The Effects of Sex and Professional Experience on Superintendent Selection Decisions by School Board Chairpersons

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The Effects of Sex and Professional Experience on Superintendent Selection Decisions by School Board Chairpersons

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College of Education
University of South Carolina
2017

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Dedication

Both this study and its corresponding degree are dedicated to all of my family, without whom neither would have been realized. We all share in this accomplishment.
Acknowledgments

First and foremost, thanks be to God for giving me the ability, drive, and opportunity to pursue a terminal degree. I have been blessed beyond measure.

I cannot thank enough my wife, Britain, for working tirelessly beside me as I completed this goal. The pursuit of this degree required great sacrifices by her in terms of time, energy, and resources that could have been used in other ways. There is no question that I would not have started, much less completed, this degree without her constant, unquestioned support.

I thank my family for always being supportive and proud of everything I do, this degree being no different.

I thank Dr. Henry Tran for taking a chance on and being will to work with me as I accomplished this task. The constant level of rigor he demanded from me was only surpassed by the level of support he provided me. Through both, he challenged and helped me to grow and be capable of more than I thought possible.

Thanks also goes to Drs. Bon, Platt, and Ployhart for graciously serving on my committee and giving me feedback and advice throughout the process.
Abstract

The purpose of this research was to examine the effects that a superintendent candidate’s sex and professional background and school board chairpersons’ sex have on resume screening decisions. School board chairpersons were selected randomly from across the United States to receive one of six types of hypothetical superintendent candidates’ resumes and respond to a survey which requires subjects to rate the likelihood they would recommend the candidate depicted in the resume for an interview. Variables examined were candidates’ sex (male vs. female), professional experience (business vs. education vs. military) and sex-similarity with school board chairperson. An ordinal regression was used to identify differences in interview recommendations between groups.
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Chapter 1

Introduction

A superintendent is normally considered a school district’s most visible and influential figure. As such, the superintendent is often seen as the “face” of the school district – for both the community he or she serves and the educators he or she leads. Interestingly, even with the great diversity of communities and school districts which exist across the United States, American superintendents are most frequently White, male, and career educators (Kowalski, McCord, Petersen, Young, & Ellerson, 2011).

While females comprise 76% of American public school teachers (National Center for Education Statistics, n.d.) and 52% of public school principals (Goldring, Gray, & Bitterman, 2013), only 24% of public school superintendents are female (Kowalski et al., 2011). Although the percentage of superintendents who are female is comparable to that of college presidents (26%) (Cook, 2012) and far greater than that of Fortune 500 CEOs (4%) (Zarya, 2016), it is still much lower than one might expect considering the disproportionately high percentage of females who enter the field of education. In response to these glaring disproportions, Glass, Björk, and Brunner (2000) asked: “What deters large numbers of women from becoming superintendents? Is the position not alluring to women? Are preparation program entryways blocked? Are school board members not inclined to hire women? Are search firms not bringing women into their pools? These and other questions are in need of substantial research” (p.45).
Many have postulated plausible explanations for the dearth of female superintendents; some of the causes are self-selected by females and others are external. Sperandio and Devdas (2015) suggest that many women do not aspire for the superintendency, but, rather, seek roles more closely linked to students. Grogan and Shakeshaft (2013) state that female educators’ care for students, which is what most often motivated them to become educators in the first place, compels them to seek roles which can directly influence students. Some have claimed women often make career choices aimed at achieving personal satisfaction rather than career advancement (Grogan & Shakeshaft, 2013).

One aspiring for a future superintendent position will likely have to move several times during the course of their career in order to capitalize on vertical mobility opportunities (Sperandio & Devdas, 2015), yet many women choose not to relocate (Glass, 2000). Munoz et al. (2014) state that women applying for superintendent positions give up too quickly. Whatever the reason, women are not pursuing the superintendency proportionate to the number of women who have or are pursuing superintendent certification (Grogan & Brunner, 2005). The most widely cited explanations for female underrepresentation are a lack of encouragement for women to pursue the superintendency and discrimination by school board members (Glass, 2000). Some (e.g., Brunner & Kim, 2010; Sperandio & Devdas, 2014; Tallerico, 2000) posit the latter as the paramount deterrent to more common female-occupied superintendencies.

Glass (2000) states that, although school board discrimination may play a role, the female superintendent disparity is at least partially attributed to a number of other factors as well, specifically that female educators: are not in positions that normally lead to the superintendency; are not gaining superintendent credentials in preparation programs; are not as experienced nor as interested in districtwide fiscal management as their male counterparts; are not interested in the superintendency for personal reasons; enter the field of education for
purposes other than pursuing leadership opportunities; and enter administrative positions too late in their careers. In a direct retort to Glass (2000), Brunner and Kim (2010, p. 279) describe Glass’ assertions as “myths and misunderstandings” and refute each, save discrimination. Brunner and Kim (2010, p. 301) go so far as to state that they “can offer no explanation for the dearth of women in the superintendency other than the fact that long-held biases” are the root cause.

Stating the national underrepresentation of female superintendents is due to school board members’ discrimination during the selection process is not a novel idea, but it is one that lacks sufficient evidence. Claiming that the underrepresentation of female superintendents is because board members are biased against female superintendent candidates and substantiating that claim by pointing to the fact that females are not assuming the role of superintendent in equitable proportions (see: Brunner & Kim, 2010) is circular reasoning – the premise is supported by the conclusion, which is supported by the premise. Furthermore, 44% of school board members nationally are female (National School Boards Association, 2015), which seems to subvert this claim. Are men discriminating against women? Are women discriminating against other women? Are there other possible factors at play? Brunner and Kim’s (2010) assertion may very well be correct; however, more evidence is necessary to corroborate, or perhaps invalidate, the claim.

In addition to being mostly male, superintendents are overwhelmingly career educators (Kowalski et al., 2011). Considering that the superintendency is a position within the educational profession this fact might seem intuitive; however, there has been a notion promulgated since the 1980s that perhaps traditional superintendent types are not the answer to the public education crisis. In 1983 *A Nation at Risk* (National Commission on Excellence in Education) was published, resulting in increased attention and criticism of American schools.
One of the results of *A Nation at Risk* was a renewed interest in market-based school reforms, such as increased school choice options and availability, increased school accountability standards, and deregulation (Dudley-Marling & Baker, 2012). This free-market approach to education, often referred to as neoliberalism (Harvey, 2007), has faced political resistance, and yet has had numerous effects on public education. One effect has been the introduction of voucher-based school choice initiatives in places such as Milwaukee, Cleveland, and Florida and a 500% increase in attendance of charter schools nationally (U.S. Department of Education, 2015).

Perhaps the most profound impact that neoliberalism has had on American schooling came through the passage of No Child Left Behind (NCLB) in 2001. NCLB, which has been embraced by groups across the American political spectrum, incorporates many market-based concepts such as high-stakes testing and accountability, deregulation, school choice options, merit pay, and competition among schools (Dudley-Marling & Baker, 2012). One of the results of the rise of neoliberalism in modern American schools has been a re-thinking of school leadership preparation and qualifications. Specifically, rather than recruiting traditional superintendents, who began their rise to the top of school districts from the ranks of teachers, some have called for an influx of non-educators, business and military leaders mostly, to lead school districts to more efficient and effective outcomes (e.g., Eisinger & Hula, 2004). With nearly half of school board members nationally being business professionals, and only relatively few having professional education experience (Hess, 2002), one might expect a preference for superintendent candidates with proven professional experience. Yet, the movement towards nontraditional superintendent leadership has gained only modest traction, with nontraditional superintendents comprising only about 5% of superintendents nationally (Kowalski et al., 2011).

This study does not intend to argue for or against the employment of nontraditional
superintendents – after all, nontraditional superintendents have yielded mixed results, at best (Eisinger & Hula, 2004; Glass, 2006) – but merely to gain a better understanding of school board members’ views of such candidates.

Another factor to consider as a potential influence on superintendent selection decisions is the similarity-attraction paradigm, which requires the researcher to examine not just the candidate’s sex, but that of the employer as well. Byrne’s similarity-attraction paradigm (1971) postulates individuals like and are attracted to others who are similar, especially in held attitudes and beliefs, which can influence selection decisions made by employers when such characteristics become known or perceived. Within the confines of the screening stages in the selection process, attitudes, values, or beliefs are not usually recognizable for observers of paper credentials; however, demographic similarity between the employer and candidate on characteristics such as sex can lead to perceived similarity in attitudes and beliefs because one might believe that individuals of the same sex might have similar life experiences, resulting in other similarities. This type of perceived similarity can in turn lead to interpersonal attraction and bias in a selection decision (Graves & Powell, 1995). Fifty-six percent of school board members are male (National School Boards Association, 2015), meaning that if similarity-attraction effects are real in the screening decisions of superintendent candidates, then that might be a contributing factor to the dearth of female superintendents.

The purpose of this study is to investigate the effects that superintendent candidates’ sex and professional experience and the sex of the school board chairperson have on screening decisions. In so doing, the study will begin to expose whether or not biases exist – and to what extent – which may explain the disproportionate percentages of female and nontraditional superintendents. Such expositions have the potential to substantiate the claims and arguments
of many on either side of the discussions, such as those aforementioned, who have posited reasonable explanations for the disproportions.

The ability to yield empirical evidence to these discussions alone makes this study significant because there is very limited research that examines the influences of sex and type of experience on the selection of superintendent candidates. Furthermore, although research examining the selection decisions of employers has been existent for over a century (e.g., Mayfield, 1964; Scott, 1915; Wagner, 1949), and many of these studies have been within the public educational context (e.g., Reis, Young, & Jury, 1999; Young, 2005), rarely, if ever, have school board members been the subjects of such research. Therefore, by examining the school board members’ selection decision-making processes, the current study does far more than address the above-stated research questions – it serves as a potentially seminal work for a new stream of future research examining school board members’ perceptions and bias directly rather than indirectly (e.g., Kim & Brunner, 2009).
Chapter 2

Literature Review

This chapter will describe the superintendency, both its historical and current statuses. Additionally, staffing practices, especially the selection processes of superintendents, will be discussed at length. Finally, barriers to the superintendency will be detailed as arguments for the use of valid staffing practices and as an impetus for this study.

The Superintendency

The superintendent is arguably the single most influential, catalytic, and crucial person within American public school districts when it comes to district decision making. He or she wields great influence over the choice and implementation of district initiatives, district- and school-level personnel selection decisions, and the culture and climate of the district and schools within the district. A superintendent is the personification of, spokesperson for, and leader to the entire educational community of the district.

Technically, superintendents possess little actual authority. With some variation from state to state, school boards are vested by their state legislatures with the responsibility of managing the educational system within the district and it is the board members who possess actual authority in all school district-related matters (National School Boards Association, 2015). The superintendent, whom the board appoints and dismisses, excepting districts in which the position is elected directly by the populous, merely acts as the board’s executor. Despite this,
the superintendent has strong influence over the board’s decisions in that his or her opinion and experience is often trusted and accepted by the board.

**The history of the superintendency.** It is customary for effective and well-functioning school boards to defer management authority of day-to-day operations to the superintendent and to rely on his or her advice and input on all matters (Lee & Eadens, 2014), but that has not always been standard practice. During the approximate 180 years that the position of school superintendent has existed in the American public education context (Brunner, Grogan, & Björk; 2002), the roles and responsibilities of the position have evolved drastically.

The first superintendents were appointed in 1837 in Buffalo, New York and Louisville, Kentucky, as the administrative duties of overseeing a school district in such large cities began to be too much for the local governing board (Sharp & Walter, 2004). By 1850, school systems in 13 large cities had employed a superintendent and by 1900 most city school districts had a superintendent (Kowalski, 2005). The need for the employment of a superintendent arose as a result of many factors, including the increase in size of many city school districts, the consolidation of rural school districts into larger districts, an expanded state curriculum in many states, the passage of national compulsory attendance laws, mandates for increased accountability, and ever-increasing efficiency expectations influenced by industrialization (Kowalski, 2003).

Superintendents at first were primarily a mere clerk to the school board (Carter & Cunningham, 1997; Petersen & Barnett, 2003); however, over time the role evolved into the school board’s chief executive and administrative officer (American Association of School Administrators, 1994). The role expectations of district leaders has progressed through stages of teacher-scholar, organizational manager, democratic statesman, applied social scientist, and
communicator (Callahan, 1966; Kowalski, 2013), with the challenges and complexity of the job ever-increasing and changing (Houston, 2001).

**Superintendent as teacher-scholar.** The earliest superintendents were essentially master teachers (Callahan, 1962), often viewed as intellectual leaders who authored professional journal articles and eventually became state superintendents and/or members of academia (Björk, Kowalski, & Browne-Ferrigno, 2014). Beginning around the time of the War Between the States, these men were seen as scholarly educational leaders and sometimes even philosophers. They saw themselves as leaders in the community and teachers of teachers (Callahan, 1966). The primary foci of these men were to implement state curriculum, which was intended to instill values of American culture into students, and supervise teachers (Kowalski, 2005).

Up until the 20th century, some of the most prominent and well-known superintendents were William Torrey Harris and William H. Maxwell. The former, a Yale-trained leader in education and philosophy, saw the role of the superintendent as an efficient manager of school operations, effective leader of teachers and the school culture, and outspoken advocate for the school to the community. Maxwell, the superintendent of Brooklyn schools from 1887-1898, believe the most important qualification for teaching was scholarship (Callahan, 1966).

The prestigious perception of early superintendents allowed these individuals the ability to refract more modern expectations of superintendents being politicians or managers. These superintendents did not see themselves as being separated from the teaching profession, but, rather, spent most of their time supervising instruction or participating in scholarship. Managerial duties were usually handled by the school board members (Kowalski, 2005). Although the conceptualization of superintendents as teacher-scholars diminished around 1910,
the emphasis of superintendents as being instructional leaders has reemerged since the 1980s (Björk, Kowalski, & Browne-Ferrigno, 2014) with 60% of modern superintendents indicating instructional leadership as a substantial emphasis expected of them by their school boards (Kowalski et al., 2011).

**Superintendent as organizational manager.** The late 1800s in America was an era of industrialization and scientific management theory and these business movements began to influence education and the role of the superintendent. The occupation of businessman became an ever-increasing position of prestige and the business ideologies and models became ever-more influential in non-business sectors of society (Callahan, 1966). This shift came, in large part, in pragmatic response to logistical and financial crises faced by schools around 1900 as poor non-English-speaking immigrants, primarily from Southern and Eastern Europe poured into America at the rate of 1 million per year. Additionally, child labor laws were enacting during these same years, resulting in a cumulative effect of massive influxes of mostly poor and poorly-educated students into the classrooms, stretching resources thin (Callahan, 1966).

During this critical time, school boards dominated by business-minded individuals began assigning management duties to superintendents, such as the management of personnel, facilities, budgets, and operations in addition to their instructional roles (Björk, Kowalski, & Browne-Ferrigno, 2014). By 1920, superintendents were expected to be scientific managers who were capable of improving operations by concentrating on time and efficiency (Kowalski, 2005; Tyack & Hansot, 1982). Although the managerial concept of the superintendency lost momentum in the 1930s following the stock market crash, strong managerial expectations remain common expectations for superintendents today (Glass, Björk & Brunner, 2000).
Superintendent as democratic statesman. Björk and Gurley (2003) described superintendents of this era as astute political strategists, which, due to the philosophical and political realities of the time period (Kowalski, 2005), was a necessary role and accurate description. With the scarcity of resources that plagued the 1930s came the need for superintendents to lobby and secure financial resources to maintain the viability of their schools. This further propelled superintendents into the realm of politics as public education came into competition with other public agencies for funding.

In addition to parents, school board members, and the local community, superintendents were tasked with developing advantageous relations with policymakers and the larger taxpaying community, highlighting the political acumen suddenly necessary in order to effectively champion their schools’ interests. During this difficult post-Great Depression era, an effective superintendent was seen as one who could accrue financial and political capital for district initiatives. District problems had become economic, social, and political in nature and knowledge and skills, rather than philosophy, were necessary to solve them (Kowalski, 1999, 2005). Since the 1930s, the methods by which superintendents carryout their political responsibilities may have changed, but the political role they serve has not diminished (Björk, Kowalski, & Browne-Ferrigno, 2014).

Superintendent as applied social scientist. After 1954, the focus of educational leadership shifted from the idealistic to the realistic – from what educational leadership was rather than what it should be. During this era of improved scientific research, effective superintendent practice was seen as having research-based understandings of human beings and organizations and applying that knowledge in practical ways. University-based administrator preparation programs adjusted their curriculum to address not merely practitioner-based content, but additionally research-based findings and theories (Björk, Kowalski, & Browne-
Ferrigno, 2014). Callahan (1966) described four major factors which contributed to the transformation of superintendent to applied social scientist: a growing dissatisfaction with “democratic administration”, which was the popular educational leadership style of the time; a rapid advancement in social sciences following the end of World War II; work done by the Kellogg Foundation to advance of educational administration; and intense criticism of schools and administration between 1950-1954, which was partially a byproduct of the hysteria of McCarthyism, greater demand for educational services, and increasing enrollment.

After World War II, the concept of democratic leadership was criticized as being less useful and pragmatic than necessary. Critics argued that the idealistic view of shared leadership only exacerbated political, social, and economic problems (Kowalski, 2005). A calculated, scientific approach to leadership, specifically at the superintendent level, was promulgated by many.

Social science research underwent a rapid development in the years following World War II. During the 1950s, the Kellogg Foundation allocated more than $7 million to major universities to support research in social sciences. Many argued that social science concepts were central to the administrative and leadership-oriented roles of the superintendent (Kowalski, 2005), and, therefore, superintendents were expected to act upon and implement the myriad of research flooding in.

Many factors contributed to emerging social and political concerns related to schools: segregation’s demise was eminent, families were leaving for suburbs in masses, post-World War II baby boomers were enrolling in schools in large numbers, and the Cold War concern was intensifying. All of these factors exacerbated problems for school districts and superintendents
were considered to be ill-prepared for the task (Kowalski, 2005). As a result, the role of the superintendent was expected to transform to the empirical and pragmatic.

**Superintendent as communicator.** Beginning in the mid-1950s, America has become an increasingly information-based society, which has continually increased the communicative expectations of superintendents regarding their communication abilities and frequency (Björk, Kowalski, & Browne-Ferrigno, 2014). Educational reforms occurring post-*A Nation at Risk* and subsequently have underscored the importance of superintendents to engage in open dialogue with stakeholders in order to maintain district support and deflect negative attention (Björk, Kowalski, & Browne-Ferrigno, 2014). It is considered axiomatic that communication is absolutely essential for an organization to function effectively, and an organization’s leaders, most important of all, must be able to communicate well in order to sustain a healthy, communicating organizational culture. The superintendent must practice effective communication by regularly informing the school board with information, interacting with parents and other community members, leading district personnel and initiatives. Employing oral, written, and crisis resolution communication skills through various mediums such as district websites, newspapers, local news outlets, social media, and in-person are considered essential functions.

The role and perception of the superintendency has changed over time as a result of social, economic, and political conditions. The history of the superintendency shows that as the role of the superintendent position changes, it does so by adding new responsibilities and expectations, rather than replacing former, with the superintendency increasingly becoming more and more complex and challenging with each new era of focus. As the position becomes more challenging, so does the process of selecting individuals who have the necessary skill set and experience to effectively fulfill the duties of such a complex and dynamic position.
The roles and responsibilities of superintendents. A superintendent has numerous district responsibilities for which he or she is directly or indirectly accountable: facility and transportation management, financial planning and supervision, curriculum and instruction leadership, policy implementation, public relations via numerous media vehicles, modeling leadership to and developing it within school leaders, and school board liaison (Weiss, Templeton, Thompson, & Tremont, 2015). Depending on the location, size, and social setting of the district, the actual duties associated with the title of superintendent can vary greatly from one district to another. In small and rural districts, superintendents often are directly responsible for all of the above-mentioned functions; large and urban districts contain a cabinet of district-level administrative personnel to whom the superintendent delegates one or more of those functions. The role of school board liaison – which includes informing, collaborating with, and enacting the wills of the school board – is the most important function of the superintendent and cannot be delegated.

Superintendents are very powerful individuals not only in the realm of education, but also in the community and politics. Building and maintaining community support for the school district is an ever-increasing function of a superintendent. District leaders are encouraged to develop partnerships with local organizations to accomplish common goals through coordination, cooperation, or collaboration (Kowalski, 2013).

Some see school districts as vehicles for social justice and reform (e.g., Ratts, DeKruyf, & Chen-Hayes, 2007), while others expect schools to preserve and transmit social norms and values held by the community. The tension between these two conflicting perceptions is political as much as it is philosophical, and, as the visible representative and leader of the district, the superintendent is thrust into the middle of the political debate expected to balance
or promote one or both sides (Kowalski, 2013). The station holds much power of persuasion as to which side, or direction, the district will lean.

For over a century, scholars and observers of education have understood superintendents are in the position most influential on the quality of education the students within their districts receive (Callahan, 1966; Rice, 1893). In a meta-analysis study of over 30 years of research, Waters and Marzano (2006) found superintendent leadership to be positively correlated \((r = .24)\) with student achievement. Numerous studies have since suggested superintendents’ characteristics (Hough, 2014), tenure (Myers, 2011; Simpson, 2013), and experience (Plotts & Gutmore, 2014; Thompson, Thompson, & Knight, 2013) all strongly impact student achievement.

No other person is so influential on the accomplishment of secondary academic district objectives, such as equity and personnel development. Superintendents serve as tone-setting moral agents who have the capacity to reduce achievement gaps and ensure equitable educational experiences for all whom are under their authority (Sherman, 2008; Wright & Harris, 2010). The development and sustaining of learning communities within schools – a popularly verbalized priority in school districts – is a function for which superintendents are positioned as the primary catalyst (Sackney & Mitchell, 2008).

As important, influential, and rewarding as the job of superintendent can be, it is also very complex, difficult, and demanding. Due to the expectations of appeasing the school board and local community, supporting and leading the educational community, pleasing parents, and serving students, conflict between competing stakeholders is common and managing such conflict can be quotidian for superintendents (Cuban, 1988). A superintendent must be able to endure possible micromanagement from his or her board members as well as hyperinterest and
hypercriticism from outside groups (Carter & Cunningham, 1997), which might explain why many superintendents’ tenures are so short and why many forego the superintendency altogether (Grogan, 2008).

**The Selection Process of the Superintendent**

Considering the significant impact superintendents have on the success of their students, teachers, and schools, choosing the best candidate to fill a superintendency vacancy is the most important and challenging function a school board must perform (Hord & Estes, 1993). Selecting the right candidate to fill a vacancy is crucial for any organization to operate productively and efficiently (Borucki, 1983; Dipboye, 1992; Heneman, Judge, & Kammeyer-Mueller, 2014) and is one of the most potent ways to shape the characteristics of an organization (Wilk & Cappelli, 2003). The potency is amplified multiplicably when the candidate selected is to be chosen to become the future leader of the organization.

Superintendent selection, as important as it is, is a task for which board members are often underprepared (Kowalski, 2013). The significance of the selection decision, in conjunction with the potential for community scrutiny of or litigation due to the board’s selection performance, is likely a cause for the increased trend in employing professional search consultants in the last few decades (Kowalski, 2003). Whether boards choose to conduct the staffing process on their own or under the guidance of a consulting agency, effective staffing should be the board’s priority.

School boards across the country differ in their sizes – ranging from just a few members on a board to a dozen or even more – and in how membership is obtained – whether through election or appointment – but some aspects of school boards are ubiquitous. On all matters, each board member has one vote and in split decisions the decision of which the greater
number of board members are in favor becomes the decision of the board and the district. With many types of decisions, and always with personnel decisions, board members consider, debate, and/or deliberate on choices behind closed doors, making not just the votes of board members but also the interpersonal influence of board members on each other the deciding factors in district decisions.

An unofficial but often-present practice of many school boards is an enhanced influence of the school board chairperson. The chairperson, as a board member, has just one vote on all matters just as does their board member peers; however, the influence and prestige that corresponds with the position of chairperson coupled with the relational influence that chairpersons often have on their peers magnifies the influence of their vote and opinion. In addition, chairpersons are usually elevated to the position by their board member peers, which means they are usually seen quite favorably by their peers. Many board chairpersons have the added responsibility of serving as the public voice of the entire school board or even the entire district, a practice which can further magnify the chairperson’s influence in non-unanimous school board decisions.

The importance of effective staffing practices. Generally, the selection process for superintendents follows the same staffing practices as many other comparable occupations. Ployhart, Schneider, and Schmitt (2006) define staffing as the process of finding, assessing, placing, and evaluating individuals for employment within an organization. It can be understood as the process that establishes and governs the flow of applicants into and within an organization through recruitment, selection, and employment (Heneman et al., 2014). The selection stage – rather than recruitment or employment – has been and continues to be a stage that receives a great deal of political, legal, and academic attention.
Selection involves the assessment and evaluation of applicants’ knowledge, skills, abilities, and motivation using various selection methods such as resumes, cover letters, application blanks, and interviews. A highly effective and legally permissible selection process incorporates data from these assessments to evaluate an applicant in relation to requirements of a position to predict the degree to which the applicant would fit the position and organization (Heneman et al., 2014). The ultimate goal in the selection process is to find a candidate who possesses the combination of skills, qualities, and motivation needed to improve the effectiveness and efficiency of the organization.

Terpstra and Rozell (1993) found a relationship exists between the staffing practices an organization employs and the effectiveness of that organization, and organizations that use effective staffing processes, such as the use of structured interviews, validation studies, and cognitive aptitude tests, out produce and outperform competitors (Hunter, Schmidt, & Judiesch, 1990; Kim & Ployhart, 2014). In economic terms, selecting an employee that appropriately fits the needs of an organization can over time amount to literally millions of dollars in increased capital; inversely, selecting an employee that poorly fits can cost millions (Schmidt & Hunter, 1998). Effective staffing is even more important within the public school setting because the quality of the education students receive is what is at stake, which is exponentially more valuable not only to the individual, but also the community and future generations.

Although it is difficult to overstate the importance for an organization to select the best candidate to fill a position, it is easy and common to underestimate the difficulty involved in making productive personnel selection decisions. Decision-makers usually are required to make predictions of candidates’ future job performance based on limited information that might be inadequate, inaccurate, or irrelevant. In addition to being challenging, staffing can prove to be a costly endeavor for an organization in terms of time and financial resources committed to the
recruitment, selection, and training processes, making personnel selection a component that an organization should strive to do well.

**Selection methods.** Because employers are faced with the challenge of choosing only one of many applicants to fill a particular position, and the degree of fit and success that each applicant would bring to an organization is not and cannot be foreknown, employers rely on certain assessments, or measurements, to make predictions as to the probability that an applicant will be efficacious in the position and to the organization. An organization has limited resources to exhaust on recruitment, selection, and employment, so establishing a selection process to maximize the efficiency and effectiveness of selecting optimal candidates is vital. A standard approach to increasing efficiency within the selection process is by separating predictors into two types, initial and substantive assessment methods, with the distinguishing factor being the amount of resources required to apply each, and using first the least costly assessments to screen applicants (Heneman et al., 2014).

Initial assessments are utilized to reduce the costs associated with selection by reducing the number of candidates to be assessed by substantive assessment methods, which require more time and resources. This phase in the selection process is frequently referred to as screening. Examples of predictors used to screen applicants are resumes and cover letters, application blanks, biographical information, reference reports, handwriting analysis, literacy testing, genetic screening, and initial interviews (Heneman et al., 2014).

After employers have reduced the size of the applicant pool, substantive assessments are used to make more precise judgments about remaining candidates and are more involved than initial assessments. Predictors such as personality tests, ability tests, work samples, personal inventories, clinical assessments, and interviews are used to make decisions as to
which candidate a job should be offered (Heneman et al., 2014). The choice and implementation of assessments used during the selection process can, and often does, vary greatly between different industries, different organizations within an industry, and even different managers within the same organization.

Employers commonly use a combination of predictors to make more informed inferences about applicants than can be achieved with just one, although more predictors does not necessarily lead to more accurate inferences (Eisenhouse, 2008; Sarbin, 1943; Schmidt & Hunter, 1998). Better selection decisions and inferences are made only by utilizing selection methods with higher predictive validity, which is the most important value of any personnel assessment method (Schmidt & Hunter, 1998). The higher the validity of an employment assessment, the more likely the assessment will be in predicting future employment success.

Within the selection context, validity refers to the degree to which inferences made from selection predictors are accurate (Ployhart et al., 2006). In employment testing, three chief types of validity exist: criterion, content, and construct validities. Criterion validity demonstrates applicants who do well on a predictive assessment will do well on the job and vice versa. For example, if the use of the Armed Services Vocational Aptitude Battery (ASVAB) test positively predicts performance of job-related abilities in military personnel, that would be an example of criterion validity: individuals scoring higher on the test are more likely to be successful in accomplishing certain job-related tasks (Grant et al., 2012), making the test criterion valid.

Content validity, as Lawche (1975) explained in his seminal work, is the degree of association or overlap which exists between the performance of a task on a job-related test and the ability to function within the job’s performance domain. For example, since speed is a vital ability for a football player and the 40-yard dash is an accurate measurement of one’s speed,
the 40-yard dash is content valid for most positions in football. A job performance domain is one or more components of a job about which can be inferred and are operationally defined. Tasks comprising job performance domains can range from simple, observable (e.g., arithmetic) to highly abstract (e.g., deductive reasoning). Higher levels of abstraction for the task(s) require greater “inferential leaps” to demonstrate validity.

The transition from content validity to construct validity occurs when abstraction and inferential leaps become significant (Lawche, 1975). Construct validity is an investigation of the psychological qualities a test measures and whether these explanatory constructs are adequately included in the performance of the test. Construct validity essentially is an attempt to validate the underlying theoretical construct (American Psychological Association, 1952) or, as DeVon et al. (2007) simply define it: the degree to which a test instrument measures the intended construct. Criterion, content, and construct validities are all necessary in order for an employment assessment to be considered valid.

An example of the use and interrelation of criterion, content, and construct validity within the educational context would be an examination of cognitive abilities of teacher candidates. Wayne and Youngs (2003), in a systematic review of the research in the United States, found teachers’ cognitive abilities to be correlated with student achievement. Grönqvist and Vlachos (2008) concluded teachers with low cognitive abilities negatively affected the educational outcomes of their high achieving students. Instruments which can assess teachers’ cognitive abilities, such as general mental ability (GMA) assessments (see below), are criterion valid if high GMA scores are indicative of high teacher performance. GMAs are said to be content valid for teacher selection since cognitive ability is a determinedly valuable asset for teacher-effectiveness and should be included within teachers’ job performance domain. Since
cognitive ability is a complex and highly-abstract construct, GMAs must be determined to adequately measure cognitive ability to be considered construct valid.

Employers, applicants, and the public at large benefit when selection decisions are made by the most valid means available (American Psychological Association Division of Industrial/Organizational Psychology, 1979). For this reason, determining the predictive validity of different types of predictors has been the focus of decades of selection-related research within the fields of industrial/organizational psychology and education. The compilation of hundreds of studies conducted in numerous contexts examining the utility and validity of various employment assessments has provided support, and lack of support, for the use of various employment assessment methods.

One conclusion the wealth of research has yielded is GMAs are perhaps the most valid predictor of future job performance and learning for applicants without prior job experience (e.g., Hunter & Hunter, 1984; Ree & Earles, 1993; Schmidt & Hunter, 1998). GMAs may be comprised of components such as arithmetic computations, verbal analogies, reading comprehension, number series completion, and spatial relations (U.S. Office of Personnel Management, n.d.). Meta-analysis has shown using GMAs ensures that an employer is selecting employees who are the likely to learn the most from job training programs and the quickest from job experience, both of which increase productivity (Salgado et al., 2003; Schmidt & Hunter, 1998). So profound is the totality of validity evidence regarding GMA assessments that it has been stated the immensity of well-established findings regarding the GMA-performance is the greatest contribution of the industrial-organizational (I/O) psychology field to intelligence research (Gonzalez, Mount, & Oh, 2014; Scherbaum et al., 2012).
The relationship between personalities and job performance also has been a heavily-researched topic within I/O psychology. For the past few decades researchers have investigated the validity of personality assessments, such as the Big Five, and concluded certain personality traits can be used reliably to predict job performance across numerous occupations, including teaching and educational administration (Goldberg, 1990, 1993; Hurtz & Donovan, 2000; Judge & Zapata, 2015). In their longitudinal study, Judge, Higgins, Thoresen, and Barrick (1999) found Big Five traits assessed during adulthood and even childhood to be useful predictors of future career success.

Unfortunately, employment decisions are not always based on valid selection methods. In fact, the large majority of selection decisions are made using employment assessments that research has regularly shown to be less valid. As Highhouse (2008) piquantly points out, “perhaps the greatest technological achievement in (I/O) psychology over the past 100 years is the development of decision aids that substantially reduce error in the prediction of employee performance”; and yet “the greatest failure of I/O psychology is the inability to convince employers to use them” (p. 333).

Of all of the employment assessments, the selection interview is by far the most commonly used (Buckley, Norris, & Wiese, 2000; Shackleton & Newell, 1991; Wilk & Cappelli, 2003), the most researched (e.g., Posthuma, Morgeson, & Campion, 2002), and yet one of the most dubious in its predictive value (Hunter & Hunter, 1984). Dipboye (1992) defines the selection interview as a dialogue between an applicant and an employer to gather information and evaluate the qualifications of the applicant for employment. An interview, with or without accompanying pre-employment assessments and predictors, has constituted the primary factor of consideration for almost every selection decision for more than a century (Levashina, Hartwell, Morgeson, & Campion, 2014; Webster & Anderson, 1964). So much significance is
attributed to and confidence is placed in the interview as a predictor that often the interview is
the only assessment employers use to select an employee (Levashina et al., 2014).

The use of interviews in the selection process is so pervasive that some proclaim it to be
“rare, even unthinkable, for someone to be hired without some type of interview” (Huffcutt &
Culbertson, 2010, p. 185). Because of the ubiquity of interviews in selection decisions, the
validity, reliability, and methodology of interviews have been the focus of many researchers for
the last century (Arvey & Campion, 1982; Harris, 1989; Mayfield, 1964; Posthum et al., 2002;
Scott, 1915; Wagner, 1949). Researchers consistently find interviews to be far less reliable and
valid than other predictors (Highhouse, 2008; Reilly & Chao, 1982; Schmidt & Hunter, 1998), yet
the robust evidence provided by decades of research has done little to dissuade employers from
basing employment decisions on the employment interview.

The relatively higher costs and lower degrees of reliability and validity associated with
interviewing compared to other predictors make the popularity of interviews in the selection
process a fascinating phenomenon. The prevalence of interviews reflects a tendency to view
human judgment as a more effective predictor of an applicant’s skills and fit than other, more
objective measurements (Dipboye, 1992). Intuition-based judgments of interview performance,
which most employers believe are superior for assessing an applicant’s character (Highhouse,
2008), have consistently been shown to be ineffective in predicting job performance (Eisenkraft,
2013; Grove, Zald, Lebow, Snitz, & Nelson, 2000; Huffcutt & Arthur, 1994; McDaniel, Whetzel,
Schmidt, & Maurer, 1994).

Researchers have examined interviews and their influence on selection decisions for
decades focusing on a variety of variables, including the way in which the interview is
conducted. The most basic distinction in interview methodology is structured interviewing
versus unstructured interviewing. Structured interviews are carefully and thoroughly fashioned through the intentional incorporation of components that enhance psychometric properties and standardization (Campion, Palmer, & Campion, 1997), while unstructured interviews are characterized as unplanned, casual, and contain questions that are speculative, obtuse, and highly subjective (Heneman & Judge, 2014). The less procedural variability an interviewer allows across applicants, the greater the level of structure (Huffcutt, 1992).

Decades of interview research reviews (Arvey & Campion, 1982; Campion et al., 1997; Harris, 1989; Carlson, Thayer, Mayfield, & Peterson, 1971; Levashina et al., 2014; Mayfield, 1964; Posthuma et al., 2002; Schmitt, 1976; Ulrich & Trumbo, 1965; Wagner, 1949; Wright, 1969) and meta-analyses (Conway, Jako, & Goodman, 1995; Huffcutt & Arthur, 1994; Huffcutt, Conway, Roth, & Klehe, 2004; Hunter & Hunter, 1984; Latham & Sue-Chan, 1999; Marchese & Muchinsky, 1993; McDaniel, Whetzel, Schmidt, & Maurer, 1994; Reilly & Chao, 1982; Schmidt & Rader, 1999; Schmidt & Zimmerman, 2004; Wiesner & Cronshaw, 1988; Wright, Lichtenfels, & Pursell, 1989) have consistently found structured interviews to be superior to unstructured interviews in terms of reliability and validity. Yet even with the overwhelming level of support for structured interviews, the actual implementation of structured interviews during the selection process remains very uncommon (Johns, 1993; Levashina et al., 2014; Lievens & De Paepe, 2004; Ryan, McFarland, Baron, & Page, 1999). Often interviewers are concerned about having discretion over questions/scoring, want to establish personal and informal contact with interviewees, or view the ease of preparation as a priority, resulting in significantly less inclination to use structure in employment interviews (Lievens & De Paepe, 2004).

Impression formation. Interview research can also be segmented into microanalysis and macroanalysis, with the former dividing the interview into units for further examination (Mayfield, 1964). Dividing the interview process into stages is one of the ways in which
researchers microanalyze the selection interview. Since employment selection generally follows a process of interviewers viewing paper credentials of applicants and then interviewing the applicants, examples of stages might be pre-interview, early (in the) interview, and post-interview.

Whether intentionally or not, interviewers make judgments several times during the course of the interview process: after reading credentials, after seeing the interviewee’s appearance, after the first few minutes of examining the interviewee, after the conclusion of the interview, and, when applicable, after discussion with other interviewers about the interviewee’s performance. The early judgments an interviewer makes can create a bias at the beginning of an interview, or even before an interview, which affects his or her interpretation of everything the interviewee says and leads to a favorable or unfavorable decision (Driver, 1944; Mayfield, 1964; Webster, 1964). Interviewers are inclined to seek information which confirms their initial hypothesis by altering the emphasis placed on part of information made available or by choosing areas to be further explored during an interview, a notion that has been explored in psychology literature (Webster, 1964).

Social psychologist Solomon Asch (1946) proposed an impression formation theory which postulates that a person’s judgment is subject to the order in which evidence is received. He explained the process of forming an impression based on meager information occurs easily and quickly and is difficult to forget once it is formed. An observer, such as an interviewer, after being exposed to information, forms an immediate impression and then strives to maintain unity within the impression by searching for compatible evidence that can be fashioned together to create an ostensibly complete and coherent impression about the subject.
Asch’s (1946) impression formation theory can be referred to as order effects, which is normally understood as one of two types. Primacy effect occurs when evidence received relatively earlier disproportionately influences judgments, while recency effect occurs when evidence received relatively later is disproportionately influential (Highhouse & Gallo, 1997). While order effects are universally accepted as influential factors in decision making practices, there is great disagreement amongst researchers as to which one is more influential and the process through which they occur.

Several studies have shown primacy effect to be a strong influence on the impressions by observers (Cunningham, Turnbull, Regher, Marriott, & Norman, 1997; Nahari & Ben-Shakar, 2013). One example is a study by Steiner and Rain (1989) in which they asked subjects to view four videotaped lectures by an instructor – three average performances followed by either a good or poor performance – and to rate the instructor’s performance after each lecture and to provide an overall performance rating after rating the fourth lecture. The study showed subjects rated the recent poor or good inconsistent performance more similarly to preceding average performance, maintaining the preconceived impression formed while viewing the first three lectures.

Other studies explain recency effect is more dominant (Ahlawat, 1999; Furnham, 1986). Price and Dahl (2014) exposed subjects to various evidences in a mock crime scenario and asked subjects to determine guilt. They found evidence viewed more recently, even when conflicting with previously encountered contradictory evidence, to be more influential in the subjects’ decision making and judgment.

Some have contended the mode in which observers make decisions influences order effects. Specifically, recency effect is prevalent in step-by-step decisions such as when a
selection team rates and narrows candidates after each phase of the selection process (Farr & York, 1975; Sprenger & Dougherty, 2012) and primacy effect is prevalent in end-of-sequence decisions such as reviewing a resume but not rating or deciding on a candidate until after an interview (Farr & York, 1975; Lange, Thomas, & Davelaar, 2013; Rebitchek, Scholz, Bocklisch, Krems, & Jahn, 2012; Smith, Greenlees, & Manley, 2009; Sumer & Knight, 1996). Order effects in observers’ judgments have been indicated to be influenced by the rate at which information is presented (Lange, Thomas, Buttaccio, Illingworth, & Davelaar, 2013), the complexity of the task (Marsh & Ahn, 2006), and even the observer’s mood (Forgas, 2011). Even though little consensus exists on the issue of which effect is more influential or more commonly occurs (Highhouse & Gallo, 1997), since applications almost always precede interviews during the selection process, primacy effect, specifically the bias viewing an application has on the appraisal of subsequent interview performance and final employment decisions, is perhaps more focal and meaningful in selection research.

Cognitive psychologist Jerome Bruner (1957) described the cognitive process through which individuals “sort” input information. A person receiving repeated input information will attempt to categorize information using “open” cue searching in which he or she scans the environment to obtain information that will fit or link together. Once the person categorizes the information, the openness to stimulation decreases and a selective searching for confirming cues follows. At which time the observer determines a high-probability, good-fit category has been established, the cognitive process leads to sensory “gating” in which the observer terminates the search for additional information and normalizes or “gates outs” information not in conformity with the existing categorization.

The processes Asch (1946) and Bruner (1957) describe of sorting information into chosen categories and then searching for confirming evidence, while simultaneously ignoring or
rejecting contrary information, is consistent with selection research evidence. In one of the first studies of primacy effect during the selection process, Springbett (1958) asked subjects to rate applicants after examining an application, after seeing an applicant for the first time, and, finally, after conducting an interview with an applicant. He found the initial judgment after viewing an application conformed to the final judgment in 88% subjects studied.

Macan and Dipboye (1990) examined recruiters’ impressions of applicants after viewing the applicants’ name, address, educational background, employment history, work preference, interests, and references. Recruiters indicated their pre-interview impression of each applicant using a 7-point scale and then interviewed each applicant and indicated their overall post-interview impression of each applicant using the same 7-point scale. The recruiters’ overall post-interview impressions were significantly ($r = .53, p < .01$) related to their pre-interview impressions based on the applicants’ credentials and information.

In a subsequent study, Macan and Dipboye (1994) created application packets, including an application form and two recommendation letters, which were intentionally constructed to represent high, moderate, or low applicant qualifications. Subjects then viewed photographic slides of the interviewee and listened to an audio recording of an interview. The study showed observers rated applicants’ interview statements relative to the quality of their qualifications, with those with higher qualifications receiving higher ratings and those with lower qualifications receiving lower ratings. Several other studies (Dipboye, Stramler, & Fontenelle, 1984; Huguenard, Sager, & Ferguson, 1970; Latham, Wexley, & Pursell, 1975; Tucker & Rowe, 1979) corroborate the assertion that applications bias post-interview impressions.

The bulk of selection research examining the decision making process within the employment interview context shows interviewers create impressions early, usually after
reading paper qualifications and applications, and these impressions heavily influence the final employment decisions (e.g., Mayfield, 1964; Wagner, 1949). Since qualifications and other information are so influential on the interview process, and interviews are almost always the central, or sole, factor in an employment decision, the role and significance of credentials is pronounced. A better understanding of qualification-based impression formation would likely yield more valid and accurate predictions during the selection process.

Invalid influencers. Unfortunately, valid information is often not all that is considered during the paper qualification screening stage; characteristics of the applicant, decision-maker, and selection context all can contribute to a decision (Heneman, 1981). The consideration of characteristics such as race, sex, age, or religious affiliation, for example, is not only illegal but it negatively affects predictive validity yet, unfortunately, is not uncommon in staffing decisions within the educational context (Cole, Feild, & Giles, 2004). This type of bias can cause discrimination.

Bias, as it is defined for the purpose of this study, is any conception – whether positive or negative – that is consciously or subconsciously generalized and attributed to a group of individuals who share a common characteristic. Assuming individuals of a particular race, sex, or age group are more or less capable of accomplishing a task would be an example of bias. Discrimination, for the purposes of this study, is defined as the unfair treatment of an individual or group due to their perceived association with a particular characteristic. In other words, bias would be prejudicial feelings or thoughts about a group of people; discrimination would be actions resulting from bias.

As Greenwald and Banaji (1995) explain, individual’s attitudes, beliefs, and stereotypes can operate in an unconscious fashion. Biases can often be perpetuated unconsciously, without
the intent or even knowledge of the individual who holds the biases. Within a selection process, unconscious biases can affect a decision maker’s views of candidates by causing discriminatory effects, while those effects can be consciously justified (in the decision maker’s thinking) as being the result of other non-discriminatory influencers.

Results from past studies have suggested the race, sex, and age of teacher candidates influence principals’ perception of the candidates during the screening of applications. For example, Young and Fox (2002) found principals to prefer teacher candidates of age 49 over those of 29, while Place and Vail (2013) found suburban principals to prefer the former and urban principals to prefer the latter. Similar consideration of candidates’ demographic information in paper qualifications has been shown to be prevalent during the screening of applications for assistant principal and principal positions as well (Reis, Young, & Jury, 1999; Young & De La Torre, 2006; Young & Fox, 2002), yet hitherto the current study, research has not been conducted regarding the influence of superintendent candidates’ paper qualifications on screening decisions. When considerations produce an adverse impact for demographic groups of candidates, the considerations become biases which can act as barriers to career advancement to the subjects of these biases.

Application and qualification information other than demographics, such as professional organization involvement, level of education, and professional experiences, also can influence screening decisions of applicants. Involvement in professional organizations is generally encouraged and preferred, as is the obtainment of advanced degrees (Glass et al., 2000). Preferences of prior professional experiences, however, are not as harmonious. While most prefer applicants for educational positions who possess experience within the field of education, there is a growing number of dissenters who view prior experience within education as concerning. Regardless of the appropriateness of these preferences, such preferences or biases
can become barriers to obtaining the superintendency for many, which is especially problematic for those who might be otherwise seen as well qualified.

**Barriers to the Superintendency**

**Sex.** For the purposes of this study, the term “sex” is used to describe the perceived sex of a candidate by the interviewer. The term “gender” could just as easily have been used to depict the male or female categories; however, due to the historical use of the word sex to refer to the male-female distinction and specifically the inclusion of the word sex in reference to similarity-attraction paradigm research (e.g., Graves & Powell, 1995; Sacco et al., 2003; Young et al., 1997), the researcher chose to use the word sex to describe the male-female distinction. Additionally, since federal laws barring discrimination, such as Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972 prohibit discrimination on the basis of “sex” (U.S. Department of Education, 2015; U.S. Equal Employment Opportunity Commission, n.d.), this study uses the term sex rather than gender to be consistent in terminology.

According to the most recent available data, females constitute 76% of American public school teachers (National Center for Education Statistics, n.d.), yet only 24% of public school superintendents are female (Kowalski et al., 2011). Considering teaching in a classroom is often the first step on the path to the superintendency – over 95% of all superintendents were previously teachers – this inherent disparity in the percentage of superintendents who are female is shocking. The fact females who enter the superintendency do so as seemingly “better” prepared candidates – with more teaching experience and education than their male counterparts – only compounds the egregiousness of the extant circumstance (Glass et al., 2000; Kowalski et al., 2011).
In the last 25 years the percentage of female superintendents has more than doubled; however, some have estimated continued improvement at the observed rate would necessitate approximately 80 years for females to achieve the superintendency proportionate to their male counterparts (Wallace, 2015). As bleak of an estimation as that is, researchers such as Kowalski et al. (2011) and Sperandio and Devdas (2015) contend such an estimation is perhaps too optimistic and warn the observed increases in female superintendency likely result from a combination of, possibly, ephemeral factors: the number of females achieving certification has outpaced males, leading to a predominately female applicant pool; an economic crisis has led many financially constrained districts to forego expensive selection processes and hire internal candidates, many of whom are women who would have otherwise been overlooked; and the recent national focus on high-stakes testing and the corresponding school and district ranking systems have increased the value of instructional leadership, an area in which females ubiquitously specialize (Brunner & Kim, 2010).

**Self-imposed barriers.** The possible contributions to the female underrepresentation are numerous and often interrelated, resulting in complex and multifaceted interpretations of causations and remedies to the condition. Many of the barriers expressed by aspiring and non-aspiring female educational leaders through contemporary research are self-imposed, such as alternative career aspirations or a lack of desire to relocate (Glass, 2000).

One self-imposed barrier for women in achieving the superintendency is a lack of aspiration to do so. Sperandio and Devdas (2015) postulate the superintendency is not the ultimate career goal for many women, but, rather, women tend to seek roles more closely linked to classrooms. Care for students, which often motivated the women to become teachers, drives them to seek roles which can directly influence students (Grogan & Shakeshaft, 2013). Kelsey, Allen, Coke, and Ballard (2014), in a study of female superintendents in Texas, found that
not one of the subjects had aspired to be a superintendent; almost all stated being a teacher was their career goal. Many (e.g., Gardiner, Grogan, & Enomoto, 1999; Grogan, 2005; Grogan & Shakeshaft, 2013) point out that women are often motivated to enter the educational field due to a care for students, and desire to be in positions that allow them to act upon that motivation. Many women, it seems, are completing superintendent certification programs with aspirations of central office positions other than the superintendency. If women do not see the superintendency as a position best suited for caring for students, then they will be less likely to aspire to the position.

Some women choose, or are compelled, to prioritize location over career aspirations. Being open to relocate is an important factor in allowing or expediting access to the superintendency; however, Sperandio and Devdas (2015), in a survey of female superintendents and assistant superintendents in Pennsylvania, found 74% of participants were reluctant to relocate or commute more than an hour from home for a position, irrespective of family commitments. Glass et al. (2000) observed that very few superintendents (8.8%) have spent their entire careers in one school district, and most of those whom have are in large districts. Kowalski et al. (2011) found that 66% of superintendents were not already district employees at the time in which they were selected to be superintendent. In order to climb the ranks to the superintendency, an aspiring superintendent will likely have to move several times, something that, according to Sperandio and Devdas (2015), many women are choosing not to do (Glass, 2000). Although this is a deterrent that can be accurately attributed to aspirants of both sex, it seems to be more prevalent in female aspirants (Sperandio & Devdas, 2015).

Yet another barrier to the superintendency for women is that many exit the classroom too late. According to Glass (2000), future female superintendents spend on average of two to four years longer in the classroom than their male counterparts. Others, who never achieve the
superintendency, may spend even longer, narrowing the window of opportunity for them to achieve their aspirations. One reason attributed to the longer teaching tenure for women is due to a desire to delay their career progression until their children are older (Glass, 2000; Sperandio & Devdas, 2015).

An underlying assumption in lamenting the inequitable percentages of female and male superintendents is that female and male educators are pursuing the superintendency in equal, or even approximate, numbers. Although females comprise over half of the participants in superintendent certification programs (Dana & Bourisaw, 2006), the number of women pursuing superintendency is far less than the number who have or are pursuing superintendent certification (Grogan & Brunner, 2005). Perplexingly, a large proportion of women are obtaining the necessary credentials but choosing not to pursue superintendent positions.

A possible deterrent is the responsibilities of the superintendency, which can require excessive workloads and exact physical and emotional stress. Being the recipient of criticism from political, educational, and communal spheres is not an enviable position, especially when it comes at a high cost of personal time and privacy. Grogan and Shakeshaft (2013) suggest women are making career choices aimed at satisfaction and balance in life and work rather than career-centered decision making that may increase the likelihood of obtaining a superintendency. Even with all of the possible self-imposed barriers to reaching the superintendecy, unfortunately, opportunities for women are frequently curtailed for reasons outside of their control.

*External barriers.* Family responsibilities and considerations continue to negatively affect career-goal attainment for many superintendent candidates, especially women. The propensity of many women to prioritize their husband’s career over their own results in a loss of
potential career-advancement opportunities (Pixley, 2008). Even when women are void of or uninhibited by familial obligations, female superintendent candidates have to overcome societal expectations of such obligations. According to Mahitivanichcha and Rorrer (2006), school boards expect males to be unencumbered by family-related obligations in fulfilling job-related responsibilities, while females have to convince board members that their family will not interfere with their ability to perform (Sperandio & Devdas, 2015). Whether these expectations are vocalized by board members behind closed doors, considered during interviews and/or screenings, or just contemplated individually, they undermine not only females’ chances of obtaining a superintendency, but, also, their ability to be successful upon earning a superintendent position (Grogan, 2008).

Kowalski et al. (2011) found 65% of superintendents surveyed began their careers as secondary (middle school or high school) teachers. Superintendent candidates with secondary teaching backgrounds are benefited by the depth and breadth of experiences secondary schools afford. Glass et al. (2000) explains elementary schools usually have fewer assistant principal and department chair positions, meaning elementary teachers typically have to jump from teaching to a principalship or central office position in order to gain administrative experience, which generally takes more time than moving into a high school department chair position. Kim and Brunner (2009) reinforce this career progression as being the typical path for female superintendents. Club sponsorship and coaching are opportunities which provide increased visibility and experiential diversity, yet are ordinarily limited to secondary schools. As a result, elementary educators, who are disproportionately female, are significantly disadvantaged in pursuing the superintendency due to fewer intermediary leadership opportunities.

In a national survey of sitting superintendents (Glass, et al., 2000), 58.5% acknowledged their career progression was assisted by a mentor. Mentorships are invaluable assets to
individuals in any profession in that they provide an effective means of obtaining professional knowledge (Glass et al., 2000), opportunities for constructive feedback not commonly available within the supervisor/employee situation (Healy & Welchert, 1990), and an increase in social capital through networking with influential individuals within one’s profession or organization. Grogan (1996) suggests female access to the superintendency continues to be inhibited by networks of mentors and sponsors within the educational hierarchy which favor males, due in part to a lack of superintendents available who are supportive of superintendent-aspiring females.

The motivational detractor most posited by researchers is the perpetuation of socialized appropriate roles and career expectations for sexes that suggest the superintendency and leadership is male-oriented (Alston, 2000; Dana & Bourisaw, 2006; Bjork, 2000; Blount, 1998; Brunner et al., 2003; Grogan, 2000, 2008; Haveman & Beresford, 2012; Kim & Brunner, 2009; Shakeshaft, 1989, 1999; Sperandio & Devdas, 2015), a belief that can be ingrained into female would-be superintendent candidates, diminishing hope and motivation for the position. The pervasiveness of gender bias in society, whether subliminal or intentional, is damaging to females’ careers and self-efficacy and presents significant obstacles to achieving the superintendency, but when the bias is upheld by individuals who directly affect the selection and hiring or superintendents, it is no longer an obstacle but rather a virtually impregnable barrier. The vast majority of superintendents are appointed by members of the local school board, making board members the ultimate determinants of whom will lead school districts. To be sure, their decisions are subject to influencers such as superintendent search consultants, the local community, and perceptions of the outgoing and former superintendents, but the final decision always belongs to the board.
Ideally, candidates are vetted and judged based on formal and informal criteria defined by the school board. Components of formal criteria might include documented attributes such as education, certification, and professional experiences and accomplishments, compared to informal criteria such as one's attitude, leadership style, reputation, and skill set. However, according to Tallerico (2000), whether due to misguided views of leadership qualifications or staffing simplicity and expediency, many school boards, and, consequently, consultants, consider formal criteria while disregarding – or at least underappreciating – informal criteria.

When evaluating formal criteria such as professional experiences, most consultants and school board members value secondary over elementary, and line over staff administrative experiences (Tallerico, 2000). Their stated justification for maintaining such a hierarchical value belief system is a belief that secondary and line positions better prepare and prove the mettle of administrators due to the more challenging and demanding responsibilities associated with these positions. Since females proportionately occupy more elementary (Montenegro, 1993) and staff administrative positions (Tallerico, 1997), their resumes, commonly comprised of lesser-valued professional experiences, are prematurely winnowed from consultants' candidate pools.

Consultants have the potential to magnify the impact of experience even before the winnowing of resumes through the initial stages of their selection process. Consultants often form a collection of questions to use to determine the type of superintendent candidate(s) desired by the school district. Stakeholder focus groups, which might consist of district employees, parents, students, and other community members, act as respondents to consultant questions and provide direction and insight into what type of superintendent candidate would be given serious consideration in the latter stages of the selection process. From a large pool of candidates, consultants choose a group of candidates to further investigate and interview using
focus group feedback as a guide. Summary data is then compiled consisting of candidates’ experiences and qualifications.

Consultants’ selection processes, although valuable, can unintentionally disfavor otherwise highly-qualified candidates who lack extensive experience, or secondary-level experience specifically, due to a number of factors. Focus groups can easily become secondary-level heavy: many of the most well-respected administrators and employees in a district are employed at the secondary-level; parents who have the most and most recent experience as school-active parents are often those with high school students; and students who are most likely to make valuable contributions to a focus group are high school students. Consultant-provided questions might gravitate towards questions about what candidates have done rather than what qualities/skills they possess. Additionally, summary data consultants provide to boards of candidates are often spreadsheets which focus on job titles and years of experience (Tallerico, 2000). Informal criteria is glossed over or excluded altogether in this form of summarization. All of these phases of the consultant selection process can favor certain categories of candidates over others.

Tallerico (2000) observed prejudicial gender stereotyping in school board members’ analysis of male and female candidates. Certain competencies were assumed in male candidates but questioned in females. The district’s readiness for a woman leader, the board’s ability to fraternize with a female superintendent, and the woman’s ability to obtain child care to perform the job were all questions inequitably presented by board members to women but not men.

Riehl and Byrd (1997) stated consultants, as servants to the wills of the boards they serve, are often conditioned by experiences with boards to pursue stereotypical candidates to fill vacancies. When biases projected by boards condition consultants’ practices, those biases
become cancerous in that the consultants’ biased practices are likely, albeit inadvertently, implemented when working with boards who do not share biased views of female candidates.

The more board members, consultants, and educational leaders become aware of the barriers females face in aspiring to the superintendency, the more these groups can rectify biased practices and continue the positive trend toward equitable female representation. Yet, increases in awareness of past successes should be made thoughtfully, for the substantial gains women have made in recent decades can present challenges to women seeking future superintendent positions. The optimism expressed by bias-conscientious and equitably-minded school board members, consultants, and educational leaders can result in a relaxed sense of urgency in advocating for or pursuing female superintendent candidates due to a belief that the current momentum will continue to build and yield greater numbers of female superintendents (Riehl & Byrd, 1997).

The underrepresentation of female leadership in school districts nationally results in a lessened diversification of approaches, perspectives, and solutions to the ever-evolving challenges faced by the educational community (Sperandio & Devdas, 2015). To say it another way, seeking the best possible candidate regardless of sex is important not just for relevant superintendent candidates, but for the advancement of the educational community they lead, development of the children they serve, and progress of society as a whole. Discrimination against female superintendent candidates is not only counterproductive; it is also illegal.

The proportion of American women participating in labor force activities grew significantly from the 1960s to 1980s (U.S. Bureau of Labor Statistics, 2014). This growth helped catalyze the creation of a number of federal laws protecting the employment-related rights of individuals from discrimination. Title VII of the Civil Rights Act of 1964, with its prohibition of
discrimination based on sex, was one of such laws. Title VII still serves as the primary legal
guardian for women’s employment rights, but other laws such as Equal Pay Act of 1963, The
Pregnancy Discrimination Act of 1978, and the Family and Medical Leave Act, as well as the
creation of the Equal Employment Opportunity Commission, have bolstered women’s
Pittsburgh Press Co. v. Pittsburgh Commission on Human Relations, 413 U.S. 376 (1973), and
have all corroborated the sentiment: women will not be denied the same opportunities as men
in the workplace. Employment practices such as recruitment, hiring, promotion, transfer, and
training – practices relevant to the staffing process for superintendency – are all named as
specific practices covered by Title VII (U.S. Department of Labor, 1999). School boards must
ensure that they and their search consultants are aware of staffing-related laws to avoid costly
litigation and negative public relations, and to devoid superintendent staffing procedures of
biased practices which can prevent selection of the best available candidates.

Females may be opting not to pursue the superintendency due to personal reasons and
choices, but the presence of overt and covert biases have long been and continue to be
suspected of directly or indirectly contributing to the disproportionate percentage of female
superintendents. Discriminatory practices, if existent, are intolerable and demand every
available recourse, beginning with an increased awareness of such practices. This study
intended to provide evidence of the existence or non-existence of discrimination in the selection
process of superintendent candidates in order to provide the data to combat those
discriminatory practices, if present.

**Nontraditional experience.** Unlike sex, an individual’s experience is not protected from
discrimination, and, whether judiciously or not, competent and capable individuals can be
disallowed consideration from the superintendency due to the perception that the type of experiences they possess are insufficient preparation for the complexity of the superintendency. As previously mentioned, the typical career path for superintendents progresses from teacher to building-level administration and, often, district-level administration prior to occupying the superintendent’s office – this is referred to as the traditional path (Orr, 2006). Beginning in the 1990’s, America has seen a rise in interest and employment of nontraditional superintendents whose backgrounds include little or no professional experience in public education. Whether unilaterally by a mayor or governor or collectively by a school board, these superintendents are often appointed to reform the school district from the top-down.

This rise in interest in nontraditional superintendents has followed the rise in neoliberal reforms in American education, largely as a response to A Nation at Risk (National Commission on Excellence in Education, 1983). The publication of this study sparked a renewed criticism in the public education system and an exploration of free-market ideals applied to the education context. One of those ideals was deregulation. In 1983 New Jersey became the first state to loosen the preparation and qualifications necessary in order to enter the teaching profession and create an alternative certification program (Kane, Rockoff, & Staiger, 2008); now, all 50 states and Washington D.C. have paths to alternative certification for teachers. Many states have created alternative paths to the principalship and superintendency as well.

The employment of nontraditional superintendents is more common in large, urban, and predominately poor and minority school districts perceived as operating in acute crisis (Eisinger & Hula, 2004). A survey of superintendents of large, urban districts revealed that 9% of respondents had no prior experience in public education and 26% had at least some professional experience outside of education prior to becoming a superintendent (Council of the Great City Schools, 2010). Eisinger and Hula (2004) found districts which employed
nontraditional superintendents not to be significantly worse by any outcome indicator (such as math and reading scores and dropout rates) than comparable districts with traditional superintendents. The radical decision, in terms of historical experience and conventional wisdom, to pursue nontraditional superintendents is due to idiosyncratic community dynamics, more so than relative poor performance.

In 1991, Howard Fuller, who as the former director of the Milwaukee County Department of Health and Human Services had no background in public education, became the first of many nontraditional superintendents to be hired by large city school districts across the United States (Eisinger & Hula, 2004). Since Milwaukee’s pioneering, dozens of cities have recruited retired military officers (Jacksonville, New Orleans, Seattle, Washington, D.C.), business and finance leaders (Minneapolis, New York, Philadelphia, Seattle), attorneys (Philadelphia, San Diego), government officials (Baltimore, Chicago, Los Angeles), or academics (Detroit) to reshape the school district leadership structure. These educational outsiders, whom possess little or no formal training or degree in education, are recruited for their systemic independence and managerial skills (Eisinger & Hula, 2004).

Although the circumstances which precede the pursuit of a nontraditional superintendent vary, much commonality exists in the reasons districts consider such individuals. Nontraditional superintendents are perceived as more apt to initiate innovative and effectual reforms due to a transcending objectivity free from experiential espousals to or prejudices of educational approaches (LaFee, 2004; Ray, Candoli, & Hack, 2005). As outsiders, these individuals are not products of educational culture, but, rather, are sought to challenge the culture and implement courageous, perhaps even ruthless, leadership. Labeled by some as “gunslingers” after the American Western characterization of strangers who ride into town to save the townspeople from dangers which they are incapable of saving themselves, these
nontraditional superintendents are appointed to fix failing school districts. The installment of a nontraditional superintendent is predicated upon the belief that the crisis facing the district too great for, or even due to, those within the educational community (Eisinger & Hula, 2004).

Nontraditional superintendents are pursued not just due to school board members’ hopeful perception of their abilities, but also due to the perceived lack of abilities possessed by traditional educational leaders. Several have stated the preparation and experience working through the educational ranks does not provide educators with the skill set necessary to be an effective superintendent (e.g., Hess, 2003), calling would-be traditional superintendents certified but not qualified. The educational “leadership famine amidst a feast of ‘certified’ leaders”, as Meyer and Feistritzer suggest (2003, p. 14), is in part due to the failure of established educational leadership preparation and certification methods to keep pace with the ever-evolving complexity and demands of the superintendent role.

Not all agree with the recruitment of outside leaders – most notably, educators themselves. Thompson, Thompson, and Knight (2013), in a study of teachers and principals, found participants’ level of trust, respect, support, and acceptance for nontraditional superintendents each to be statistically significantly lower than that for traditional superintendents. Results indicated experienced educators may not accept nontraditional superintendent leadership which would significantly encumber their effectiveness as leaders.

To successfully implement new and innovative reforms, which, as previously stated, often is a primary reason for hiring a nontraditional superintendent, it is necessary to have the cooperation and acceptance of the educators within the district (Geijsel, Sleegers, Leithwood, & Jantzi, 2003). Therefore, although proponents of nontraditional superintendents may be correct in claiming such leaders possess a fresh and objective perspective needed for reform, the very
reason for that perspective might derail their ability to achieve reform. To provide valuable educational experience which might assist in the transition from a non-educational background and earn credibility with district personnel, Quinn (2007) suggests that nontraditional leaders enter at central office positions other than the superintendency.

Glass (2006) contends a reformation of the superintendent preparation methods, rather than the recruitment of outside leadership, will lead to improved leadership outcomes. As he states, the superintendent training process has remained unchanged since the mid-20th century, with the majority of training coming by way of graduate coursework from higher education institutions. Degree programs should not be eliminated, but, rather, augmented by leadership training from state and private agencies (Glass, 2006).

The efficacy of nontraditional superintendent leadership is still in question (Glass, 2006). Longitudinal analysis of the tenures of nontraditional superintendents across the country seemed to provide mixed results (Eisinger & Hula, 2004). Whether traditional or nontraditional superintendents are better prepared to lead school districts towards educational reforms and improved outcomes is debatable, and likely dependent on unique, situational circumstances. However, perceptions and biases held by decision makers, of which background is superior, can act as a barrier to ascent for many superintendent candidates and could potentially prevent a district from selecting the best available individual to lead their district. This study intends to explore what school board members’ perceptions are in regards to superintendent backgrounds and whether biases exist to better inform individuals on both sides of the debate and those in positions of influence over superintendent selection decisions.

**Ethnicity.** A perplexing statistic is that African Americans are estimated as constituting 16% of the American population, yet only 6% of American Superintendents identify as African
American (U.S. Department of Education, 2016). On the surface, the disproportionality of those percentages seems to point toward the possibility of a discriminatory effect against African Americans perhaps even more egregious than that postulated against females; however, when one considers that the proportion of American public school teachers who identify as African American is only 7%, the evidence points towards nondiscriminatory factors as causes for the disproportionate number of African American superintendents.

The traditional and overwhelmingly common career path to the superintendency begins with the role of teacher, and with a 7% African American-teacher workforce eventually yielding a 6% proportion of African American superintendents the number of African Americans being selected as superintendents is closely proportionate to the number of African Americans entering into the educational field. Not only is the number of African American teachers disproportionately low compared to the size of the African American community – as already mentioned – but it has trended downward from 8% in 1988. This downward trend is inconsistent with that of other American minority groups, such as Hispanic (from 3% to 8%) and Asian (from 1% to 2%) Americans during that same time (U.S. Department of Education, 2016). Unlike the disparity in female representation within the ranks of superintendents, the disparity in African American representation appears to be a recruitment and retention issue, rather than a selection issue.

**Theoretical Framework**

**Attraction-similarity.** The interaction between a superintendent candidate’s sex and that of the school board members in charge of selecting a superintendent can prove to be an obstacle for some superintendent candidates. In his seminal study, Byrne (1961) found that individuals perceive strangers who are known to possess similar attitudes as more likable,
intelligent, informed, and moral than those with known dissimilar attitudes. Byrne’s similarity-
attraction paradigm (1971), which arose from the culmination of years of research, postulates
individuals like and are attracted to others who are similar, especially in held attitudes and
beliefs, which can influence selection decisions made by employers when such characteristics
become known or perceived. Similarity-attraction theory is relevant at the interview stage,
when determinations often are made about candidates’ characteristics and views on an array of
topics, but also during the screening stage where inferences can be made by employers about
characteristics of applicants.

Schneider (1987) proposed his attraction-selection-attrition theory in which he
postulated that organizations severely restrict the range of types of people in the organization
by attracting and selecting like-individuals and losing through attrition unlike individuals. By
selecting individuals to fill vacancies who are similar in attributes and “type” as the selecting
committee, an organization can further ingrain the unidimensional composition of the
organization. Within the context of superintendent selection, school boards can often choose
candidates to interview and fill a vacancy whom they see as being similar to themselves in
characteristics and values.

Within the confines of the screening stages in the selection process, attitudes, values, or
beliefs are not usually recognizable for observers of paper credentials; however, demographic
similarity between the employer and candidate on characteristics such as sex can lead to
perceived similarity in attitudes and beliefs, which can in turn lead to interpersonal attraction
and bias in a selection decision (Graves & Powell, 1995). Demographic information, such as sex,
can be inferred based on information in application packets, such as applicants’ names and
masculine or feminine pronouns used in reference letters. If school boards are male-dominated,
then such a phenomenon would likely have an adverse effect for female superintendent
candidates. As an example, according to Tallerico, (2000), some male school board members are reluctant to consider female superintendent candidates because they feel the interpersonal dynamics with such a superintendent would be hindered.

Sex bias in the employment has long been a topic of substantial research interest (e.g., Dipboye, Fromkin, & Wiback, 1975; Arvey & Faley, 1992), yet research has not yielded consistent results. I/O studies examining the effect of sex-similarity have provided mixed results, with some indicating a sex-similarity effect, (Binning, Goldstein, Garcia, and Scattaregia, 1988; Wiley & Eskilson, 1985), no effect (Gallois, Callan, and Palmer, 1992), or a negative effect (Graves & Powell, 1995). Results of studies within the educational context have been equally as varied: Young (2005) found a sex-similarity effect for principals selecting teachers, Bon (2009) found no effect for principals examining assistant principals, and Reis, Young, and Jury (1999) found female assistant principals more likely to be interviewed by both male and female principals. The seemingly inconclusiveness of the totality of prior similarity-attraction theory research relevant to sex requires further investigation.

**Neoliberalism.** Neoliberalism is a philosophy which proposes that “human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade” (Harvey, 2007, p. 2). It is first and foremost a political economic theory; however, a neoliberal view of education has taken root in American education systems beginning in the 1980s, especially after the publishing of *A Nation at Risk* (National Commission on Excellence in Education, 1983). The answer to the American public education crisis, neoliberalists proposed, is a free-market approach to education in which market-based school reforms, such as increased school choice options and availability, increased school accountability standards, and deregulation, become the norm (Dudley-Marling & Baker, 2012).
Although neoliberalism in education came with some political resistance, the effects of its introduction has permeated American education systems. One such effect has been the introduction of voucher-based school choice initiatives in places such as Milwaukee, Cleveland, and Florida and a 500% increase in attendance of charter schools nationally (U.S. Department of Education, 2015). Perhaps the most far-reaching and significant result of neoliberalistic thought in education came through the passage of No Child Left Behind (NCLB) in 2001. Hailed as a bipartisan achievement, one which has had a seemingly permanent impact on American schools, NCLB incorporates many market-based concepts such as high-stakes testing and accountability, deregulation, school choice options, merit pay, and competition among schools (Dudley-Marling & Baker, 2012). Advancing alongside NCLB’s calls for deregulation has been a re-consideration of what is seen as necessary school leadership preparation and qualifications. Specifically, some have called for nontraditional superintendents, who have little to no professional experience in education, to fix the education crisis from the top-down (e.g., Hess, 2002; Eisinger & Hula, 2004).

Considering that superintendency is a position within the educational profession one might expect a nontraditional “outsider” to be faced with steep opposition; however with nearly half of school board members nationally being business professionals, and only relatively few having professional education experience (Hess, 2002), it is not unforeseeable to for districts, or at least the decision-makers, to have a preference for superintendent candidates with proven professional experience outside of education. With nontraditional superintendents comprising only about 5% of superintendents nationally (Kowalski et al., 2011), the neoliberal philosophy has not significantly affected the selection of superintendents.

This study does not intend to argue for or against the employment of nontraditional superintendents but merely to gain a better understanding of school board members’ views of
such candidates. The apparent lack of research exploring the selection preferences of school board members has created a void in literature which this current study intended to address. Specifically, this study intended to examine the influence superintendent applicants’ sex and professional backgrounds have on school board chairpersons’ acceptance of the applicants as viable superintendent candidates.

Summary. Selecting the best superintendent candidate available is one of the most challenging and important responsibilities with which a school board is entrusted. Many invalid influencers, such as candidates’ sex or professional experience, can adversely affect the selection decisions of school board members. This study intends to examine the degree to which these influencers are present in school board chairpersons nationally.

Purpose of Study

The purpose of this study was to detect whether or not school board chairpersons have biases concerning superintendent candidates’ sex and/or professional experience. More specifically, this study examined whether or not school board chairpersons are more likely to extend an offer to interview to candidates of a particular sex or of a similar or dissimilar sex to that of themselves. In addition, this study surveyed chairpersons’ perceptions of and likelihood of extending an interview offer to candidates with educational work experience compared to those with business or military experience. Business and military backgrounds were chosen due to leaders from these background being the most prevalent among the ranks of actual nontraditional superintendents (AASA, 2016) and the frequently proposed as alternatives to traditional educational leaders (e.g., Hess, 2003; Meyer & Feistritzer, 2003).
Research Questions.

1. Does a superintendent candidate’s sex affect the chairperson’s decision to offer an interview to the candidate?

H₀ = School board chairpersons will extend an offer to interview male candidates and female candidates in equal proportions.

2. Does a superintendent candidate’s sex-similarity with the school board chairperson affect the chairperson’s decision to offer an interview to the candidate?

H₀ = School board chairpersons will extend an offer to interview sexually-similar candidates in equal proportions as to sexually-dissimilar candidates.

3. Does a superintendent candidate’s type of experience (educational vs. military vs. business) affect the chairperson’s decision to offer an interview?

H₀ = School board chairpersons will extend an interview offer to superintendent candidates of each professional background in equal proportions.
Chapter 3

Methods

This chapter details this study's procedures for creating and distributing the survey instrument, as well as an examination of the responses. More specifically, experimental manipulations – what they were and how they were operationalized – is detailed along with and explanation of how the dependent measure was measured and examined. Descriptive tables and figures of the characteristics of the respondents and treatment groups are depicted at the end of the chapter.

Procedure

The population of this study was all school board chairpersons from public school districts across the United States. Participants were randomly selected by the researcher from a randomly selected sample of chairpersons provided by Market Data Retrieval, a national marketing firm who provided the names and contact information of current school board members. Male and female participants were randomly assigned in equal proportions one of six experimental conditions. Peduzzi et al. (1996) recommend at least ten participants per treatment group \( n > 120 \) in a logistic regression analysis. To determine the number of participants necessary for the study given the number of variables, a statistical power analysis was conducted using procedures as set forth by Cohen (1988) with an alpha level of 0.05, a \( \beta \) of at least 0.20 \( (\text{power} = 1 - \beta) \). Using these parameters, a sample size of 139 or more is suggested via simulation using G*Power for logistic regression. Since similar research within
social science has yielded approximately a 35.7% response rate (Baruch & Holtom, 2008), 480 subjects were selected randomly to be sampled with an anticipated receipt of 168 responses. The sample was derived using a balanced stratified random sampling process based on sex, with half of the subjects solicited being male (n = 240) and half being female (n = 240).

All school board chairpersons requested to participate in this study received by a blind copied email an explanatory cover letter, a superintendent candidate resume, and an electronic survey instrument. The cover letter detailed the purpose of the study, solicited participation from the recipient, provided directions for participation, and assured confidentiality regarding their responses and participation – only the researcher would know those solicited and those who participated.

All unresponsive subjects were sent a duplicate follow-up email two weeks after the initial solicitation. After four weeks, all remaining unresponsive subjects were emailed individually, with individualized greetings which included their names, as a way of making the email more personal. After six weeks from the initial solicitation, non-respondents were sent by U.S. mail a packet which includes a physical copy of all of the same information included in the email in addition to a stamped, pre-addressed return envelope. This mixed-mode delivery process increased the likelihood of a favorable response rate compared to a single U.S. mailed-only solicitation of participation (Kaplowitz, Hadlock, & Levine, 2004; Miller & Dillman, 2011).

**Experimental manipulations.** The study manipulated three independent variables: sex of school board chairperson, sex of superintendent candidate, and type of professional experience of superintendent candidate. Based on Young’s (2005) findings which concluded that sex-similarity between screener and applicant affected decisions on whether or not to extend an interview, interactions between the sex of the chairpersons and the sex and type of experience
of superintendent candidates were tested as well. The packets included one of six combinations of independent variables: male with educational background, male with business background, male with military background, female with educational background, female with business background, and female with military background. All other variables, such as level of educational attainment, institution of educational attainment, total years of professional experience, years of experience at each step/level in career, current location, type of undergraduate degree (i.e., business management), candidates’ surname, and look and format of resume were all held constant by design. All of these variables were intentionally crafted to be identical to ensure that variations in results were due to manipulations only, and not to unintended factors. To prevent confounding, other demographic information, such as that of age and ethnicity, were intentionally crafted to be indistinguishable in the resumes by holding constant all years and lengths of service at each level of the profession in each resume and using the same surname for each candidate.

Resumes created by the researcher depicted hypothetical superintendent candidates and varied only the sex and type of professional experience of the candidates. Subjects were randomly assigned one of six potential candidate sex/experience combinations. Departing again from similar studies (e.g., Young, 2005), sex was operationalized in the resumes using sex-specific first names, “Patricia” or “Tom”, rather than sex-specific title pre-fixes such as “Mr.” and “Ms.” which can confound results due to assumptions made by respondents about the marital status and/or age of hypothetical candidates. The names Patricia and Tom have been empirically shown to be male and female analogues in terms of attractiveness and connotations of age, competence, and race (Buchanan & Bruning, 1971; Dion, 1985; Kasof, 1993; Mehrabian, 1988, 1990).
Establishing content validity of sex manipulation. Lawshe (1975) suggests a minimum of at least five panelists with a minimum CVR of .99 in order to establish content validity; however, more panelists are suggested for lesser values of agreement. The researcher used a five-member panel of experts to further corroborate the use of these names.

The panel of experts, which was comprised of actively-serving local school board members, was diverse in its composition regarding sex (four males and one female), ethnicity (four White and one African-American), and professional experience (one of each: accountant, insurance salesman, human resources officer, educator, and engineer) yet still identified the names Patricia and Tom as being female- and male-associated, respectively. Furthermore, the panel recognized the surname “Williams” as being non-associated with any specific ethnicity, providing this study opportunity to include full names of hypothetical candidates without confounding ethnicity. All of the above-mentioned forenames and surnames were validated using Lawshe’s (1975) content validity ratio (CVR) at .99. A CVR score can range from 0 to 1, with 1 indicating complete consensus amongst the panelists; however, Lawshe (1975) recommends a score of 1 be adjusted to .99. A CVR score can be calculated using the following formula \((n_e - N/2)/(N/2)\), where \(n_e\) is the number of panelists indicating a certain response and \(N\) is the total number of panelists. For example, all five of the panelists indicated that “Tom” is a male-associated name, so the CVR calculation for the name Tom is \((5 - 5/2)/(5/2) = 1\), which is then adjusted to .99. Lawshe (1975) suggests a minimum of at least five panelists with a minimum of .99 in order to establish content validity. More panelists are suggested for lesser values of agreement.

Establishing content validity of experience manipulation. Type of experience varied between educational experience (teacher, high school assistant principal, high school principal, and assistant superintendent of curriculum and instruction) and equivalent military or business
experiences. Two panels of experts were recruited to create military and business experiences tantamount to the educational experience listed above. The military-experience panel was comprised of ROTC instructors who are current educators with prior military experience (five White males). The business experience panel consisted of certified business teachers who had prior business industry experience (four males, two females; three White, three African-American). ROTC instructors and business teachers were selected as the panels of experts because these individuals have the unique experiences of having worked both in education and in the military or business field, respectively, making them uniquely qualified to compare the education occupation to that of their former industry. The business panelists defined the following business-type positions as being equivalent to the aforementioned education positions with a CVR of .99: sales representative, assistant sales manager, manager, and vice president of sales. The military panelists indicated (CVR .99) Ensign, Lieutenant, Lieutenant Commander, and Commander to be an equivalent career progression in the U.S. Navy. Navy equivalents, rather than other branches of the military, were chosen due to the majority of the ROTC instructors’ familiarity with the Navy over other branches of the military. Level of educational attainment (Ed.D., J.D., DBA) and years of experience at each level were equivalent in each type of resume. Professional backgrounds were operationalized by both the education depicted in the resume (e.g., an Ed.D. degree was assigned only to the educators’ resumes) and the type of professional experience exhibited in the resume (e.g., the Ensign, Lieutenant, Lieutenant Commander, and Commander career progression was assigned only to the military candidates’ resumes). Therefore, each resume had a clearly depicted (note: as evidenced by the validation process) sex variable and professional background variable.

**Dependent measures.** The dependent variable was the likelihood school board chairpersons would extend an interview offer to a superintendent candidate. The variable was
rated using a 10-point Likert-type item with higher ratings indicative of greater likelihood of recommending candidate for an interview.

**Content validity of dependent measure.** In order to establish content validity for the inclusion of the Likert items in the survey instrument that assessed participants views of the candidate and their likelihood of extending an interview offer, a panel of experts comprised of actively-serving school board members who have superintendent selection experience indicated their perception of the level of importance that each of the items have on a superintendent selection decision. The raters’ responses indicated that each of the items included in the survey instrument are very important items for consideration of a superintendent candidate. More specifically, using 1-5 Likert-type items to indicate their perception of importance that each item has in the selection decision-making process, the panelists overwhelmingly (\(\bar{x} = 4.5\), out of 5) agreed in their assessment of each of the items as being important characteristics for consideration in a superintendent selection process. Interrater reliability for ordinal ratings can be calculated using the kappa coefficient (\(k\)) to assess the level of agreement between raters for a given scale (Sim & Wright, 2005). Cohen’s kappa is appropriate for assessing the degree of agreement between two raters (birater), but when the ratings of three or more raters are assessed (multirater), Fleiss’ kappa is a more appropriate measurement (Randolph, 2005). Fleiss’ kappa can be calculated using \(k = (\bar{P} - \bar{P}_e)/(1 - \bar{P})\), with \(\bar{P} - \bar{P}_e\) representing the degree of actual agreement divided by the degree of agreement attainable by chance \((1 - \bar{P})\). A score of \(k = 1\) would indicate complete agreement, while a score of \(k \leq 0\) means no agreement beyond chance. The panelists’ had an interrater agreement of \(k = 0.445\) and Cronbach’s alpha (\(\alpha\)) of .932.
**Analysis.** Assessments of school board chairperson’ likelihood of extending an interview offer for each resume combination (female business, male business, female education, male education, female military, and male military) were tabulated. A composite score of responses was calculated and a Cronbach’s alpha was used to determine the internal consistency of the responses ($\alpha = .943$). With .70 as a minimum threshold of acceptability (Santos, 1999), $\alpha = .943$ indicates an excellent level of internal consistency.

Differentiating from decades of similar research (e.g., Bon, 2009; Reis et al., 1999; Rinehart & Young, 1996; Young, 2005; Young & Oto, 2004), results were analyzed using an ordinal regression rather than an analysis of variance technique. The reason for the deviation is due to the treatment of Likert scales as ordinal data rather than interval. Although the response scales have a clear directional ordering, the degree of difference between each response level cannot be assumed to be equivalent, and doing so is considered by many to be inappropriate (e.g, Cohen, Manion, & Morrison, 2013; Blaikie, 2003; Jamieson, 2004).

**Survey Response Rate**

According to the results of a meta-analysis by Baruch and Holtom (2008), because organizational representatives (such as school board chairpersons) are less likely to respond to surveys, a benchmark response rate of 35% is considered acceptable for organization-level research. Out of the 480 subjects randomly selected to participate in the study, 177 chose to respond for an acceptably-deemed response rate of 37%. The mixed-mode delivery process yielded relatively proportional response rates for both delivery methods: 101 subjects responded via email (21%) and 76 responded by mail (20% of the remaining 379 solicited by mail). Although the response rate met the “acceptable” threshold for organization-level research, it potentially could have been much higher if not for the many incorrect or out-of-date
email addresses and/or physical addresses provided by MDR, resulting in a large portion of potential participants not being reached for participation.

Numerous ethnicities were represented in this study, including African American, Hispanic, and Native American; however, respondents were primary White. The respondents were relatively balanced in numbers of male and female participating in this study. The balance of ethnicities was comparable for males and females participating (see: Table 3.1).

Table 3.1

*School Board Chairpersons’ Demographics*

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male School Board Chairpersons</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>White</td>
<td>78</td>
<td>95.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>3.6</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>100</td>
</tr>
<tr>
<td><strong>Female School Board Chairpersons</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>White</td>
<td>90</td>
<td>94.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Native American</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>100</td>
</tr>
</tbody>
</table>
Responses were adequately distributed amongst all of the treatment groups, with males and females responding in comparable numbers to each (see: Table 3.2). This even distribution allowed this study to meet the response requirements per treatment group suggested by Peduzzi et al. (1996) in order to use an ordinal regression analysis. Females had slightly higher numbers of responses for each treatment group.

School board chairpersons from 39 states responded with responses by state ranging from one (Alaska, Mississippi, New Mexico, Rhode Island, and Utah) to 18 (California). Other well-represented states included Ohio (13), Illinois (13), and Arizona (8). With school districts

Table 3.2

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Female Chairperson</th>
<th>Male Chairperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Business Candidate</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Female Military Candidate</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Female Education Candidate</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Male Business Candidate</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Male Military Candidate</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Male Education Candidate</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>82</td>
</tr>
</tbody>
</table>

represented serving student populations ranging from 62 to over 60,000 students, chairpersons from small, medium, and large districts are present in the study. Fifty three percent of respondents are female. Forty seven percent of respondents reported having business
experience, 31% education experience, and 2% military experience. Thirty two percent stated having backgrounds in law, health industry, technology industry, and/or some other field (see: Table 3.3 and Figure 3.1). Respondents were fairly evenly distributed between types of professional backgrounds with the exception of military. The military background was far less represented in the respondents of this study than the other major background categories; however, without demographic data available describing the types of professional backgrounds of the American school board chairperson population, this underrepresentation could potentially be proportional to the percentage of chairpersons nationally who have military backgrounds.

Table 3.3

\textit{School Board Chairpersons’ Professional Backgrounds}

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency*</th>
<th>Percent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>83</td>
<td>46.9</td>
</tr>
<tr>
<td>Education</td>
<td>55</td>
<td>31.1</td>
</tr>
<tr>
<td>Military</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>32.2</td>
</tr>
</tbody>
</table>

*Note: Frequency and Percent totals do not equal the total number of participants and 100%, respectively, because many participants indicated experience in more than one profession.

Other demographic variables of respondents, including the number of superintendent selections in which they have participated and the size of the districts they serve in terms of the number of students served in the district, varied. The number of superintendent selection
decisions in which respondents had participated ranged from zero to eight with two being about average (see: Table 3.4). District sizes ranged from as little as 62 students to 60,000, with an average district size of 6,222. Therefore, respondents included chairpersons of relatively little to immense experience with superintendent selection from districts ranging from very small to quite large, relatively speaking.

An analysis of variance was conducted for both the number of superintendent selections in which chairpersons have participated and the size of the districts they serve relative to the treatment groups in order to determine if the random assignment of chairpersons to each treatment group was successful and if the variation of demographics of respondents was sufficiently random in order to dismiss the potential of confounding variables in the data. Table

Figure 3.1

*Percentages exceed 100% due to some respondents indicating multiple professional backgrounds.

<table>
<thead>
<tr>
<th>Professional Backgrounds</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>46.9%</td>
</tr>
<tr>
<td>Education</td>
<td>32.2%</td>
</tr>
<tr>
<td>Military</td>
<td>1.7%</td>
</tr>
<tr>
<td>Other</td>
<td>31.1%</td>
</tr>
</tbody>
</table>

*Percentages exceed 100% due to some respondents indicating multiple professional backgrounds.
Table 3.4

Descriptive Statistics of Variables

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Mean Statistic</th>
<th>Std. Deviation Statistic</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Superintendent Selections</td>
<td>2.162</td>
<td>1.545</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>District size</td>
<td>6222</td>
<td>9391</td>
<td>59938</td>
<td>62</td>
<td>60000</td>
</tr>
<tr>
<td>Interview Likelihood</td>
<td>4.555</td>
<td>2.866</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

3.5 shows that the number of superintendent selection conducted by respondents differs across treatment groups, but not significant enough to warrant further investigation. Figure 3.2 illustrates the average number of superintendent selections conducted by chairpersons in each treatment group. Averages ranged from a low of 1.63 to a high of 2.96, with an overall mean of 2.19 superintendent selections conducted.

Table 3.5

Variance of Respondents’ Number of Selections Between Treatment Groups

<table>
<thead>
<tr>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>816.744</td>
<td>1</td>
<td>816.744</td>
<td>349.292</td>
</tr>
<tr>
<td>Treatment Group</td>
<td>25.404</td>
<td>5</td>
<td>5.081</td>
<td>2.173</td>
</tr>
</tbody>
</table>

The variation between treatment groups in terms of district sizes was relatively equal with a nonsignificant F statistic (see: Table 3.6). The average district size for chairpersons in each treatment group ranged from a low of 4,900 to a high of 8,221 (see: Figure 3.3.) With no significant differences in demographic characteristics across treatment groups, interpretation of
the results can proceed without suspicion of a confounding effect from chairpersons’ superintendent selection experience or district size. Chairpersons were evenly distributed, in terms of characteristics, as a result of random selection and random assignment.

Figure 3.2

*Number of Superintendent Selections of Respondents by Treatment Group*

Table 3.6

*Variance of Respondents’ District Sizes Between Treatment Groups*

<table>
<thead>
<tr>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>6089524821</td>
<td>1</td>
<td>6089524821</td>
<td>68.832</td>
</tr>
<tr>
<td>Treatment Group</td>
<td>228618132.6</td>
<td>5</td>
<td>45723626.51</td>
<td>.517</td>
</tr>
</tbody>
</table>
Figure 3.3

District Size of Respondents by Treatment Group
Chapter 4

Results

This chapter summarizes the information obtained through the email and mail survey instruments and the techniques employed to analyze the data. Included in this chapter are data related to each research question accompanied by interpretations of significant findings. Checks of assumptions and model fit for the use of ordinal regression as an analysis technique are presented as well.

Analysis Checks

In order to derive any meaning from the data and ensure that the ordinal regression analysis was valid, a check of the assumptions of ordinal regression and of the overall fit of the model was necessary. In using ordinal regression, there are four assumptions that must be met in order to allow a valid result: the dependent variable must be ordinal; one or more independent variables that are continuous, ordinal, or categorical must be present; a lack of multicollinearity should be present; and proportional odds must be present (Laerd, 2013). Model fitting information is also important to assess whether the model gives better predictions than guesses based on the probabilities for the outcome categories (National Centre for Research Methods, 2011).

Assumptions of Ordinal Regression. The dependent variable in this study is the likelihood of extending an interview to a candidate, as measured on a Likert-type scale ranging from 1-10. The independent variables are the sex of the candidate, profession of the candidate,
and sex of the school board chairperson. With the incorporation of an ordinal dependent variable and three categorical independent variables in this study, the first two assumptions are met.

Multicollinearity. The presence or absence of multicollinearity can be checked by running the data through a linear regression analysis. This is necessary because the regression procedures for categorical dependent variables do not have collinearity diagnostics. Several of the output values check multicollinearity. The “Tolerance” score is an indication of the percent of variance that is solely accounted for by that predictor, hence small values indicate that the predictor is redundant. Values approaching zero, especially those that are less than .10, require further investigation before allowing to be included in a study. The variance inflation factor (VIF) is (1/tolerance score), therefore scores of 10 or more are considered warranting further investigation (Hair et al., 2010; UCLA, 2017d). This study’s predictors’ tolerance scores of 1.000 and VIF scores of 1.00 (see: Table 4.1) are strong indications of a lack of multicollinearity.

Table 4.1

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate Sex</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Profession</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Chair sex</td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Further evidence of an absence of multicollinearity is found in the collinearity diagnostics table (Table 4.2). Condition index scores above the thresholds of 15 and especially 30 are considered to be indications of multicollinearity (Hair et al., 2010), as are very low (e.g., <
Eigenvalues values (UCLA, 2017d). The condition indices and Eigenvalues for the current study provide additional support for the absence of multicollinearity of the predictor variables.

**Proportional odds assumption.** The proportional odds assumption, or test of parallel lines, which assesses whether the one-equation model is valid, was checked in order to determine whether each independent variable has an identical effect at each cut point of the ordinal dependent variable, a foundational assumption for ordinal regression (National Centre for Research Methods, 2011; UCLA, 2017c). In other words, do the independent variables have the same effect at ordered levels or are there different effects for extreme vs. moderate levels? The assumption can be checked by allowing the coefficients to differ, estimating each, and determining whether each are equivalent. The row labeled “Null Hypothesis” assumes the lines are parallel and contains a -2 log likelihood for the constrained model. The “General” row models separate lines. The SPSS test of parallel lines determines if the general model provides a sizable improvement compared to the null hypothesis model. To reject the null hypothesis based on the significance of the general Chi-Square statistic would mean that the ordered coefficients are not equal across the cut points of the outcome variable, and a less restrictive model would be more appropriate for analyzing the data (UCLA, 2017c).

**Collinearity Diagnostics**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Eigenvalue</th>
<th>Condition Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.882</td>
<td>1.000</td>
</tr>
<tr>
<td>2</td>
<td>.520</td>
<td>2.354</td>
</tr>
<tr>
<td>3</td>
<td>.441</td>
<td>2.557</td>
</tr>
<tr>
<td>4</td>
<td>.157</td>
<td>4.289</td>
</tr>
</tbody>
</table>


The general model’s Chi-Square in this study did exhibited a statistically significant ($p = .04$) improvement compared to the null hypothesis model (see: Table 4.3), however, the results of this should be interpreted cautiously. Peterson and Harrell (1990) note that this omnibus test is neither powerful nor conservative, and nearly always results in very small significance values (O’Connell, 2006). Therefore, rejecting the null hypothesis should be done not based solely on the omnibus test, but only after examining the underlying binary models and comparing the variable effects within the binary models to those within the full model (O’Connell, 2006). After investigating the effects of the independent variables across each of the binary models, it was not reasonable to reject the null hypothesis of proportional odds because the effects of the independent variables were stable across all of the models.

Table 4.3

*Test of Parallel Lines*

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 Log Likelihood</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Hypothesis</td>
<td>260.337</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>213.057</td>
<td>47.280</td>
<td>32</td>
<td>0.040</td>
</tr>
</tbody>
</table>

**Overall Model Fit Checks.** Model fit was assessed using a Likelihood Ratio (LR) Chi-Square test which can be calculated by $-2\times L(null\ model) - (-2\times L(fitted\ model))$, where $L(null\ model)$ describes a model that predicts the log likelihood of the outcome variable only (“Intercept Only”), while $L(fitted\ model)$ describes that a model that predicts the log likelihood for the full context of predictor variables (“Final”) (UCLA, 2017c). The LR Chi-Square computation (see: Table 4.4) yielded a statistically significant ($p < .0005$) statistic of 40.559 ($df = 32$).
4) which indicates that the fitted model allows for a significant improvement over the null, intercept-only model (National Centre for Research Methods, 2011).

To determine the model’s goodness of fit, a Pearson’s Chi-Square statistic \( (x^2 = \sum \frac{(O_{ij} - E_{ij})^2}{E_{ij}}) \) for the model was calculated, as well as a deviance Chi-Square statistic (\( D = \)).

Table 4.4

Model Fitting Information

<table>
<thead>
<tr>
<th>Model</th>
<th>-2Log Likelihood</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept Only</td>
<td>301.173</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>260.087</td>
<td>41.086</td>
<td>5</td>
<td>.000</td>
</tr>
</tbody>
</table>

\( 2\Sigma O_{ij} \ln \frac{O_{ij}}{E_{ij}} \). These statistics assess the model’s consistency with the observed data and determine whether the model fits the data or if the data conflicted with the chosen model. A determination of goodness of fit can be ascertained by beginning with the null hypothesis that the model’s fit is good and then determining whether or not to reject the null hypothesis (note: a large \( p \)-value – \( p > .05 \) – leads to a rejection of the null hypothesis) (National Centre for Research Methods, 2011). This test determines if the values generated by a model are significantly different (\( p < .05 \)) from the data values themselves. With a nonsignificant \( p \)-value of .688 (see: Table 4.5), the null hypothesis was not rejected, concluding that the utilized model improves prediction over the null model.

Pseudo \( R^2 \) measures are additional methods of assessing a model’s goodness of fit. In linear regression, \( R^2 \) summarizes the proportion of variance in the outcome that can be accounted for by the explanatory variables, with scores ranging from 0 (no variance) to 1 (all
Table 4.5

**Goodness-of-Fit**

<table>
<thead>
<tr>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td>86.807</td>
<td>94</td>
</tr>
<tr>
<td>Deviance</td>
<td>91.663</td>
<td>94</td>
</tr>
</tbody>
</table>

variance). Unfortunately, it is not possible to compute the same $R^2$ statistic for logistic and ordinal regression models, yet several approximations can be computed instead (National Centre for Research Methods, 2011).

Pseudo $R^2$ statistics can give contradictory conclusions and do not have the same interpretation as standard $R^2$ values from OLS regression, therefore these statistics should be interpreted with caution. The three most commonly referenced Pseudo $R^2$ statistics are the Cox and Snell, Nagelkerke, and McFadden.

1. **Cox & Snell’s Pseudo $R^2$:** This value indicates the ratio of the likelihood of improvement of the full model over the intercept model; therefore, the smaller the ratio, the greater the improvement. The $R^2$ is a transformation of the $-2\ln[L(M_{\text{Intercept}})/L(M_{\text{Full}})]$ statistic that is used to determine convergence. “Cox & Snell’s pseudo R-squared has a maximum value that is not 1: if the full model predicts the outcome perfectly and has a likelihood of 1, Cox & Snell’s is then 1-$L(M_{\text{Intercept}})^{2/N}$, which is less than one” (UCLA, 2017a).

2. **Nagelkerke’s Pseudo $R^2$:** Nagelkerke’s Pseudo $R^2$ adjusts Cox & Snell’s so that the range of possible values extends to 1 by dividing by the maximum possible value, $1-L(M_{\text{Intercept}})^{2/N}$. When Nagelkerke’s Pseudo $R^2 = 1$, then the full model completely predicts the result (UCLA, 2017a).
3. McFadden’s Pseudo R\(^2\): With McFadden’s Pseudo R\(^2\), “the log-likelihood of the intercept model is treated as a total sum of squares, and the log-likelihood of the full model is treated as the sum of squared errors, with the ratio of the likelihoods suggesting the level of improvement offered by the full model.” Because a likelihood falls between 0 and 1 the log of a likelihood is less than or equal to zero. If a model has a very low likelihood, then the log of the likelihood will have a larger magnitude than the log of a more likely model. Therefore, smaller ratios of log-likelihoods indicate that the full model is a far better fit (UCLA, 2017a).

Approximations yielded from these three Pseudo R\(^2\) tests (see: Table 4.6) indicate that the model has a sufficient goodness of fit.

Table 4.6

<table>
<thead>
<tr>
<th>Pseudo R(^2)</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox and Snell</td>
<td>.207</td>
</tr>
<tr>
<td>Nagelkerke</td>
<td>.210</td>
</tr>
<tr>
<td>McFadden</td>
<td>.052</td>
</tr>
</tbody>
</table>

**Results**

Table 4.7 reports the parameter estimates of the ordinal regression analysis of school board chairpersons’ likelihood to extend an interview offer to the hypothetical superintendent
Table 4.7

*Ordinal Regression Results*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Logistic coefficient</th>
<th>Standard error</th>
<th>Wald</th>
<th>P value</th>
<th>Odds ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Candidate Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.126</td>
<td>0.388</td>
<td>0.106</td>
<td><em>p = 0.745</em></td>
<td>1.13</td>
<td>0.53-2.43</td>
</tr>
<tr>
<td>Male</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Professional Background</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>-2.153</td>
<td>0.360</td>
<td>35.773</td>
<td><em>p &lt; 0.0001</em></td>
<td>0.12</td>
<td>0.06-0.24</td>
</tr>
<tr>
<td>Military</td>
<td>-1.498</td>
<td>0.339</td>
<td>19.519</td>
<td><em>p &lt; 0.0001</em></td>
<td>0.22</td>
<td>0.12-0.41</td>
</tr>
<tr>
<td>Education</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chairperson Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-.081</td>
<td>0.369</td>
<td>0.048</td>
<td><em>p = 0.827</em></td>
<td>0.92</td>
<td>0.44-1.90</td>
</tr>
<tr>
<td>Male</td>
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<td><em>p = 0.617</em></td>
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candidates. Main effects for candidate sex, candidate professional background, school board
chairperson sex, and interaction between candidate sex and chairperson sex are presented, as
are Wald Chi-Square statistics, significance levels, odds ratios, and 95% confidence intervals for
each variable.

Research question 1: Does a superintendent candidate’s sex affect the chairperson’s
decision to offer an interview to the candidate? According to the results of this study,
candidates’ sex did not affect chairpersons’ decisions on whether to interview the candidates.
Specifically, the log odds coefficient (β) for female candidates being offered an interview was
.126 with \( p = .745 \). Logistic regression coefficients (β) imply a one unit increase in the
explanatory variable yields a β increase in the log of the odds (UCLA, 2017b). A log odds
coefficient can be transmuted into an odds ratio (OR), a far more easily interpretable value, by
exponentiation (i.e., \( \ln(e^\beta) \)). For example, the aforementioned coefficient (.126) can be
transformed by computing \( e^{.126} = 1.13 \), yielding an odds ratio of 1.13 (95% CI, 0.53 to 2.43) with
a statistically insignificant Wald \( \chi^2(1) = .106, p = .745 \).

Odds ratios can vary in value from 0 to infinity with 1 indicating that the predictor
variable has no effect on the likelihood of an event, supporting the null case. The value of an
odds ratio can be represented as a percentage of change in odds by calculating \( (100*[\text{OR}-1]) \)
(O’Connell, 2006). The inverse of an odds ratio can be computed by \( (1/\text{OR}) \).

The practical interpretation of the odds ratio for female candidates, using the
aforementioned formula, is that female candidates were 13% more likely to receive an invitation
to interview. However, with 95% confidence intervals of 0.53 to 2.43 and a significance level of
Wald \( \chi^2(1) = .106, p = .745 \), that interpretation is unreliable at best. As a consequence of these
results, the null hypothesis, that female and male candidates are offered interviews in equivalent ratios, was not rejected.

These findings mirror those of Bon (2009) who found no statistical difference in the likelihood of principals to extend an interview offer to male vs. female assistant principal candidates. Reis, Young, and Jury (1999) found female assistant principals to be more likely to receive an interview offer at a statistically significant difference. This study also found a preference for female candidates, but not to the same extent.

These results are completely contrary to one might expect considering the significant disproportion of female superintendents in relation to the proportion of overall educators who are female. These results are also contrary to the postulations of many (e.g., Alston, 2000; Chase & Bell, 1994; Dana & Bourisaw, 2006; Bjork, 2000; Blount, 1998; Brunner, 2000, 2003; Brunner & Grogan, 2007; Brunner et al., 2003, 2006; Brunner & Kim, 2010; Grogan & Brunner, 2005; Shakeshaft, 1989, 1999; Tallerico, 2000, 2003; Tallerico & Blount, 2004) who state the school board member discrimination against female superintendent candidates is a, if not the, primary factor for the dearth of female superintendents. Other factors might need to be explored in order to better determine the causes of female underrepresentation.

Research question 2: Does a superintendent candidate’s sex-similarity with the school board chairperson affect the chairperson’s decision to offer an interview to the candidate? The interaction was not statistically significant, therefore there was no evidence of a sex-similarity attraction effect from the data. Female chairpersons were 0.77 (95% CI, 0.27 to 2.17) times as likely to offer an interview to a female candidate than male chairpersons were to offer an interview to a male candidate; however, the difference was not statistically significant (Wald $\chi^2(1) = .250, p = .617$) and was at least partially a result of the fact female chairpersons seemed
less likely to extend an interview to all candidates (OR = 0.92; 95% CI, 0.44 to 1.90). The null hypothesis of chairpersons offering interviews to sexually-similar and -dissimilar candidates was not rejected.

Bon (2009) found female evaluators to rate lower than their male counterparts at a statistically significant level. This study found comparable findings; however, not at a significant level. There may be a trend of male vs. female evaluators’ rating habits worth exploring.

Interestingly, there was no evidence that Byrne’s similarity-attraction paradigm or Schneider’s attraction-selection-attrition theory affected the screening decisions of the superintendent candidates. Having no sex-similarity effect is contrary to the findings of many prior studies in which positive sex-similarity effects (e.g., Binning, Goldstein, Garcia, and Scattaregia, 1988; Wiley & Eskilson, 1985; Young, 2005) or negative sex-similarity effects (Graves & Powell, 1995) were found.

Research question 3: Does a superintendent candidate’s type of experience (educational vs. military vs. business) affect the chairperson’s decision to offer an interview? This study yielded strong evidence that superintendent candidates’ professional backgrounds affect chairpersons’ decisions to extend an interview offer. Traditional candidates were found to have odds ratios of 8.33 (Wald $\chi^2(1) = 35.773, p < .0001$) compared to business candidates and 4.55 (Wald $\chi^2(1) = 19.519, p < .0001$) compared to military candidates, which translates to traditional candidates being overwhelmingly more likely (833% and 455%, respectively) to be offered an interview compared to nontraditional candidates. Perhaps the statistic most surprising to the researcher is the low business background odds ratio of 0.12 (95% CI 0.06 to 0.24). Considering that 47% of the participants in the study self-reported having business experience in their professional backgrounds, one might predict a more favorable likelihood of business-type
superintendent candidates’ being extended an interview offer, at least in comparison to
military-type candidates.

Military candidates did not fare much better than their business counterparts, with an
odds ratio of 0.22 (95% CI 0.12 to 0.41). Military leaders are often held up as examples of
alternatives to traditional superintendent candidates (e.g., AASA, 2016; Hess, 2003; Quinn,
2007) and, therefore, a more favorable perception of military candidates was expected.
Whatever the reasons which led to these findings, the null hypothesis – traditional and
nontraditional candidates being offered interviews in equivalent ratios – was rejected for both
business and military candidates.

**Summary.** The results of this chapter indicate a few important findings. First, males and
females receive interview offers for superintendent positions in comparable proportions.
Secondly, sex-similarity does not appear to be an influence on superintendent screening
decisions. Finally, professional backgrounds of candidates are very important, with traditional
candidates being significantly more likely to receive and interview offer than business or military
candidates.
Chapter 5

Conclusion

This chapter summarizes the purpose of and methodology used in this study. A discussion of the results of the primary and secondary analyses is included. Limitations and recommendations for future research are also presented.

Discussion

The purpose of this study was to examine the effects that superintendent candidates’ sex and professional background and school board chairpersons’ sex have on superintendent resume screening decisions made by school board chairpersons. School board chairpersons were selected randomly from across the United States to receive one of six types of hypothetical superintendent candidates’ resumes and respond to a survey of Likert-type items which required subjects to rate the likelihood they would recommend the candidate depicted in the resume for an interview. Variables examined were candidates’ sex (male vs. female), professional experience (business vs. education vs. military) and sex-similarity with board chairperson. Scores for each combination were analyzed using an ordinal regression to identify differences in interview recommendations between groups.

According to the results of this study, candidates’ sex did not affect chairpersons’ decisions on whether to interview the candidates, nor did candidates’ sex-similarity with screening school board chairpersons. Candidates’ professional backgrounds did significantly affect their likelihood of receiving an interview offer, with traditional candidates being 8.33
(Wald $\chi^2(1) = 35.773, p < .0001$) times more likely to be offered an interview than business-type candidates and 4.55 (Wald $\chi^2(1) = 19.519, p < .0001$) times more likely to be offered than military-type candidates.

**Candidates’ sex.** Surprisingly, candidates’ sex did not affect chairpersons’ decisions on whether to interview the candidates. In fact, females were slightly (13%), albeit not statistically significantly, more likely to receive an interview offer. This conclusion is surprising because it fails to provide evidence to support the claim by many (e.g., Brunner & Kim, 2010; Sperandio & Devdas, 2014; Tallerico, 2000) that biases held by school board members is a predominant cause of the dearth of female superintendents, at least in at the screening stage of the selection process. Notwithstanding, the results of this study do not invalidate the claim that such biases exist, but rather this study did not find evidence to support the claim that such bias influences screening decisions.

These results again beg the question, as previously posed by Glass, Björk, and Brunner (2000, p. 45): “What deters large numbers of women from becoming superintendents?” Are there self-imposed or external barriers at play? Perhaps, the superintendency is not the ultimate career goal for many women, but, rather, roles more closely linked to classrooms (Sperandio & Devdas, 2015) where they can more directly care for and influence students (Grogan & Shakeshaft, 2013). Even for females who achieve the superintendency, it was often not a career goal (Kelsey et al., 2014). It is possible that females’ desire to be in positions that allow to directly care for students might contribute both to the high percentage of teachers who are female (76%) and the low percentage of female superintendents (24%), because their motivation to enter the educational field, which is to directly care for students (Gardiner, Grogan, & Enomoto, 1999; Grogan, 2005; Grogan & Shakeshaft, 2013), keeps them in positions
that allow them to act upon that motivation, which is in the classroom or not far removed from it.

Or could it be that females not applying for positions in equal proportions to males due to an apprehension to relocate? Very few superintendents are hired from within the district (Kowalski et al., 2011) and far fewer spend their entire careers in the same district (Glass et al., 2000) making it clear that relocation is an essential part of achieving the superintendency. However, females are less likely than males to be willing to relocate to obtain a superintendent position (Sperandio & Devdas, 2015), stymieing their ascension.

Another deterrent might be that females are not pursuing superintendent certification proportionate to the number who are completing superintendent preparation programs (Grogan & Brunner, 2005). Could females be learning about the role of superintendent and deciding that responsibilities associated with the position are not compatible with what their expectations were? If so, then Grogan and Shakeshaft (2013) might be correct in postulating that women opting for satisfaction and balance in life and over career aspirations of the superintendency.

Copeland (2014) found female superintendents reached their career goals with the help of mentors, especially female mentors. Glass et al. (2000) note that a lack of mentors is one of the most significant barriers that female superintendent aspirants face. Might the adversity that many aspiring females face be during their attempt ascent to the superintendency due to factors such as a lack of supportive mentorship rather than their application for it?

Of course, it might be too optimistic – and simplistic – to posit the dearth of female superintendents is self-imposed; factors outside their control could be to blame. Unfortunately, those closest to female superintendent aspirants might contribute to their inability to realize
their career ambitions. Many women prioritize their husband’s career over their own (Pixley, 2008), which significantly reduced the number of opportunities for advancement available. Familial obligations, whether present or not, can affect female superintendent candidates’ chances at job-acquisition because of expectations that they are primary care givers to their children (Mahitivanichcha & Rorrer, 2006).

Female educators’ entry positions, which are predominately at the elementary level, can be a hindrance in superintendent attainment as well. Kowalski et al. (2011) found 65% of superintendents were secondary teachers, rather than elementary. Secondary levels have more leadership positions available, such as department chairs, coaches, assistant principals, which allow for more advancement opportunities than at the elementary level (Glass et al., 2000). Additionally, secondary experience is often viewed more favorably for prospective candidates by selection committee and search consultants (Tallerico, 2000), making candidates hailing from elementary positions less marketable.

If school board members are not shutting females out of superintendent interview opportunities, then perhaps consultants might be at fault for screening out female candidates. There are numerous possible factors that might contribute to the underrepresentation of females at the superintendent level, but bias by school board members at the screening stage of the selection process does not appear to be one of them. Of course, more research is warranted to further bolster these findings.

Candidates’ sex-similarity. According to Byrne’s similarity-attraction paradigm (1971), school board chairpersons should like and be attracted to superintendent candidates who are perceived to be similar in held attitudes and beliefs. At the screening stage in the selection process, little information about attitudes, values, or beliefs are usually present; however,
candidates’ sex is commonly decipherable and can lead to perceived similarity in attitudes and beliefs, which can in turn lead to interpersonal attraction and bias in a selection decision (Graves & Powell, 1995). Tallerico (2000) stated male school board members especially might be prone to similarity-attraction.

Schneider’s (1987) attraction-selection-attrition theory predicts similar results from selection groups: selection decision makers will choose candidates who they perceive as having characteristics consistent with the organization. It is, therefore, plausible that school board members would choose individuals of the same sex due to perceived commonality in held views and beliefs. However, contrary to Byrne’s similarity-attraction paradigm and Schneider’s attraction-selection-attrition theory, no evidence for sex-similarity effects was found in this study. Male school board chairpersons were 1.30 times more likely to offer an interview to a male superintendent candidate; however, without any statistical significance (Wald $\chi^2(1) = .250, p = .617$) the null hypothesis was not rejected. As previously noted, overall male school board chairpersons indicated higher likelihoods of interviewing all candidates compared to females, to which the insignificant difference in sex-similarity odds can be partially attributed.

**Candidates’ professional background.** The results of this study provide strong evidence that traditional superintendent candidates are the overwhelming favorites to receive interview opportunities for superintendent vacancies compared to nontraditional business (OR = 8.33 [Wald $\chi^2(1) = 35.773, p < .0001$]) and military (4.55 [Wald $\chi^2(1) = 19.519, p < .0001$]) candidates. Such an underwhelming response to business candidates is surprising considering that 47% of this study’s respondents have business experience, the most common professional background of respondents. Do business professionals view themselves and other business professionals as unprepared for the office of superintendent due to a high view of the superintendent position...
or a low view of the type of preparation that business experience provides? Or is there something else leading to such a poor reception of business candidates?

Military candidates, too, were given less-than-expected likelihoods of receiving an interview. With many of the nontraditional superintendents employed hailing from military backgrounds and ex-military personnel so frequently discussed as viable candidates for superintendents (e.g., AASA, 2016; Hess, 2003; Quinn, 2007), a more favorable perception was expected of the military candidates. Do school board members view military experience as being inadequate preparation for leading a school district compared to the traditional preparation, or is there perhaps some other factor affecting the offer of an interview, such as school board members’ concerns about how well such a candidate would be received by the professional educators employed by the district?

With nontraditional superintendents having seemingly comparable effects on district outcomes (Eisinger & Hula, 2004), the basis of such a disproportionate favoritism for traditional superintendent candidates is intriguing. Are there extant stereotypes of what makes a qualified superintendent affecting decisions? Is instructional leadership a critical focus of school board chairpersons when selecting a superintendent candidate? Certainly in states where alternative routes to superintendent certification is difficult, bureaucratic limitations might affect school board chairpersons’ likelihood of offering an interview to nontraditional candidates.

These results provide no evidence that the ideals of neoliberalism have infiltrated school board members’ preferences in the types of superintendent candidates they pursue. Although many free-market concepts have permeated American public education over the last couple of decades (Dudley-Marling & Baker, 2012), it appears that school board members still view traditional superintendents as their choice for leading school districts. Perceptions and biases
held by school board members of which professional background is adequately prepared can prevent the entrance of many, perhaps well-qualified, superintendent candidates and could potentially prevent a district from selecting the best available individual to lead their district.

**Limitations**

A limitation with this study is that subjects were responding to paper credentials for hypothetical candidates in a simulated situation. Although the screening decision in a real superintendent selection situation involves making judgments about offering an interview to a candidate based on their resume – just as occurred in this study – knowing that candidates are real persons and that there is an actual superintendent vacancy that needs to be filled has the potential to change the judgments school board members make about resumes. Knowing to what extent those judgments differ was not captured in this study.

Additionally, in actual selection situations, decision makers are usually given a slate of resumes from which to choose whom to interview. This study was intentionally designed to reduce the possibility for confounding variables and one of the means by which this was accomplished was by providing subjects only one resume. This allows the researcher to create seemingly identical resumes manipulating only the name and professional background of the candidate. The limitation inherent in this design is that subjects might rate resumes differently depending on the context of other resumes.

The data was collected in a cross-sectional study. Therefore, the findings are indicative of respondents’ perceptions at one point in time, rather than over time. Respondents’ perceptions might be variable depending on a number of time-dependent factors, none of which was captured in this study.
One of the independent variables in this study was the professional background of the candidates, varying between education, business, and military experience. In order to create equivalent resumes in terms of content and strength so not to confound results, the details contained in each resume had to be relatively limited. This was a limitation in this study because effective resumes – those that are likely to earn an interview for the applicant – usually contain more detail and depth of information. Although the depth of detail in the resumes used in this study was consistent across each resume, it was consistently superficial.

Unfortunately, 95% of respondents were White, which was another limitation for this study. According to a national study of school board members, approximately 86% of school board members are White (Hess, 2002), which leaves this study with a slight overrepresentation of White school board members compared to their non-White counterparts. Although this study’s respondents’ participation was greatly appreciated and their responses are highly valuable, having a more ethnically-diverse sample population that is more representative of the population would provide greater insight into the perceptions of all school board members. Since this the researcher is unaware of any evidence that White school board members differ significantly in their perceptions of superintendent candidates’ sex and/or professional background, this limitation is believed to have had little to no effect on this study’s findings.

**Recommendations for Future Research**

More research must be conducted on the views and perceptions of school board members, especially as they pertain to selection decisions, in order to gain a better understanding of the superintendent selection process and, perhaps more importantly, the factors that contribute to the underrepresentation of females in the superintendency. Although this study did not identify discriminatory perceptions by school board chairpersons against
female candidates, further research is necessary to determine whether or not this study marks a positive turning point in the perceptions of school board members away from a male-dominated view of the superintendency.

Specifically, more research is warranted on the effects that traditional superintendent candidates’ sex have on the likelihood of school board members offering an interview. The results of this study present clear evidence that traditional superintendent candidates are the preferred candidates of school board members over business- and military-type candidates; however, the results narrowed to traditional candidates only yielded counterintuitive conclusions – traditional female candidates were more likely ($p > .05$) to receive an interview offer than males. Are female educators actually more likely to be offered an interview for a superintendency than their male counterparts?

An additional recommendation for future research would be to employ resumes which include a moderate to substantial amount of detail and depth of information without confounding results. This can be done by disregarding different professional backgrounds as a manipulation and focusing solely on traditional superintendent candidates. By so doing, one can create a detailed resume rich with industry-specific information that can provide an accurate screening experience that even more closely simulates actual superintendent screening decisions.

Another relevant and potentially valuable area of future research is the perceptions of school board members from specific types (i.e., rural, urban) and sizes (i.e., < 1,000, 1,000-10,000, > 10,000) of districts might provide insight into what contexts female candidates are more likely to be offered an interview. Such insights will not only help encourage and guide female superintendent aspirants to more fruitful opportunities, but will also provide invaluable
information about the type of contexts that might need an enhanced focus in anti-discriminatory practice research and training. If the disparity of female superintendents is not largely due to school board member biases as many have posited, then researchers, practitioners, and activists need to identify other potential factors to examine and correct in order to rectify the disproportion.
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Appendix A
Female Business Candidate Resume

Patricia Williams
Superintendent Candidate
pwilliams@globalsales.com

Education
DBA, Business Administration, State University
MBA, Business Administration, State University
BS, Business Administration, State University

Professional Experience
Vice President of Sales, 2010-present
Global Sales Company
• Provide leadership through developing the vision of our sales department and implementing effective strategies to accomplish our sales goals.
• Am responsible for the professional achievement and growth of approximately 300 sales team members and related personnel.
• Regularly coordinate the evaluation and revision of our sales protocols and expectations to maximize customer satisfaction and profitability, such as customer communication initiation procedures.

Manager, 2004-2010
Global Sales Company
• Guided the location to six consecutive years of goal-related growth through effective management and leadership strategies.
• Managed the allocation and distribution of an approximate $150,000 budget annually.
• Executed and administered the procedural directives given to me from executive leadership, such as accomplishing annual sales goals through pre-established clientele.
• 2006 and 2009 Manager of the Year Award recipient

Assistant Sales Manager, 1998-2004
Global Sales Company
• Assisted with the supervision of department personnel (approximately 60 sales team members), resource management, and execution of administrative roles.
• Implemented a technology proficiency and integration initiative for our location’s personnel, encouraging the use of social media to increase product marketing and profitability.

Sales Representative, 1992-1998
Global Sales Company
• Successfully achieved company-related sales goals prescribed to me every year, while actively pursuing leadership opportunities within the company.
• Initiated and organized community outreach efforts to encourage increased community relations with the company.
• 1997 Sales Person of the Year Award recipient

Community Involvement
Girl Scout Leader, 2005-2010
Girl Scouts of America

Youth Mentor, 2000-present
American School District

References
Available upon request.
Appendix B

Male Business Candidate Resume

Tom Williams
Superintendent Candidate
twilliams@globalsales.com

Education
DBA, Business Administration, State University
MBA, Business Administration, State University
BS, Business Administration, State University

Professional Experience
Vice President of Sales, 2010-present
Global Sales Company
• Provide leadership through developing the vision of our sales department and implementing effective strategies to accomplish our sales goals.
• Am responsible for the professional achievement and growth of approximately 300 sales team members and related personnel.
• Regularly coordinate the evaluation and revision of our sales protocols and expectations to maximize customer satisfaction and profitability, such as customer communication initiation procedures.

Manager, 2004-2010
Global Sales Company
• Guided the location to six consecutive years of goal-related growth through effective management and leadership strategies.
• Managed the allocation and distribution of an approximate $150,000 budget annually.
• Executed and administered the procedural directives given to me from executive leadership, such as accomplishing annual sales goals through pre-established clientele.
• 2006 and 2009 Manager of the Year Award recipient

Assistant Sales Manager, 1998-2004
Global Sales Company
• Assisted with the supervision of department personnel (approximately 60 sales team members), resource management, and execution of administrative roles.
• Implemented a technology proficiency and integration initiative for our location’s personnel, encouraging the use of social media to increase product marketing and profitability.

Sales Representative, 1992-1998
Global Sales Company
• Successfully achieved company-related sales goals prescribed to me every year, while actively pursuing leadership opportunities within the company.
• Initiated and organized community outreach efforts to encourage increased community relations with the company.
• 1997 Sales Person of the Year Award recipient

Community Involvement
Boy Scout Leader, 2005-2010
Boy Scouts of America
Youth Mentor, 2000-present
American School District

References
Available upon request.
Appendix C

Female Education Candidate Resume

Patricia Williams
Superintendent Candidate
pwilliams@americansd.k12.edu

Education
Ed.D. Educational Administration, State University
M.Ed. Educational Administration, State University
B.S. Business Administration, State University

Professional Experience
Assistant Superintendent of Instruction, 2010-present
American School District
  • Provide leadership through developing the vision of our instructional department and implementing effective strategies to accomplish our instructional goals.
  • Am responsible for the professional achievement and growth of approximately 300 administrators and teachers.
  • Regularly coordinate the evaluation and revision of our instructional protocols and expectations to maximize instructional value and learning, such as parent communication initiation procedures.

Principal, 2004-2010
Washington High School, American School District
  • Guided the school to six consecutive years of goal-related growth through effective management and leadership strategies.
  • Managed the allocation and distribution of an approximate $150,000 budget annually.
  • Executed and administered the procedural directives given to me from district leadership, such as accomplishing annual student growth goals as determined by standardized test scores.
  • 2006 and 2009 Principal of the Year Award recipient
Assistant Principal, 1998-2004
Washington High School, American School District
- Assisted with the supervision of school personnel (approximately 60 faculty and staff), resource management, and execution of administrative roles.
- Implemented a technology proficiency and integration initiative for our school’s personnel encouraging the use of social media to increase parent communication.

Business Education Teacher, 1992-1998
Washington High School, American School District
- Successfully achieved school-related educational goals prescribed to me every year, while actively pursuing leadership opportunities within my school.
- Initiated and organized community outreach efforts to encourage increased community relations with my school.
- 1997 Teacher of the Year Award recipient

Community Involvement
Girl Scout Leader, 2005-2010
Girl Scouts of America

Youth Mentor, 2000-present
American School District

References
Available upon request.
Appendix D

Male Education Candidate Resume

Tom Williams
Superintendent Candidate
twilliams@americansd.k12.edu

Education
Ed.D. Educational Administration, State University
M.Ed. Educational Administration, State University
B.S. Business Administration, State University

Professional Experience
Assistant Superintendent of Instruction, 2010-present
American School District
• Provide leadership through developing the vision of our instructional department and implementing effective strategies to accomplish our instructional goals.
• Am responsible for the professional achievement and growth of approximately 300 administrators and teachers.
• Regularly coordinate the evaluation and revision of our instructional protocols and expectations to maximize instructional value and learning, such as parent communication initiation procedures.

Principal, 2004-2010
Washington High School, American School District
• Guided the school to six consecutive years of goal-related growth through effective management and leadership strategies.
• Managed the allocation and distribution of an approximate $150,000 budget annually.
• Executed and administered the procedural directives given to me from district leadership, such as accomplishing annual student growth goals as determined by standardized test scores.
• 2006 and 2009 Principal of the Year Award recipient
Assistant Principal, 1998-2004  
Washington High School, American School District  
- Assisted with the supervision of school personnel (approximately 60 faculty and staff), resource management, and execution of administrative roles.
- Implemented a technology proficiency and integration initiative for our school’s personnel encouraging the use of social media to increase parent communication.

Business Education Teacher, 1992-1998  
Washington High School, American School District  
- Successfully achieved school-related educational goals prescribed to me every year, while actively pursuing leadership opportunities within my school.
- Initiated and organized community outreach efforts to encourage increased community relations with my school.
- 1997 Teacher of the Year Award recipient

Community Involvement

Boy Scout Leader, 2005-2010  
Boy Scouts of America

Youth Mentor, 2000-present  
American School District

References

Available upon request.
Appendix E
Female Military Candidate Resume

Patricia Williams
Superintendent Candidate
pwilliams@navy.us

Education
J.D., Law and Business, State University
LL.M., Masters of Law, State University
B.S., Business Administration, State University

Professional Experience
Commander, 2010-present
JAG Corps, United States Navy
• Provide leadership through developing the vision of our JAG department and implementing effective strategies to accomplish our legal goals.
• Am responsible for the professional achievement and growth of approximately 300 active duty service members.
• Regularly coordinate the evaluation and revision of our protocols and expectations to maximize litigation success rate, such as client communication initiation procedures.

Lieutenant Commander, 2004-2010
JAG Corps, United States Navy
• Guided the department to six consecutive years of goal-related growth through effective management and leadership strategies.
• Managed the allocation and distribution of an approximate $150,000 budget annually.
• Executed and administered the procedural directives given to me from department leadership, such as accomplishing annual litigation success goals while not rejecting any prescribed cases.
• 2006 and 2009 Officer of the Year Award recipient

Lieutenant, 1998-2004
JAG Corps, United States Navy
- Assisted with the supervision of department personnel (approximately 60
  subordinates), resource management, and execution of administrative roles.
- Implemented a technology proficiency and integration initiative for our
  department’s personnel, encouraging the use of social media to increase
  communication and productivity.

Ensign, 1992-1998
JAG Corps, United States Navy
- Successfully achieved department-related legal goals prescribed to me every
  year, while actively pursuing leadership opportunities within my department.
- Initiated and organized community outreach efforts to encourage increased
  community relations with my department.
- 1997 Junior Officer of the Year Award recipient

Community Involvement
Girl Scout Leader, 2005-2010
Girl Scouts of America
Youth Mentor, 2000-present
American School District

References
Available upon request.
Appendix F
Male Military Candidate Resume

Tom Williams
Superintendent Candidate
twilliams@navy.us

Education
J.D., Law and Business, State University
LL.M., Masters of Law, State University
B.S., Business Administration, State University

Professional Experience
Commander, 2010-present
JAG Corps, United States Navy
- Provide leadership through developing the vision of our JAG department and implementing effective strategies to accomplish our legal goals.
- Am responsible for the professional achievement and growth of approximately 300 active duty service members.
- Regularly coordinate the evaluation and revision of our protocols and expectations to maximize litigation success rate, such as client communication initiation procedures.

Lieutenant Commander, 2004-2010
JAG Corps, United States Navy
- Guided the department to six consecutive years of goal-related growth through effective management and leadership strategies.
- Managed the allocation and distribution of an approximate $150,000 budget annually.
- Executed and administered the procedural directives given to me from department leadership, such as accomplishing annual litigation success goals while not rejecting any prescribed cases.
- 2006 and 2009 Officer of the Year Award recipient

Lieutenant, 1998-2004
JAG Corps, United States Navy
- Assisted with the supervision of department personnel (approximately 60 subordinates), resource management, and execution of administrative roles.
- Implemented a technology proficiency and integration initiative for our department’s personnel, encouraging the use of social media to increase communication and productivity.

Ensign, 1992-1998
JAG Corps, United States Navy
- Successfully achieved department-related legal goals prescribed to me every year, while actively pursuing leadership opportunities within my department.
- Initiated and organized community outreach efforts to encourage increased community relations with my department.
- 1997 Junior Officer of the Year Award recipient

Community Involvement
Boy Scout Leader, 2005-2010
Boy Scouts of America
Youth Mentor, 2000-present
American School District

References
Available upon request.
Appendix G

Survey instrument

Assessment of Superintendent Applicant

The use of this survey instrument is to simulate the screening of resumes and the decision to recommend or not recommend a superintendent candidate for an interview. Using the superintendent resume included in the packet, please circle the number corresponding to your agreement or disagreement with each statement, with 1 meaning you “very strongly disagree” and 10 meaning that you “very strongly agree”. There is no right or wrong answer. Indicate your personal feeling in response to each statement.

1. The applicant has the **organizational leadership experience** necessary for you to recommend for an interview.

```
<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
```

2. The applicant has the **budgetary management experience** necessary for you to recommend for an interview.

```
<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
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<td>3</td>
<td>4</td>
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<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
```

3. The applicant has the **instructional/educational experience** necessary for you to recommend for an interview.

```
<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th>Very Strongly Agree</th>
</tr>
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<td>6</td>
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<td>9</td>
</tr>
</tbody>
</table>
```

4. The applicant has the **overall experience** necessary for you to recommend for an interview.
5. The applicant has the **transferable skills** necessary for you to recommend for an interview.

6. The applicant has **written communication skills** necessary for you to recommend for an interview.

7. The applicant has **public relations skills** necessary for you to recommend for an interview.

8. The applicant has the **skills with office technology** necessary for you to recommend for an interview.

9. The applicant has the **level of ability to effectively lead a team** necessary for you to recommend for an interview.

10. The applicant has the **level of ability to develop policies and procedures** necessary for you to recommend for an interview.
11. **The applicant has the level of ability to implement and enforce policies and procedures necessary for you to recommend for an interview.**

<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>10</th>
</tr>
</thead>
</table>

12. **Based on the quality of the candidate, you would recommend this applicant be interviewed for the superintendent position in your district.**

<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
</tr>
</thead>
</table>

**Biographical Questionnaire**

Please answer the following questions about yourself to provide the researcher with a better idea of participants’ characteristics.

**Your sex:**

**Your ethnicity:**

The approximate number of students within the school district you serve:

The number of superintendent selections in which you participated:

Circle which of the following categories best describes your professional background:

<table>
<thead>
<tr>
<th>Business</th>
<th>Education</th>
<th>Military</th>
<th>Other (please specify)</th>
</tr>
</thead>
</table>