a principal	School administrator experience but not as a principal	No school administrator experience
Highest level of education	Advanced certificate	Doctoral degree	Advanced certificate
Instructional leadership skills	Above average	Below average	Average
Managerial leadership skills	Below average	Above average	Average
Interpersonal leadership skills	Above average	Average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 3 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	16 years teaching experience	7 years teaching experience	10 years teaching experience
Administrator experience	School administrator experience but not as a principal	School administrator experience as a principal	No school administrator experience
Highest level of education	Doctoral degree	Advanced certificate	Doctoral degree
Instructional leadership skills	Below average	Average	Above average
Managerial leadership skills	Average	Below average	Above average
Interpersonal leadership skills	Above average	Below average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 4 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	16 years teaching experience	5 years teaching experience	10 years teaching experience
Administrator experience	School administrator experience as a principal	No school administrator experience	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Advanced certificate	Doctoral degree
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Below average	Average	Above average
Interpersonal leadership skills	Average	Above average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 5 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	10 years teaching experience	21 years teaching experience	16 years teaching experience
Administrator experience	School administrator experience as a principal	No school administrator experience	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Above average	Below average	Average
Managerial leadership skills	Above average	Below average	Average
Interpersonal leadership skills	Above average	Below average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 6 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	7 years teaching experience	10 years teaching experience	5 years teaching experience
Administrator experience	School administrator experience as a principal	School administrator experience but not as a principal	No school administrator experience
Highest level of education	Doctoral degree	Doctoral degree	Advanced certificate
Instructional leadership skills	Above average	Below average	Average
Managerial leadership skills	Average	Below average	Above average
Interpersonal leadership skills	Below average	Above average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 7 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	10 years teaching experience	16 years teaching experience	7 years teaching experience
Administrator experience	School administrator experience as a principal	No school administrator experience	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Doctoral degree	Advanced certificate
Instructional leadership skills	Average	Above average	Below average
Managerial leadership skills	Below average	Above average	Average
Interpersonal leadership skills	Above average	Below average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 8 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	16 years teaching experience	21 years teaching experience	10 years teaching experience
Administrator experience	School administrator experience but not as a principal	No school administrator experience	School administrator experience as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Average	Below average	Above average
Managerial leadership skills	Below average	Above average	Average
Interpersonal leadership skills	Above average	Average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 9 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	21 years teaching experience	7 years teaching experience	16 years teaching experience
Administrator experience	School administrator experience but not as a principal	School administrator experience as a principal	No school administrator experience
Highest level of education	Doctoral degree	Doctoral degree	Advanced certificate
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Below average	Average	Above average
Interpersonal leadership skills	Below average	Average	Above average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

<< Back Next >>

Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 10 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	5 years teaching experience	21 years teaching experience	7 years teaching experience
Administrator experience	No school administrator experience	School administrator experience as a principal	School administrator experience but not as a principal
Highest level of education	Doctoral degree	Doctoral degree	Advanced certificate
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Below average	Average	Above average
Interpersonal leadership skills	Below average	Above average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

< Select >

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Part 2: Additional Insights

LIU Post

I would also appreciate learning any other insights you would like to share with me about the characteristics you value in candidates seeking to become a high school principal. (This is an optional question.)

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Part 3: Your Experience and General Background

LIU Post

To help me understand the patterns of responses from teachers with similar experience and backgrounds, I would appreciate your answering the following four questions. (None of this information can or will be used to identify you or your school.)

*** 1. Which of the following describes your current status?**
Senior high schools are defined as high schools with no grade lower than Grade 9.

- Tenured teacher in a public senior high school in New York State
- Currently untenured, but previously tenured, teacher in a public senior high school in New York State
- Untenured, and not previously tenured, teacher in a public senior high school in New York State
- Other current position (please specify)

*** 2. How many full years will you have been a teacher, at any grade level, as of the end of this school year?**

*** 3. Which of the following best describes your highest level of education?**

- Bachelor's degree
- Master's degree
- Master's degree plus additional credits
- Advanced certificate
- Doctoral degree (e.g., Ed.D., Ph.D., Psy.D., J.D., etc.)
- Other (please specify)

*** 4. Do you think most people would consider your school district as a high-needs district?**

- Yes
- No
- Other (please specify)

***5. Do you currently teach in one of New York State's "Big Five" city school districts (*Buffalo Public Schools, New York City Department of Education, Rochester City School District, Syracuse City School District, or Yonkers City School District*)?**

- Yes
- No
- Other (please specify)

Please be sure to press the "Finish Survey" button below to send your survey responses to me.

<< Back | < Finish Survey>

APPENDIX A2:

SURVEY – FORM 2

Teachers' Perspectives on Search Committees

LIU Post

LONG ISLAND UNIVERSITY/LIU POST

Introduction to the Survey and
Informed Consent Form for Human Research Subjects

Dear Teacher,

You are being invited to volunteer in a research study called Teachers' Preferences in the Selection of High School Principals in New York State, conducted by Paul M. Guzzone, a doctoral candidate in the School of Education. The purpose of this research is to understand the characteristics that teachers value in recommending hypothetical candidates for principalships in public high schools in New York State.

The study seeks participation from tenured teachers in senior high schools in all New York State public school districts other than the "Big 5" city school districts. If you participate, you will be asked to consider 10 sets of three hypothetical candidates for a principalship and to indicate which candidate you would recommend from each set. You will also be asked to answer five brief questions about your professional background, which are not personally-identifying and which will only be used to understand the responses from teachers with similar backgrounds. While there is no direct benefit for your participation in the study, the results may provide information of value for the field of Education.

This survey will take only about 10-15 minutes to complete. If you agree to participate in this study, your participation will be on an anonymous basis, and you will not be asked for any information that could identify you or your school individually. Your participation in this research is voluntary. There are no known or anticipated risks from participating in this study, and declining to participate (or discontinuing participation) will involve no penalty or loss of any benefits.

If you have questions about the research you may contact me, Paul Guzzone, at (631) 833-0706 or my dissertation advisor, Dr. R. H. Red Owl, at (516) 299-4111. If you have questions concerning your rights as a subject, you may contact the Institutional Review Board Administrator, Dr. Lacey Sischo, at (516) 299-3591.

By checking the "Agree to Participate" box below, you can indicate that you have fully read the above text and have had the opportunity to ask questions about the purposes and procedures of this study. If you choose not to participate, please check the "Decline to Participate" box below or simply close your browser.

Thank you for your consideration.

Paul M. Guzzone (**paul.guzzone@my.liu.edu**)
Doctoral Candidate and Study Director

*

- ○ I Agree to Participate
- ○ I Decline to Participate

Reviewing Previous Pages in This Survey

Before you begin the survey, I need to caution you not to use the regular back arrow or page refresh button on your browser. That would reset the survey and cause your responses to be lost.

To return to a previous page at any point in this survey, you may press the << Back button located on the bottom of each page.

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Directions For Part 1

In the first part of this survey, I am interested in learning your preferences as a teacher for candidates for a hypothetical senior high school principalship.

Assume that you are a teacher-representative on a search committee charged with recommending candidates for the principalship of a hypothetical senior high school. In this part of the survey, I ask you to make just ten choices.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 1 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	10 years teaching experience	5 years teaching experience	21 years teaching experience
Administrator experience	School administrator experience as a principal	School administrator experience but not as a principal	No school administrator experience
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Below average	Above average	Average
Managerial leadership skills	Above average	Average	Below average
Interpersonal leadership skills	Above average	Below average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 2 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	5 years teaching experience	21 years teaching experience	10 years teaching experience
Administrator experience	No school administrator experience	School administrator experience as a principal	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Advanced certificate	Doctoral degree
Instructional leadership skills	Below average	Above average	Average
Managerial leadership skills	Below average	Average	Above average
Interpersonal leadership skills	Above average	Average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 3 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	7 years teaching experience	5 years teaching experience	21 years teaching experience
Administrator experience	No school administrator experience	School administrator experience but not as a principal	School administrator experience as a principal
Highest level of education	Doctoral degree	Advanced certificate	Advanced certificate
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Above average	Below average	Average
Interpersonal leadership skills	Above average	Average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 4 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	7 years teaching experience	5 years teaching experience	21 years teaching experience
Administrator experience	No school administrator experience	School administrator experience as a principal	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Above average	Below average	Average
Managerial leadership skills	Below average	Average	Above average
Interpersonal leadership skills	Below average	Average	Above average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 5 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	5 years teaching experience	10 years teaching experience	7 years teaching experience
Administrator experience	School administrator experience but not as a principal	No school administrator experience	School administrator experience as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Above average	Below average	Average
Interpersonal leadership skills	Below average	Average	Above average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 6 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	16 years teaching experience	5 years teaching experience	21 years teaching experience
Administrator experience	No school administrator experience	School administrator experience as a principal	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Advanced certificate	Doctoral degree
Instructional leadership skills	Above average	Below average	Average
Managerial leadership skills	Average	Above average	Below average
Interpersonal leadership skills	Above average	Below average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 7 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	10 years teaching experience	5 years teaching experience	16 years teaching experience
Administrator experience	No school administrator experience	School administrator experience as a principal	School administrator experience but not as a principal
Highest level of education	Advanced certificate	Doctoral degree	Advanced certificate
Instructional leadership skills	Below average	Above average	Average
Managerial leadership skills	Average	Below average	Above average
Interpersonal leadership skills	Average	Above average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 8 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	5 years teaching experience	21 years teaching experience	7 years teaching experience
Administrator experience	School administrator experience as a principal	No school administrator experience	School administrator experience but not as a principal
Highest level of education	Doctoral degree	Advanced certificate	Doctoral degree
Instructional leadership skills	Average	Below average	Above average
Managerial leadership skills	Above average	Average	Below average
Interpersonal leadership skills	Average	Below average	Above average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 9 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	10 years teaching experience	7 years teaching experience	16 years teaching experience
Administrator experience	School administrator experience but not as a principal	No school administrator experience	School administrator experience as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Average	Above average	Below average
Interpersonal leadership skills	Average	Above average	Below average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 1: Principal-Selection Scenarios

LIU Post

Which of the candidates in this set would you most likely to recommend for a senior high school principalship?

* Candidate Set 10 of 10

	Candidate A	Candidate B	Candidate C
Teaching experience	21 years teaching experience	10 years teaching experience	16 years teaching experience
Administrator experience	School administrator experience but not as a principal	No school administrator experience	School administrator experience as a principal
Highest level of education	Advanced certificate	Doctoral degree	Doctoral degree
Instructional leadership skills	Above average	Average	Below average
Managerial leadership skills	Above average	Average	Below average
Interpersonal leadership skills	Above average	Below average	Average

Using this drop-down box, please select the candidate you would most prefer from the group above.

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Part 2: Additional Insights

LIU Post

I would also appreciate learning any other insights you would like to share with me about the characteristics you value in candidates seeking to become a high school principal. (This is an optional question.)

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APPENDIX B:

EMAIL TO SCHOOL PRINCIPALS

Dear (Name of School Principal),

My name is Paul Guzzone, and I am a doctoral candidate at Long Island University, as well as an Associate Principal at Oceanside High School on Long Island. My dissertation focuses on how key characteristics of a set of hypothetical candidates for high school principalships would affect the recommendations teachers might make when serving on a selection committee. The study seeks participation from tenured teachers in senior high schools in all New York State public school districts other than the "Big 5" city school districts.

I am writing to ask your help in distributing the web link to my online, voluntary, anonymous survey, which is available at http://teachersvoices.edsurveys.us [*for survey form 1 or* http://teachervoices.edsurvey.us *for survey form 2*]. I would be grateful if you would share this link with your high school teachers to invite them to participate. This is a statewide survey, which takes only about 10-15 minutes to complete, and it does not ask for any information that would identify specific teachers, their school, or district.

This short survey just asks teachers to make 10 choices out of a pool of hypothetical candidates for high school principalships. Each of the hypothetical candidates is described as having varying levels of six leadership and professional background characteristics. The teachers will also be asked to answer five brief questions about their professional background to help me understand patterns of responses from teachers with similar backgrounds.

Thank you for your consideration and help with my dissertation. I will be happy to provide more information about my study. If you would like an executive summary of the results at the end of the study, please write to me at paul.guzzone@my.liu.edu.

Paul Guzzone, Doctoral Candidate

Long Island University, LIU Post Campus

APPENDIX C:

EMAIL TO TEACHER UNION LEADERS

Dear (Union Representative's Name),

My name is Paul Guzzone, and I am a doctoral candidate at Long Island University, as well as an Associate Principal at Oceanside High School on Long Island. My dissertation focuses on how key characteristics of a set of hypothetical candidates for high school principalships would affect the recommendations teachers might make when serving on a selection committee. The study seeks participation from tenured teachers in senior high schools in all New York State public school districts other than the "Big 5" city school districts.

I am writing to ask your help in distributing the web link to my online, voluntary, anonymous survey, which is available at http://teachersvoices.edsurveys.us [*for survey form 1 or* http://teachervoices.edsurvey.us *for survey form 2*]. I would be grateful if you would share this link with your members who teach in public senior high schools. This survey offers them the opportunity to participate voluntarily and anonymously, and, hopefully, to have their opinions heard by educational leaders and policy makers in New York State. This is a statewide survey, which takes only about 10-15 minutes to complete, and it does not ask for any information that would identify specific teachers, their school, or district.

This short survey just asks teachers to make 10 choices out of a pool of hypothetical candidates for high school principalships. Each of the hypothetical candidates is described as having varying levels of six leadership and professional background characteristics. The teachers will also be asked to answer five brief questions about their professional background to help me understand patterns of responses from teachers with similar backgrounds.

Thank you for your consideration and help with my dissertation. I will be happy to provide more information about my study. If you would like an executive summary of the results at the end of the study, please write to me at paul.guzzone@my.liu.edu.

Paul Guzzone, Doctoral Candidate
Long Island University, LIU Post Campus

APPENDIX D:

ONLINE FORUMS AND SOCIAL MEDIA POSTING

My doctoral dissertation is designed to give teachers a voice in the principal selection process. If you teach at a public senior high school in NYS, I would appreciate your completing my voluntary, anonymous survey at http://teachersvoices.edsurveys.us [*for survey form 1 or* http://teachervoices.edsurvey.us *for survey form 2*].* Thanks for your help.

* The link provided will vary between form 1 and form 2 as needed to improve balance in the responses from both blocks.

APPENDIX E:

IRB EXEMPT STATUS

LONG ISLAND UNIVERSITY
UNIVERSITY OFFICE OF SPONSORED RESEARCH
BUSH-BROWN HALL, UNIVERSITY CENTER

NOTICE TO ALL RESEARCHERS:
Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

TO: Dr. R.H. Red Owl
Paul Guzzone (Student Investigator)

FROM: Dr. Lacey Sischo, IRB Administrator
LIU Institutional Review Board

DATE: September 14, 2018

PROTOCOL TITLE: Teachers' preferences in selecting senior high school principal in New York public schools: A discrete choice experiment

PROTOCOL ID NO: **P 18/09-131**

REVIEW TYPE: Exempt-Level

ACTION: **IRB Exempt Determination/Approval**

Your application has been reviewed using the University's Institutional Review Board's (IRB) administrative review process and can be considered to be an EXEMPT methodology/approach as defined in 45 CFR 46.101.b.2:

Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior unless:

- The information obtained is recorded in such a manner that human subjects can be identified, either directly (e.g. name) or through identifiers linked to the subject (i.e., through ANY code used with the intent of being traced back to the subject.)

AND

- Any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation

Please note: Revisions and amendments to the research activity must be promptly reported to the IRB for review and approval prior to the commencement of the revised protocol. **If the project is amended so that it is no longer considered to be exempt research as per the federal definitions, it will be necessary for the investigators to submit an application for full committee review.**

LONG ISLAND UNIVERSITY

Verification of Institutional Review Board (IRB) Exempt Determination/Approval

LIU IRB ID: P 18/09-131

Project Title: Teachers' preferences in selecting senior high school principal in New York public schools: A discrete choice experiment

Signature: 

Name/Title: Lacey Sischo, PhD, IRB Administrator

APPENDIX F:

NARRATIVE RESPONSES

1. Strong instructional pedagogy 2. Strong interpersonal skills

A reasonable amount of classroom experience (10 + years) need consistent, clear communication commitment to district, lots of turnover need the right fit with district, some districts require a stronger leader, some require a facilitator

Ability to communicate effectively with both staff and students, and desire to support staff in every way possible.

Ability to remove obstacles to teaching and to stand up to pressure from above. Awareness and concern that teachers are overloaded. The philosophy that teachers should not have more than 2 course preps and should become experts at what they teach. Don't keep assigning new courses

Although I think a certain number of years teaching experience is necessary, I don't place much value in number of years after a certain minimum (5 to 7 years) is achieved. I would put interpersonal skills as necessary at the very least average and hopefully above average.

As you can see from my answers, interpersonal and management skills were much more important to me than degree earned.

At least 10 years teaching experience is a must.

Beliefs in communication, decision making, etc

Candidates with less than 5 years of classroom experience tend to, in my 29 yrs. of teaching, be on the fast track to superintendent positions for a GAS increase. WHY are lousy leaders passed between districts? Why don't administration candidates serve a 2 or 3 yr. internship with QUALITY- Highly Effective principals before being allowed to take on a leadership role? A HS principal MUST be open minded, willing to accept questions when asked, creative problem solvers, open to collaboration with faculty, lead WITH the faculty and staff. A doctoral degree is ideal.

Candidates need to be able to articulate and motivate staff, without sounding condescending. Appreciate that the staff is the first line of defense and should be given respect!

Decision making skills: seeks input from librarians, classroom teachers, all staff, other stakeholders, yet is able to prioritize well. Supports faculty publicly, clearly. Willing to learn new.

Degree is least important to me. I value skill as teacher and manager more than length of teaching but cannot marine someone with less than 5 -10 years in various high schools being a viable candidate.

Degree is not relevant. I don't think a doctorate is a deal breaker. Virtually anyone can perform well in an interview. It takes real defective work to dig through the references to gain a clearer picture of a candidate. Most important question-Why did they leave their previous jobs?

Degrees earned is less important, to me, than is skill set. I'd prefer a candidate who is well spoken, an accomplished teacher with a variety of instructional strategies in his/her tool belt, someone who can make difficult decisions, and understands the importance of positive relationships.

First of all, when evaluating candidates, I am not evaluating what I read on a piece of paper, I'm evaluating a person. There are candidates with no past experience in a job but have skills that are well suited to the job. There are also candidates with years of experience who would not be flexible in meeting the needs of a particular school community. I think if you have APs that have strength in the details of the academics and instruction, then you can have a successful principal who inspires, supports and advocates for her/his school. However, it really does need to be a balance between instructional and inspirational amongst the building leadership.

Hard working, easy to respect, honorable

I appreciate teaching experience, interpersonal skills, and an open-door policy. It's important for a principal who knows their faults to have a good team behind them who can

pick up the slack. If they are weak in instructional abilities allow an AP to provide PD in this area.

I believe interpersonal skills is most important because all other aspects can be learned and improved on.

I believe that interpersonal skills are extremely important in a principal, and that is what I look at most. I don't think it's necessary to have prior principal experience, but I do think that having some administrative experience is important.

I believe the best asset to a principal is one who has taught and can relate to the teachers within his/her building. Interpersonal and instructional skills are also important.

I feel my choices would indicate that I believe candidates can always learn on the job, so lacking experience as a principal would not cause me to rule someone out, and in the end, a Doctoral degree means nothing if the person lacks communication or managerial skills.

I found the skills at the bottom were more significant that experiences and education level. As well I'm not sure how you could quantify community involvement/ interaction, but I think that is also an important component.

I have been a teacher for over 20 years as well as a department head. I can say that it is not important to me that a principal have a doctorate if they can't lead or manage people. I have

the content covered but I value a principal who can problem solve, offer advice and made good decisions despite the circumstances.

I like to see a candidate with a lot of teaching experience. If they do not have experience, and if they don't have strong interpersonal skills, I don't believe that there will be a smooth transition or complete respect from the faculty.

I place more value on how they run a building and how they deal with people - more than a degree or something like that. How do they treat the staff? How much room do they give you?

I think all of the skills that was listed is extremely important. There were quite a few "candidates" in this survey that I would not have recommended, buy my choices were limited. I think for some of them, I would say "let's keep looking".

I think interpersonal and managerial skills are paramount. Whether or not a person has a doctorate or advanced certificate is irrelevant to me. Experience is helpful as the job can be overwhelming for someone brand new.

I think it's more important to have interpersonal skills and managerial skills than it is to worry about instruction. There will always be people on the team who can help figure out and work with instructional goals but finding someone who leads and who cares are valuable.

I typically chose those with good experience, but most importantly was the Above average interpersonal communication. That has been my experience that a good principal or any leader has good personal contact and communication skills most of all.

I value candidates that are able to relate well to colleagues, students, and parents. A good high school principal can manage a building. An amazing high school principal understands people, the barriers that children face in school and at home, and the need to provide staff with tools that help them constantly assess their own biases and personal views that either enhance or detract from their ability to reach each and every student. An amazing principal takes on the difficult issues of racism, sexism, "class-ism," and other isms to make school safer and welcoming so that all students feel safe, noticed, and welcome in school. When a principal has those goals in mind, he or she may not be the most popular with the "old-school" thinkers, but he or she will be respected and trusted by the people that matter most - the students. Ultimately, student success is the goal and the results will speak for themselves.

I value interpersonal and managerial skills the highest. Other things can be learned.

I value interpersonal skills and leadership skills over experience in an administrative role.

I value strong interpersonal skills, flexibility, and strong communication skills.

I value that they have spent time in the classroom (10+ years). I also value that they have a history of teacher input and do not lead from the top down. They lead by democratic process. They value teachers. I think that having a doctorate is not that important because I know plenty of people with doctorates who don't know anything about educating children. Interpersonal skills are important and a leadership MISSION that is decided upon w/ the staff.

I would prefer a candidate with teaching experience and no experience as an administrator over a candidate who taught for fewer years but had administrative experience.

In answering these questions, I noticed that I always looked at the bottom three categories before I looked at the top categories. Give me a principal who knows how to work with/listen to people over one who knows everything about education and/or pedagogy.

In the trenches experience with students, teachers, staff, and parents ranks very high on my list of expectations for an administrator. S/he must have leadership and interpersonal skills, but many of the managerial task can be acquired on the job with a strong team.

Interpersonal Leadership Skills

interpersonal skills

Interpersonal skills are very important. Some who knows how to communicate. Nothing to do with age, a candidate MUST have a decent amount of years in the classroom to be a successful educational leader

Interpersonal skills can overcome other deficiencies. It is most important to have a leader who works well with others because they will be able to foster fundamental relationships and an effective environment. This skill is somewhat of a gift that can't be quickly learned. Managerial stuff can be learned or delegated.

Interpersonal skills are paramount to have in this position as an administrator.

Need a people person, someone whom the staff respects and the kids can look up to. Someone who can deal with parents and upper admin. Everything else is crap.

Principals do not need to manage staff and students, they need to lead. (You manage situations or finances, not people.) Valued characteristics: Well-rounded, well-traveled, open minded, a creative problem solver, an individual who values music and the arts, and who is interested in offering a wide variety of elective classes to the students. The candidate should value, be genuinely interested in, and show respect to ALL students, not just the top 10% college bound or those on sports teams. He or she should encourage the teaching staff to use their particular talents in their classrooms in an attempt to encourage students to recognize and use theirs.

Relate well to the staff and students. The staff generally knows what and how to teach the principal needs to support them on that level.

Sincerity, honesty, fairness

Someone who is easily approachable for advice, able to handle student: teacher/parent situations, someone students know and want around

Strong Interpersonal communication skills are a must, teaching experience is also necessary

Strong interpersonal skills, demonstrated instructional leadership, love of students, social-emotional focus

Supportive of all areas and subjects.

Teaching experience is extremely important from my perspective.

The ability to listen well, interact with faculty and students, and to be out of the office monitoring what goes on in the hallways. Being present is important.

The best qualities to have in a high school principal is someone who supports his or her teachers, LISTENS to what students and faculty want and need and allows his or her staff to do their job without getting in the way.

They absolutely have to understand curriculum.

They need actual teaching experience, preferably in a core subject, preferably with a Regents exam in it. They also need to be more interested in doing the job than just hopscotching their way to plusher and plusher jobs every few years.

They should have experience as an administrator preferably as an assistant principal at the minimum. They also should have a significant amount of teaching experience prior and should have excellent intrapersonal skills and leadership skills

Type of degree/Certificate doesn't mean much. The type of leader and instruction is what I find most important. Preference would be someone that taught for closer to 10 years and has a full understanding of the inner workings of a school building.

Vision. What learning looks like, sounds like and can articulate it to all regardless of discipline.

While I do value experience and education, I have found that both of these qualities can be acquired over time if a candidate is deficient in these areas. I have not found however that individuals who are deficient in interpersonal skills improve in this area over time. It is for this reason that I value interpersonal skills over the other criteria.

Years of experience in the classroom. Too many principals are fast tracked and have not put in the time to really understand the job of a school. They lose sight of why we are here.

A high school principal should have a broad field of knowledge related to all that high school life entails. New principals should be willing to listen to experienced staff and include staff in decision-making processes.

A high-school principal should support his/her teachers in all aspects. If there is an issue that needs to be handled with a parent, the principal should speak to the teacher before discussing issue with parent. The principal should also be aware of what other administrators are handling so as not to micro-manage.

A principal having some experience is important, but I find administrators with very little classroom experience lack perspective of our jobs and do not relate well to teachers. A principal that is accessible, has their door open, is out in the hallways, at school events, is overall- present- that's important!

A quality principal will consider the needs of everyone in the building (students, faculty, staff, etc). He/she should keep abreast of new learning techniques and share them with the faculty. Teaching can be stressful. It is important that teachers feel like they have a supportive administration behind them.

A top candidate should be consistent with enforcing rules and disciplinary consequences.

Above average managerial and interpersonal skills

As a teacher, I appreciate administrators that have great interpersonal skills and managerial skills above all other criteria.

Consistency, good advocacy skills

Doctor or not, couldn't care less...having teaching experience would be beneficial, but most are far removed and their, "back when I taught..." is antiquated because of APPR and common core, so it's not important...The chaos of what unfunded mandates Albany requires and the insane amount of regulations constantly being changed, a HS principal needs high managerial skills and strong interpersonal skill to not only keep the ship afloat but to keep it headed in the right direction.

Establishes clear expectations for faculty/staff. Resistance to micromanagement within an appropriate academic/professional environment. Utilizes positive reinforcement of faculty/staff, not solely negative/critical reinforcement.

Focused on student growth. Supportive of teacher's creative license. Visionary on classroom innovation and economic opportunity.

Goal of working as a team and not as a dictator.

Handling the people is essential and several years of teaching experience. 5 is not enough. Degree is less important.

Having children that have already been through the high school process certainly gives a candidate greater insight. Being a clear speaker who uses proper grammar and syntax and can command an audience. Someone who has a vision of what a great high school experience looks like for students on all levels.

I am most interested in how recently this candidate has been in the classroom, and if any experience, where: in what type of school, with what kind of population, and with how many teachers. To me, the degree level is irrelevant, as being a leader is about wisdom and cooperation.

I appreciate an administrator who manages but not micromanages the faculty and staff, and one who values and utilizes teacher input.

I definitely want someone with classroom experience. As a science teacher with unique circumstances that come with my teaching job, I would like to see someone with some science background. I would not be inclined to select someone whose only experience is as a teacher of Physical Education.

I don't think someone needs administrative experience to be an effective principal. I think leadership skills and the ability to inspire your staff are important. I don't think instructional leadership is important for a high school principal I think that is more important for a department chairperson.

I feel that it is imperative for a high school principal to create a community atmosphere in their school. The ability to collaborate with others, create a calm sense of order in a building and lead by example are also important.

I feel that the principal should be someone who the faculty feels comfortable speaking with and going to with any issues or concerns. I also feel that the principal should be seen within the building, both by students and teachers!

I find it interesting that level of education is a criterion. It had no bearing on my decision making. I have been on 3 of these committees and letters of recommendation and references play a key role in decision making over education.

I value someone who knows how to use and encourage people's strengths rather than micromanage everything themselves. I also value someone who supports teachers in situations with parents and students. A good principal is also someone who is not strictly reactive but is able to calmly look at all pieces of a situation before taking action or recommending action.

I value the following more than what degree they have...in order of most important: - managerial skills - interpersonal skills - years of teaching (min 5yrs of teaching experience)

I would prefer more years of teaching, all else being equal. I don't hold a tremendous value in instructional leadership but would prefer a principal who is willing to allow professional staff the latitude of using the instructional styles that they feel most comfortable with, provided they are effective teachers. Nonetheless, and no offense meant, but in most of the 10 situations presented, there wasn't much question. Seriously... you think that choices in the first situation presented was genuinely going to provide any information other than which survey takers were taking the survey seriously? But I don't think avg, above avg, and below avg in relatively broad categories is that meaningful. What's the principal's stance on discipline with students? What are the principal's expectations - do they expect their faculty to uphold the school rules 100% of the time? Do they stop any student in the hallway who is violating the dress code? Here's one that's super-important - when a parent complains about a teacher, do they have the teacher's back, or do they immediately take the parent's side? The question shouldn't necessarily be whether their leadership is average or above average; the style of leadership is more important.

I wound up focusing on the bottom characteristics (the skills). I feel these innate skills outweigh the importance of a degree, and to some degree experience (within reason).

Interpersonal and managerial skills are foremost skills. Instructional skills can be learned, I think, more so than any others.

Interpersonal skills are the most important. If a leader knows how to relate to the people working with him, he can lack in other areas because the experience and professionalism of his staff and faculty will do whatever it takes to make him a successful leader.

it is important to me that this person connects with the kids as well as the staff. They need to be visible in the building.

Lack of experience is not necessarily a deal breaker - everyone has to start somewhere. Lack of teaching experience is not necessarily a deal killer - as an administrator, you are a leader and a manager, and you can utilize skills and the experience of the people around you such as department chairs, curriculum directors, and other administrators. Having worked at 12 different schools all over the nation, the best two administrators that I ever had, had the following qualities in common... A) They were excellent leaders and communicators B) They know how to read people and situations and could identify the strengths and weakness of their coworkers and employees C) Once they identified their coworkers and employees, they used their management skills to encourage growth, communication, and a positive teaching environment in their workers D) They knew how to communicate with all members of the school community i.e.. parents

Leadership does not boil down to a diploma or certificate, or how up-to-date one is on the current educational literature. It is about being organized, strong, and listening to the needs

of those underneath you and making them feel valued. Those are the people that will always achieve the best work.

leadership skills are more important to me than education and experience

My basic criteria for leadership positions: 10- years teaching experience minimum. The teaching profession cannot be fully understood in 3-5 years it takes years of growth and development to grasp what teachers need and want. When people just use teaching as a stepping stone to reach administration, they entered the profession for the wrong reasons which money and prestige. People skills is a must. If I had to choose a leader it would like this: teacher 10-15years exp, awesome interpersonal skills, decent managerial skills, good instructional skills. Advanced degree is ok (CAS) but they don't need a doctorate, actually I don't want them to have it since I'd be inclined to believe they are using the position to climb up to super or district office positions.

Person who understands the needs of each teacher and student. Not afraid to make tough decisions and is not swayed by higher authority. Someone you can trust has your back and in turn you will have theirs.

Relational skills and good communication are key. It is a great asset if the candidate treats the staff like a coach treats a team. working as a team is essential for success in any educational establishment.

Someone that says what they mean, not what you want to hear. Especially if they aren't going to follow through after they tell you what you want to hear.

Someone who is approachable to staff and consistent with discipline.

Strong interpersonal and managerial skills. Teaching experience. Advanced degree but not necessarily a doctorate.

Teaching experience and building leadership skills (as opposed to instructional leadership) are the most important traits a principal can have, in my opinion.

Teaching experience is more meaningful than admin experience when teachers look, doctoral degree v advanced doesn't matter to teachers, what matters more is skills, especially interpersonal

the leadership competency matters most to me. I don't think years of teaching and level of education/degree matter much when considering potential in a principal. I just wonder how you have such a confident read on a candidate's leadership competency through an interview process.

The person has to have an understanding of proper school climate. The person should be able to balance the extracurricular with the academics - not lean heavily one side or the other. The person should also understand the age of the students - don't treat high school

students the way you would treat elementary students. Recently had a former physical education teacher as a principal - he did not value academics needs of the high school at all.

transparency, prompt, personable, gets out of office

While experience and education level are important, since of the other areas are hard to train someone in.

Years teaching and level of education are less important to me than instructional, managerial, and interpersonal skills.

A person who chooses to follow the path to be an administrator needs to understand group dynamics, as well as be able to balance being approachable with being a leader. The principal of a school needs to be the first one to try, the first one to do, not the person who only tells.

A principal that allows the faculty to make decisions A principal that does not micro manage A principal that supports faculty

Administrators tend to be out of touch with the classroom. Teaching experience is so important.

Admins today run from instruction because they are not good at instructing or managing their classrooms. Too many have 3-5 years teaching, then come back as superiors and tell 15-20-year veterans how to teach. The current trend is a detriment to education

Classroom experience, history as an administrator (especially a former principal), and average to above average managerial

Get to know your staff

Having a doctorate has no bearing on if the person is suited for the job. However, what I truly believe is principals who spent more time in the classroom are typically better at the 3 leadership roles that were presented. However, skills are more important than any background education/ experience.

I couldn't care less about what sort of degree the person has; what I looked for when choosing the option was the bottom three criteria.

I don't really care which degree you have--a principal must be a good manager and be able to work with people above and below them in the chain of command. If they can assemble a good support team of assistant principals and/or department heads, those people can help make up for any other shortcomings the principal may have. If they can't run the team or communicate effectively, then no other abilities matter much.

I find it valuable for my principal to have more classroom experience than 5 or 7 years. They need to have good skills delegating tasks and be able to connect with staff and students.

I think that it is essential to return to the criteria that to be an administrator one needs to have some teaching experience. It is crazy that an administrator should come into a classroom to evaluate a teacher when he/she has never been a teacher. Too many do not even know what they are looking at in terms of lesson design, classroom management, instructional learning strategies, etc. when they are evaluating. The ones with no experience tend to focus only on the use of technology in the classroom, which is a tool for instruction, not a method of instruction. The wreckage in our schools at present is largely due to administrators who have taken a one-year Master's program to become certified, having come from the business world, counseling backgrounds, criminal justice fields, or other occupations unrelated to education.

I would like the person to be approachable and willing to learn the school's culture before making any significant changes.

Interpersonal skills, creating the feeling of Being part of something, inclusive, commitment to diversity of employees and thoughts, openness to new ideas

It is important to choose a candidate that understands the importance of collaboration and understands the process through which change is made in a high school. High school

students need a principal they can respect, while also being fair. It's important that the candidate be a good listener and get a pulse of the school prior to instituting change.

Motivating employees

No administrative work at all it is hard to be principal of a school. Level of degree doesn't mean you know more or would be better than someone else.

Open communication with their staff.

The candidate should have paid his or her dues in the classroom. They should be a master teacher.

Trust in staff and departmental leadership is key

Willingness to delegate, not micro manage. Makes time to discuss changes rather than use top down directives.

APPENDIX G:

CODES APPLIED IN COMPUTER-AIDED TEXTUAL ANALYSIS

*academic

academic

*accessible/visible

accessible | accessibility | visible | see

*achieve

achieve | success | succeed | successful | accomplished | effective | perform | demonstrate | effectively

*admin

admin | admin. | admins | administration | administrative | administrator

*advance

advance | advanced

*advocate

advocate | Advocacy

*approachable

approachable | approach

*average

average | avg

*aware

aware | Awareness

*background

background | history | prestige

*believe

believe | trust

*building

building | foster

*calm

calm | calmly | patient

*candidate

candidate | candidates | applicant | applicants | finalist | finalists

*caring

care | cares | caring | empathy | kind | love | genuine | sincerity | concern | nicd | nice | genuinely

*certificate

certificate | certified | license | qualification

*change

change | alter | reform

*choose

choose | decide | determine | choice

*climate

climate | atmosphere | environment

*collaborate

collaborate | collaboration | collaborative | cooperation | democratic | input

*communicate

communicate | communication | communicating | communicator | communicators | articulate | clearer | speak | speaker | speaking | discuss | conversation

*community

community

*consider

consider | considering

*consistency

consistency | consistent

*characteristic

characteristic | trait

*criterion

criterion | factor

*decisions

decision | decision-making | decisions

*deficient

deficient | lack

*degree

degree | degree/certificate | diploma

*delegate

delegate | delegates | share | empower

*department

department | dept | dept. | departmental

*develop

develop | development | pd | "professional development"

*difficult

difficult | hard

*discipline

discipline | disciplinary | consequence | enforce

*district

district

*diverse

diverse | diversity | well-rounded | well-traveled | complete

*doc

doctoral | doctorate | "doctoral degree" | doc | doctor

*easy

easy | easily

*education

educate | educating | education | educational | ed

*established

establishment | establish | established

*evaluate

evaluate | appr | monitor

*expectation

expectation | expect

*experience

experience | experienced | seasoned | veteran | exp

*expert

expert | expertise

*faculty

faculty | faculty/staff | staff | counselor | coworker | employee | employees

*fair

fair | fairness | balance | even-handed | equal

*feel

feel | feeling

*few

few | fewer

*flexible

flexible | flexibility

*focus

focus | attention

*follow-up

follow | follows-up

*good

good | adequate | well

*greatly

greatly | largely | greater | great | most | much

*help

help | helpful

*home

home | house

*hire

hire

*honest

honest | honesty | honorable | candid

*humility

humility

*important

importance | important | super-important | imperative | paramount | essential

*improve

improve | increase | better

*information

information | info

*innovate

creative | create | design | innovation

*inspire

inspire | inspirational | motivate | encourage

*integrity

integrity

*interested

interested

*involve

include | involvement | inclusivity

*interpersonal

interpersonal | relationship | relationships | relate | relates | connect | connects | connecting |

charisma | personable | relational | personal | interact | interaction

*issue

issue | issues

*job

job | jobs | position | positions | role | roles

*knowledge

know | knowledge | wisdom

*lead

lead | leader | leaders | leading | leads | leadership | coach | counsel

*learn

learn | learning

*listen

listen | hear | listener

*look

look | appearance

*manage

manage | manager | managers | management | managing | managerial | organize | planning |

handle

*media

media

*micromanage

micromanage | micro | micro-manage | micromanagement

*minimum

little | minimum | minimize | minimal | less | least

*finances

money | economic | finances | budget | fundraising

*necessary

necessarily | necessary

*need

need

*new

new

*office

office

*open

open | openness

*order

order

*other administrator exp.

chairperson | chair | director | ap | dean | "assistant principal"

*parent

parent | parents | family | home

*people

people | person | persons

*positive

positive

*prefer

prefer | preferably | preference | value | want

*principal

principal | "school leader"

*problem-solver

problem-solver | "problem solver" | "problem solve" | solver

*process

process

*professionalism

professionalism | professional | profession

*quality

quality

*recommend

recommend | recommendation

*quite

quite

*reactive

reactive

*real

real

*respect

respect | respects | appreciate

*require

require

*school

school

*skills

ability | able | skill | skills | competent | competence | capacity

*situation

situation | scenario | situational | circumstance

*stress

stress | stressful

*strong

strong | superior | super | excellent | tremendous | extremely

*student

student | child

*support

support | supportive

*instruction

teach | teacher | teaches | teaching | taught | instruction | instructor | classroom | class | educator | instructional | curriculum | curricular | instruct | pedagogy

*team

team | group

*think

think | thought

*top

top | best

*transparent

transparent | transparency | clear | clearer

*treat

treat

*understand

understand | understanding | understood

*vision/mission

vision | visionary | direction | mission | philosophy

*willing

willing | willingness

*work

work | works | working | worker | occupation