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PREDICTABILITY OF HIRING MECHANISMS FOR ELEMENTARY TEACHERS

By

Troy Juracek

A DISSERTATION

Presented to the Faculty of

The Graduate College of the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Education

Major: Educational Administration

Under the Supervision of Dr. Kay A. Keiser

Omaha, Nebraska

June 2016

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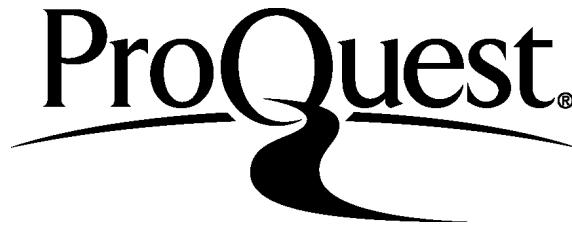
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ABSTRACT

PREDICTABILITY OF HIRING MECHANISMS FOR ELEMENTARY TEACHERS

Troy Juracek

University of Nebraska, 2016

Advisor: Dr. Kay A. Keiser

This study focused on hiring the best teachers to determine if the use of commercially available teacher selection mechanisms resulted in hiring teachers having a greater impact on reading achievement. There is substantial research related to the use of interviews for teacher selection (Mertz, 2010). However, limited research exists reviewing commercial interview protocols with improvement of academic achievement (District Administration, 2015). There was a significant main effect comparing reading achievement outcomes between Title 1 and Non-Title 1 building and there was a significant relationship between applicant screeners. The district has effective selection mechanisms, inclusive of the HUMANeX protocols; however, the mechanisms did not identify teachers with higher level of teacher efficacy to predict reading achievement. Teacher selection must be based on more than a single quantitative score deduced from a list of structured interview questions.

ACKNOWLEDGEMENTS

It is because of the support and understanding of my family I am able to complete this journey and achieve this degree. There were many hours redirected from them as we all shared the commitment of this pursuit as a family. My belief is they all learned from the value of having a goal, doing the work, and ultimately achieving the task at hand.

I would also like to take this opportunity to share my appreciation for all of the professors and fellow classmates that challenged my thinking, shaped my perspective, and help sustain this multi-year venture. I have immense gratitude to my pseudo-cadre I met during my first night of class and stuck with through each stage of the journey. It was great to learn together and benefit from some levity along the way. I would be remiss if I did not give the necessary credit to my dissertation committee members and especially to my dissertation chair. Dr. Keiser's perspective, knowledge, and passion provided me with the necessary motivation through each stage of my program. The educators I work with are true blessings. Many supported me in the process and provided me the necessary encouragement at just the right time. I work with some of the finest and have the great fortune to be part of a truly amazing school district.

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CHAPTER ONE

Introduction

It is late May and the hum of the fluorescent lights echo across the classroom. The “tick-tock” of the clock establishes the pulse and cadence within the room. The anxiety trickles down from my brain, sweat on the brow, dryness in the mouth, and a tingling sensation in my feet. I stare at the envelope containing the parent notification for my teacher next year.

My inner voice whispers, “This is it, which teacher will I get? I hear she’s new. Is she a good teacher? Will she help me when I get stuck? Will she understand me for my quirks and strengths, be my advocate? I hope she teaches me and just not everything in the book.”

This fictional account represents my childhood years, my journey to be myself, and to have that teacher able to recognize and pull the best out in me. The opportunity for every child to have an effective teacher should not be high stakes or cause any student such a level of anxiety. Through my years of schooling, I benefitted from some outstanding educators able to meet me where I was and capitalize on my talents. All teachers hired need to be effective as each student they impact deserves the best opportunity to realize his/her potential.

When people reflect back to their childhood chances are a memorable teacher is one of their first thoughts. A person encounters so many educators during his/her school experience, one often considers what makes a select few educators stand apart from the others. Teacher effectiveness could be due to having a greater depth of content knowledge or more graduate classes completed than their counterparts (Rutledge, Harris,

Thompson, & Ingle, 2008). A distinction may also be with the number of years of teaching experience accumulated by teachers (Tucker & Stronge, 2005) or the actions they take when working with their students (Hattie, 2003). Consideration to a teacher's level of professionalism, sense of humor, or having high expectations for his/her students can be what sets him/her apart from other teachers (Cain-Caston, 1999). The counter to a person's fond memories of his/her favorite teacher is the opportunity to recall a not-so-effective teacher having a negative influence at some point during his/her schooling experience. Many of the same characteristics reflecting the attributes of outstanding educators may also be asked of every teacher. Most people across the United States share a similar, albeit different, schooling experience. This common experience shapes a continuum of beliefs and perceptions regarding qualities of effective teachers (Huang & Moon, 2009). The question needs to be asked if teacher effectiveness is a teacher's professional attributes at all or is it due to more of the personal characteristics impacting our formative childhood years. It is paramount school officials recognize and hire the most effective teachers to achieve the greatest impact on student success. Teacher quality is what matters most for students and their overall success (Marzano, Boogren, Heflebower, Kanold-Mcintyre, & Pickering, 2012; Nye, Konstantopoulos, & Hedges, 2004; Sanders & Horn, 1998; Whitaker, 2004).

In fact, continuous improvement efforts are an ongoing issue impacting schools (DuFour & Marzano, 2011). To illustrate, calls for school reform appear to be almost a continuous cycle since the inception of the institution of public education and into the 21st century. Extrinsic pressures from tax payers, parents, business leaders, and politicians, coupled with intrinsic expectations of professional educators, all associate to define the

level of a school's effectiveness. Most of these improvement initiatives tend to address system level implications for the failing of schools through a process of drawing the attention of the public to the shortcomings of the current system. In essence, policy makers act by implementing new initiatives and establishing greater accountability over schools to enhance and provide better results within the existing education framework (Armstrong, 2006; Boykin & Noguera, 2011; DuFour & Eaker, 1998; U.S. Department of Education, 2010). Another common target for school improvement is by enhancing the curriculum through the establishment of common standards at the state or national level. A recent example influencing school improvement in this manner is with the Common Core state standards (Armstrong, 2006; DuFour & Marzano, 2011; Fullan, 2014).

School improvement initiatives such as these focus on broad institutional and system level change with the belief improvement will result as change "trickles down" from the federal level to the state, board of education, principal, classroom teacher, and finally to the individual student. A shift for schools is to embed improvement initiatives no longer stemming from a "top down" mentality but rather a model featuring and involving the best educators placed in the classrooms to improve student learning (Fullan, 2014; Whitaker, 2004). The National Commission on Teaching and America's Future (1996) states the impact of teacher effectiveness concisely, "A caring, competent, and qualified teacher for every child is the most important ingredient in education reform" (p. 10). While most people are able to recall a "great" or an "ineffective" educator at some point during their schooling experience, school officials need a persistent focus on recruiting and hiring teachers more likely to be regarded as "outstanding" or a "difference maker" when people are asked to reflect back on their schooling experience. School

districts are working to establish recruiting and hiring initiatives in the area of teacher selection to maximize the selection of the most effective teacher applicants. The focus then is to bring about a school improvement initiative starting at the point closest to students, the classroom teacher. DuFour and Marzano (2011) represent these classroom-based initiatives in a very concise manner, “School improvement means people improvement” (p. 15). One of the most optimal school improvement opportunity exists when a school district establishes consistent hiring protocols to select the best teacher applicant each time a teacher needs to be hired; even prior to a teacher entering the classroom, when the teacher completes their application and interviews. (Rutledge, Harris, & Ingle, 2010). This study will explore what separates the most effective teachers from the less effective teachers during the process of teacher selection.

Teacher selection may only be as impactful as the quality of teacher applicants for a teaching position. Teacher candidates are prepared in various ways for the profession during their college classes and field experiences (Cranston, 2012). The objective for teacher college institutions is to prepare education graduates to the level necessary to meet the demands a new teacher will encounter as he/she transitions into the profession given the broad range of skills and strategies necessary to be successful as a public teacher in today’s current landscape (Abernathy, Forsyth, & Mitchell, 2001; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Clotfelter, Ladd, & Vigdor, 2007; Rutledge et al., 2008). Teachers are qualified and considered ready for the classroom when they graduate from college and secure teacher certification but lack actual experience, beyond student-teaching, when transitioning from a teacher’s college to the

teacher in the classroom (Cranston, 2012). The flipside of this example would be teachers entering classrooms having accumulated a range of prior teaching experiences.

The effectiveness of a teacher is significantly enhanced by gaining experience early during his/her formative first 3 to 5 years of experience in the profession (Goldhaber, 2008). Similarly, Tucker and Stronge (2005) indicate one of the key qualities of an effective educator is having 3 years of experience in the classroom. Further research is needed on the difference teacher experience may have on the specific impact of student achievement in reading.

Based on a preponderance of evidence, quality teaching has the greatest impact on student learning (Hattie, 2009). As a result, school officials need a process to predict who will be an effective teacher during the recruitment and selection process. Goe (2007) indicates the selection of effective teachers impact student achievement, continuous school improvement efforts, the building's culture, and staff collaboration. Whitaker (2004) simply states, "The quality of the teachers determines the quality of the school" (p.125). However, the definition of what constitutes quality teachers is elusive and without real consensus (Dufour & Marzano, 2011; Goe, 2007; Marzano, 2007; Papa & Baxter, 2008).

Without a clear definition for an effective teacher, it is difficult to validate how the best, most effective, teachers are selected when a teaching vacancy opens. Liu and Johnson (2006) describe a variety of processes utilized to hire teachers. On one end of the continuum there is a lack of structure or adherence to a particular process. Some organizations lack established criteria or procedures and may not even meet with a candidate prior to an employment offer. The researchers go on to state that particularly in

more rural areas, almost one third of the teachers hired in one district started their employment after the school year was underway. School districts are commonly in the position of hiring late, often as the selection process enters the last stage of the employment time line, very late summer or even after the school year has started (Nichols, 2004).

The other end of the selection continuum is more defined focusing on the use of themes or teacher behaviors to hire the most effective teachers (Clement, 2009; Emley & Ebmeier, 1997; Goe, 2007; O'Donovan, 2012; Schumacher, Grigsby, & Vesey, 2011). "The ways in which teachers are screened and selected is of increasing importance, potentially resulting in long-term gains in student outcomes" (Rutledge, et al., 2008, p. 238). Structured interviews are associated with themes or behaviors of effective teachers creating measureable indicators to distinguish the effective teacher candidates as soon as they apply for a position (Metzger & Wu, 2008). The use of commercially developed structured interview questions may better predict teachers that will have the greatest impact on student achievement.

Effective hiring mechanisms to screen applicants and interview teacher candidates are essential in selecting educators who are able to have the greatest impact on student reading achievement. The purpose of this study was to evaluate how the hiring mechanisms of one suburban school district in the Central United States selected elementary classroom teachers and the corresponding impact on student reading achievement. This research focused on the organization's ability to hire the most effective teacher during the selection process by measuring how the use of a commercial teacher applicant screeners, HUMANeX Ventures (2012), predict candidate success

when being interviewed with a commercially-developed structured interview. This study was extended to determine the level of performance during the interview to that of its impact, if any, on student reading achievement once the teacher was hired and working with students in the classroom setting. This study determined how the use of a structured teacher selection process enables school officials to select classroom teachers based on an interview rating who potentially are having the greatest impact on student academic achievement in reading.

Definitions of Terms

The following terms are used consistently in this study:

Nebraska State Accountability (NeSA) is a criterion-referenced summative assessment proctored in the spring of each year across the State of Nebraska. The assessment serves to establish school accountability for student reading achievement in measure of the state standards (Nebraska Department of Education, n.d.).

Student Information Management System (SIMS) is an electronic school database provided by Educational Service Unit #3 for use for school districts in Sarpy, Cass, Douglas, and Washington counties in Nebraska (Educational Service Unit #3, n.d.). This database was utilized to generate the list of students, demographic information, and achievement scores for the study.

TalentED Recruit and Hire is a commercially available applicant tracking system provided by PeopleAdmin. The software serves as a comprehensive online warehouse for candidate application materials and employer hiring information (PeopleAdmin, n.d.). This system will be utilized to identify the teachers hired by the

district within the scope of the study, including their demographic information and interview rating scores.

HUMANeX Ventures is a consulting and training firm working with public and private organizations to help establish a process to select and develop employees. The terms below represent the components of the application and interview framework and protocols. (HUMANeX Ventures, 2016).

Teacher Style Profile Builder is an online interview used very early during the application process to assist administrators with identifying the strength of an applicant to help screen the best candidates to move forward to the next stage of the selection process. This timed screener consists of multiple-choice questions to help evaluate a prospective candidate compared to the other applicants (HUMANeX Ventures, 2016).

Teacher-Centered Assessment (TCA) is part of the Teacher Style Profile Builder which measures the level the teacher applicant has as a focus on his/her own needs as the educator. The lower the TCA measure the applicant generates, the more likely he/she should be moved to the next stage of consideration as he/she maintains a greater emphasis on students than on himself/herself as a teacher.

Student-Centered Assessment (SCA) is the second part of the Teacher Style Profile Builder assisting to measure the level of emphasis the teacher applicant has recognizing student need. The higher the SCA measure an applicant generates, the more likely he/she should be moved to the next stage of consideration as he/she has a greater emphasis on students.

The **Form A** is a list of 51 structured job interview questions utilized to measure how applicants verbally respond to a variety of educational situations. Where the

Teacher Style Profile Builder helps determine an applicant's ability to recognize these themes, the Form A Interview asks a standard set of open-ended questions to determine if he/she would actually verbalize implementing these actions in the school setting with the students (HUMANeX Ventures, 2012).

Hiring mechanisms constitute any and all of the guidelines and procedures established by a hiring agency to provide a consistent and effective selection process commonly associated with the recruitment, selection, and hiring policies and practices.

Poverty/Title 1 are schools with a high-poverty enrollment are defined by the overall percentage of children from low income households as measured by the building's percent of students participating in the Free and Reduced Lunch Program. For a school to be designated Title 1, the number of students enrolled at the school must be above the district average of students in the Free and Reduced Lunch Program or at a level of 40% or more of the school enrollment eligible for the food program (U.S. Department of Education, n.d.).

Problem Statement

The purpose of this study was to evaluate how the hiring mechanisms of one suburban school district in the Central United States selects elementary classroom teachers and the subsequent effect on student reading achievement as an indication of teacher efficacy. The study focused on hiring the best teacher during the selection process and how the use of a commercially available teacher interview format, HUMANeX's Ventures (2012), resulted in hiring elementary teachers that affect their students to achieve at higher levels of reading success.

Research Questions

The research questions below serve as the basis to compare excellence in teaching to excellence in teacher selection. The research explored how the applicant screenings and interview scores relate to one another, how the teacher interview score corresponds with student reading achievement, and if teacher experience and the socioeconomic status (SES) of the school (Title 1 or Non-Title 1) additionally impacts any difference between the interview ratings and student reading achievement.

Research Question #1. Was there a relationship between the pre-employment score a teacher receives on HUMANeX's Teacher Style Profile Builder (i.e. Teacher Centered Assessment and Student Centered Assessment) and the Form A Interview for the teachers hired 2012-2013 through 2015-2016?

Research Question #2. Was there a statistically significant difference between the score a teacher receives on HUMANeX's Form A Interview Protocol and NeSA-Reading achievement for students in grades three through six of the teachers hired for the school years of 2012-2013 through 2014-2015?

Research Question #3. When accounting for a teacher's years of experience and the pre-employment score a teacher received on the Form A Interview, was there a statistically significant difference with NeSA-Reading achievement for his/her students in grades three through six for teachers hired for the academic school years of 2012-2013 through 2014-2015?

Research Question #4. When accounting for a school's Title 1 status and the pre-employment score a teacher received on the Form A Interview, was there a statistically significant difference with NeSA-Reading achievement for his/her students in

grades three through six for teachers hired for the academic school years of 2012-2013 through 2014-2015?

Assumptions

The following assumptions were made for the purpose of this study: All school officials were trained with the use of HUMANeX Ventures (2012) protocol and administered each interview with reliability and fidelity. Each teacher outlined in the research benefitted equally from the district evaluation procedures, all had access to the same common district curriculum aligned to state standards, and all had equal access to staff development trainings and mentoring provided by the school district. Another assumption was the starting baseline knowledge of the students including their prior learning, background knowledge, and demographic details comprising the student population was comparable across the classrooms of the teachers included as part of the study. The potential implications for the differences between schools of differing socioeconomic status were taken into account by the additional supports and interventions (i.e. class size reduction, Reading Recovery programming, etc.) offered to teachers and students in these designated buildings. Furthermore, student reading achievement as measured by the NeSA-Reading assessment was reflective of the learning effect made by the teacher within the course of his/her first year of teaching in the school district. The subject area of reading was the selected focus of the study as reading instruction is fundamental at the elementary level and is embedded within the other content areas.

Limitations

There are potential limitations associated with the scope of this research. To establish as large of a sample size as possible, the measure of student achievement was determined by a single assessment, NeSA-Reading, as it was the only common assessment available within the school district administered across a range of grade levels. It is preferred to have multiple data measures to triangulate the effectiveness of teacher instruction as measured by student achievement during the course of the school year. The utilization of additional research formats beyond the quantitative research approach selected for this study may also offer insight on the impact of teacher selection procedures on student achievement. This research was only studying the teachers hired by the school district so the research was not able to encompass the measure of student achievement results for the teachers that applied but were not selected by the school district during the scope of this study. This limitation diminishes the opportunity for Form A below average comparisons not being available for the corresponding student achievement outcomes. One final potential limitation of the study was the researcher is an administrator in the school district under study and participated with the selection and supervision of a portion of teachers hired and students impacted as part of their schooling experience.

Delimitations

It was necessary to make the following delimitations regarding the quantitative research in this study. The study includes a single suburban school district as the source of the teacher and student participants. There were 56 elementary classroom teachers in grades three through six included in the scope of the study as specialists and primary

classroom teachers do not have comparable achievement data. Secondary teachers were not involved in the study as a result of their content specific focus and broader teaming nature associated at that level of education whereas elementary students are more commonly connected to one specific teacher for the entire school year. The study was not inclusive of the collective teacher applicant pool as only teachers being hired by the school district had student achievement data to measure. Therefore, the study was only representative of the teachers being hired and not on the quality of the teacher candidate pool applying in the school district.

Significance of the Study

One of the central responsibilities of any school district is to recruit, hire, and retain the best teachers. The implication of this research indicates very limited research to support the use of commercially prepared interviews to determine a positive impact on student achievement. Many school districts across the nation are utilizing structured interviews based upon themes or behaviors. A study of this nature allows for the development of selection criteria having the greatest impact on teacher success tied directly to student reading achievement offering an opportunity to further enhance and validate teacher selection mechanisms identifying teacher applicants most likely to have the greatest potential impact on student academic success.

In addition to the selection of the best certified teachers, there are many resources involved with the implementation and maintenance of commercial interview protocols. Between the initial investment and training costs to be able to implement the system across the school district, there are ongoing costs to maintain access and administrator certification. As stewards of taxpayer dollars there is the need to assess the effectiveness

and benefits for a program such as HUMANeX Ventures (2016) requiring ongoing budget allocation.

Contribution to Practice

School administration may determine the role online screeners and structured teacher interviews contribute to selecting teachers subsequently having the greatest impact on student reading achievement. There is also the need to evaluate the financial cost and time investment for professional development to implement and maintain such screening and interview protocols. It is important for these resources to be utilized in a cost effective manner where more effective teachers are hired to offset the additional time and cost associated with a district's hiring procedures.

Organization of the Study

The upcoming chapter consists of a review of selected literature: teacher impact on student achievement, teacher selection criteria, the use of interviews, and in particular, the use of commercially developed interviews. A review of literature describing the impact of teachers on student achievement and the process utilized to select teachers will be presented in Chapter Two. Chapter Three describes the method of study by defining the study participants, data collection parameters, research questions, quasi-experimental research design to measure the variables as described during the course of the subsequent chapter. Chapter Four presents the results, description of the findings, and data charts for each research question posed in this study. The Fifth Chapter addresses the conclusion, discussion, and any policy or research implications pertaining to the results of the study.

CHAPTER TWO

Review of the Literature

There are primarily two issues surrounding the teacher selection process; selecting the best applicant for a teaching vacancy and determining the best process for making this selection. Teacher selection is of great significance, even one of the most critical roles of the principal in developing effective organizations (Emley & Ebmeier, 1997). For a school to be high functioning, it must be filled with effective teachers (Little & Miller, 2007). A lapse with a hiring decision may have a long-term and significant impact on every aspect of the school. Organizations need to hire the best teachers during the selection process. Current practice has many school districts utilizing commercially available teacher interview protocols to help select teacher applicants having the greatest potential for the students to achieve more than with other traditional hiring formats or procedures (Clement, 2009; Goe, 2007; Metzger & Wu, 2008; Schumacher et al., 2011).

Teacher Impact on Student Success and Achievement

The importance of selecting an effective teacher during the hiring process is of paramount importance, as the teacher accounts for the greatest impact on student achievement (Danielson, 2007; Hattie, 2009; Littky & Grabelle, 2004; Marzano et al., 2012; Marzano, Pickering, & Pollock, 2001; Nye et al., 2004; Tucker & Stronge, 2005). “Teaching has not taken place if students have not learned. Teachers and the quality of their instruction directly affect student learning” (Tucker & Stronge, 2005, p.15). The impact on student achievement is reflective of a teacher’s abilities and skills (Hattie, 2009). Effective teachers make a positive contribution to the student with the same

counter point being true for less effective teachers, the potential to negatively impact student learning and success.

Goldhaber and Anthony (2007) provide perspective to the potential extent teacher effectiveness impacts student achievement where a quality teacher is able to make of up to an additional year of learning impact for a student. Hattie (2003) also speaks to the powerful impact of teachers indicating about 30% of student success is influenced by the role of the classroom teacher. Teachers are in fact, one of the most important factors influencing student achievement. Simply stated, “The question as to whether effective teachers make a significant difference in student achievement has been answered, they do!” (Marzano, 2007, p. 2).

Teacher Selection Criteria

Prior successful experience and background knowledge. A range of factors are associated with and given consideration during the process of hiring teachers. Previous successful experience, including student teaching or internships, is a common area for principals to consider when reviewing candidates (Zhao & Liden, 2011). Administrators additionally rely on the college supervisor’s evaluation of a candidate’s course work as an approach to measure successful prior experience (Abernathy et al., 2001; Rutledge et al., 2008). A candidate’s list of recommendations are often an initial factor reviewed during the selection process. To determine the level of success associated with prior experience, recommendations from prior principals or supervisors and a candidate’s prior connection with the organization (i.e. student teaching, internship, paraprofessional, or current community member) are frequently taken into consideration (Cain-Caston, 1999; Zhao & Liden, 2011). More recently, administrators are considering

teacher performance and/or student achievement data as a component reviewed when considering teacher employment (Baker & Cooper, 2005; Strauss, Bowes, Marks, & Plesko, 2000).

Candidates are selected for employment as they represent the best of the candidate pool; however, new teachers are often hired as a result of a pre-requisite relationship with the organization (Baker & Cooper, 2005, Zhao & Liden, 2011). A different study affirms the notion schools tend to defer to known candidates within the applicant pool. The study concludes 40% of teachers selected were graduates from the school district, one-third were a substitute teacher with the district, or the candidate attended a college in close proximity to the school district (Strauss et al., 2000). The familiarity of the applicant assists a principal in selecting a candidate best able to assimilate within the staff and establish the right fit within the organization.

Effective teacher themes and prior behavior. Emerging research regarding teacher themes and prior behaviors are two areas impacting teacher selection (Metzger & Wu, 2008; O'Donovan, 2012). The practice of basing interviews on past behavior will likely anticipate future success by the teacher, so questions relating to teacher behaviors should be embedded in the interview. Clement (2009) describes behavior-based interviews such as Situation, Task, Action, Result (STAR) represent the development of interview models seeking to determine prior teacher behavior as a structured approach to distinguish the stronger from the less effective candidates within the applicant pool. Incorporating questions regarding teacher behaviors specific to classroom management, organizing and implementing instruction, and monitoring student growth can help the school system select the strongest candidate. In addition to framing the interview process

on teacher behavior is the use of identified teacher themes associated with effective teachers. By structuring interview questions to distinguish these attributes, the interviewer is able to determine which candidates possess those specific attributes to predict future teaching success. This allows for the interviewer to anticipate if the candidate has similar teacher capacity as effective teachers who demonstrate making a positive impact with students and their academic achievement (Clement, 2009; Metzger & Wu, 2008; Schumacher et al., 2011).

Teacher traits and behaviors constitute a range of attributes associated with effective teachers. Principals tend to prefer teachers strong in communication, those displaying a high level of enthusiasm for being a teacher, and ability to effectively collaborate with their colleagues (Harris, Rutledge, Ingle, & Thompson, 2010). Other researchers look specifically at teachers instructional behaviors as a basis to determine effective teacher characteristics, such as: feedback and direct instruction (Hattie, 2003). Other administrators value themes about education such as: attitudes, persistence, mission (i.e. focus on student growth), and empathy (Metzger & Wu, 2008). With an awareness of the qualities and demonstrated behaviors of effective teachers, the work commences on how to select from the pool of effective teachers able to be a solid fit with the existing school culture and staff members.

Organizational fit. Whether the teacher selection process occurs during a formal meeting, the interview, or develops during the course of ongoing interactions between the school and the candidates, the background exposure a candidate has with the system tends to support his/her opportunity and desire to be hired by that organization (Zhao & Liden, 2011). Organizational fit is the reciprocal relationship of an individual with the

company he/she works or aspires to work for and how well the organization's culture is compatible with him/her as an individual. A good alignment or fit of between the two enables the strengths, beliefs, and characteristics to establish a collaborative and productive work environment (Bretz, Ash, & Dreher, 1989; Chernyshenko, Stark, & Williams, 2009; Hoffman & Woehr, 2005; Little & Miller, 2007).

Implications such as job satisfaction, culture, employee commitment, and length of service are enhanced for both the employee and school district when there is a solid organizational fit (Bretz, et al., 1989, Kristof-Brown, Zimmerman, & Johnson, 2005; Rutledge et al., 2008). The value of understanding organizational fit is of great importance during the selection process as it identifies the ability of applicants to provide flexibility and continuity, through an extended length of service, to the organization (Kristof-Brown et al., 2005). Restraint should be utilized to not solely focus on organizational fit as a condition for employee selection within the existing organization's dynamics as it may influence the existing culture to become overly homogenous. When a vacancy develops, an organization too alike may narrow the candidate pool to only those like applicants very similar to the organization. This has the potential for the organization to lose connections with the community or not be responsive to the heterogeneous nature of the student population in public schools. If an organization becomes overly homogenous, it may become less adaptable and/or responsive to a changing environment and could even become stagnated and lead to system ineffectiveness (Bretz, et al., 1989; Schneider, 1987). The selection process needs to be more about hiring the best individual to strengthen the organization and positively impact

student achievement than about maintaining the status quo of the system (Little & Miller, 2007).

The Interview as a Tool

The interview process plays a significant role during the teacher selection process. A common process for teacher selection frequently involves effective recruitment and information collection (i.e. application, recommendations, resume, etc.) to determine the values or attributes sought from the candidates to make the selection decision (Joyce, 2008; Rutledge et al., 2008). A common element of the selection process is the consistent use of interviews to select teachers from the candidate pool. Interviews are an opportunity to channel all aspects of the hiring process into a point where the personal and professional attributes of the candidate are able to be assessed. Principals must have access to and a process for the vast amount of information when selecting staff members; and regardless of the process, the interview is the most important (Cain-Caston, 1999; Mertz, 2010; Rutledge et al., 2008).

Even though teacher selection is found to have the potential to significantly impact student learning, the selection process appears to be quite varied from one district to the next or even between principals within the same school district. Some school districts tend not to have a defined teacher selection process (Mertz, 2010; Nichols, 2004). Liu and Johnson (2006) describe a process often occurring at the last minute or one that is not completed until after the start of the school year. Mertz (2010) notes inconsistencies with the selection process in finding principals, at times, have minimal information regarding a candidate prior to the interview. In fact, her study indicates about half of the principals do not utilize a pre-determined list of interview questions or

initiate a reference check. The consensus of principals is they rely on making their decision based upon a feeling or intuition. Improving and using an interview protocol enhances the opportunity to improve the quality of teaching and student performance by selecting the best educator. Since interviews are consistently utilized as a tool during the selection process, the interview process needs to be able to consistently help determine the most effective educator for a teacher vacancy. One approach to achieve this is through increasing the structure of the interview process (Rutledge et al., 2008).

During the first part of this chapter, the impact of effective teachers on student achievement was stated with the underlying premise being the effectiveness of the school or district is underscored by the quality of instructional programming provided by staff members (Little & Miller, 2007). Despite the implications on student achievement, Little and Miller indicate, “Many school districts lack a structured and systematic means for identifying and selecting certified employees” (p. 118).

It is necessary for a school district to have effective teacher selection mechanisms that are reliable and valid in identifying the desired target attributes of the teachers making application to the district; therefore, maximizing the selection of teachers with the greatest potential. As such, school leaders are able to differentiate highly effective teachers from less effective teachers during teacher selection process (Loeb, Kalogrides, & Beteille, 2012). The next section of the paper will look more closely at the teacher selection process and how interviews help inform and distinguish the more effective teachers from the rest of the applicant pool.

Structured interviews. “In the 80 years of published research on employment interviews, one of the most strongly supported conclusions is that structuring the

interview enhances its...usefulness for prediction and decision” (Campion, Palmer, & Campion, 1998, p.77). Structure in the context of interview is an effort to enhance the interview process through one or more of the following frameworks: standardization, guided, systematic or patterned frameworks, or influences (Campion et al., 1998; Mertz, 2010; Schmaucher et al., 2011). The impact of coaching candidates during an interview notes some evidence candidates receiving coaching did perform better during their interview. However, the conclusion is coaching results in more organized and thoughtful responses and not as an indicator of teacher quality. This finding reinforces the value of structure integrated within the interview is a significant factor during the selection process (Maurer, Solamon, & Lippstreu, 2008). The use of structured interviews enables principals to distinguish between a strong or weak teacher further validating the impact of structured interviews (Emley & Ebmeier, 1997).

Commercial interview protocols. Commercially developed interviews utilizing teacher themes and/or prior behaviors are becoming a more common practice in an increasing number of school districts. One nationally recognized company’s teacher selection protocol alone is in place in more than 1,200 school districts even though limited research has been completed to measure the ability to better select effective teachers (Young & Delli, 2002). As districts strive to hire the best teachers to make the greatest impact on student achievement, companies are responding with the development of structured interview protocols embedding a focus on teacher behavior and personal/professional themes. School leaders are operating with the belief teachers hired under this circumstance will support the school’s effort to meet accountability pressures and continuous improvement goals. Companies producing these interview protocols

determine success by the number of teachers receiving a proficient evaluation at the conclusion of their first year (O'Donovan, 2012). Metzger and Wu (2008) reviewed prior research seeking a connection between teacher selection and post-hire impact. Their review found one study dating back to the early 1980s examining a link between interview results and the corresponding student achievement indicating a slight association between the two variables and an additional study reviewing the impact of a nationally recognized company's teacher selection protocol on student achievement. The results of the two studies indicate some positive correlation between achievement and structured interviews based on themes or behaviors, but the results are offset after accounting for other variables. The research on theme-based interviews does not support teachers hired with this approach result in hiring teachers that make a greater impact on student achievement. Even though the research reviewed does not support the current commercial application of teacher themes or prior behaviors, the following connections were noted. Metzger's and Wu's study found a stronger relationship between a candidate's interview score and their work attendance. Their study also indicated a relationship between people hired and the attributes of the principal making the selection.

The Form A Interview is a structured teacher interview consisting of open-ended questions focusing on teacher themes (HUMANeX Ventures, 2012). The next part of this chapter will provide additional detail describing how the use of its screening interview and the formal structured interview are being utilized to assist school districts with the process of effective teacher selection.

HUMANeX Ventures interview framework. HUMANeX Ventures (2016) is a firm providing support with recruiting and selecting effective educators. They developed

a timed, computerized screening interview, Teacher Style Profile Builder, consisting of a multiple-choice assessment to help determine which applicants identify the aptitudes and beliefs to be successful as an educator based on the company's research (HUMANeX Ventures, 2012). One aspect of screener is the SCA providing insight as to how much of a focus the applicant has on the students. The applicant will score between a range of 0-100 and the higher the score the more likely the applicant will be successful and effective working with students once hired. The second part of the screening is the TCA indicating the level of focus the applicant maintains on his/her needs as a teacher. This part also scores between 0-100 with a lower score being more desirable as the reverse key scoring indicates the potential for the candidate to have a greater focus on the students than on him/her as a teacher (HUMANeX Ventures, 2012). The purpose of screening the applicants is to provide all within the large pool of applicants with consideration, while also supporting the process of narrowing the field to those applicants likely to be a "fit" for the school district. HUMANeX's online screeners reduce up to 70% of the applications from further consideration as applicants are not able to recognize the themes or behaviors being sought in teacher candidates (HUMANeX Ventures, 2009).

Along with all of the other application, credential, and reference information, the screening score provides the opportunity for all applicants to demonstrate the awareness of effective teacher behaviors, narrowing the applicant pool to know which specific individuals should complete a structured interview with the district. Even with the online screening stage as part of the selection process, there is not yet sufficient information to determine the effective practitioners from the others performing well with the screening portion of the interview process. According to HUMANeX Ventures in 2009, roughly

50% of the candidates performing well on the screening stage are eventually deemed to be excellent teachers as measured by their own studies. “Excellence in personnel selection occurs when the applicant is able to respond to open-ended questions and describe his/her [SIC] specific attitudes and behaviors in given situation” (p.2).

As a candidate responds positively to the screening process, these individuals are able to move to the next stage of consideration as part of the selection process, a structured interview. The interview requires applicants to move beyond recognition of the designated themes to provide the opportunity to speak to their consistent application of these skills and strategies through their experiences working with children. Applicants completing a Form A Interview receive a score within a 0-51 range with a higher score being desired, increasing the probability an excellent teacher is selected during the hiring process (HUMANeX Ventures, 2012).

Summary

The purpose of this chapter was to establish the importance of effective teachers on student success. When selecting teachers, interviews soliciting information from the candidate regarding his/her existing behaviors and/or characteristics are commonly utilized to assist in the selection process. The use of commercially developed structured teacher interviews enables school officials to select classroom teachers who have the greatest potential to impact student academic achievement in reading.

CHAPTER THREE

Methodology

This research focused on the teacher selection process to hire the best teachers that would potentially have the greatest impact on student achievement. Schools are commonly implementing commercially developed teacher selection protocols to increase the probability of hiring teachers to have their students achieve a higher level of academic achievement (Young & Delli, 2002). Teachers performing better on the Form A Interview will be a more effective educator once hired and working with students in the classroom (HUMANeX, 2012).

The purpose of this study was to evaluate how the hiring mechanisms of one suburban school district in the central United States selects elementary classroom teachers and the subsequent impact on student reading achievement as an indication of teacher efficacy. The study focused on hiring the best teacher during the selection process and how the use of a commercially available teacher interview format, HUMANeX's Ventures (2012), resulted in hiring elementary teachers that affect their students to achieve at higher levels of reading success.

Research Design

Correlation of interview measures. The overall research design was predictive comparative with the following statistical analyses. The method for the research for the first quantitative analysis was established to determine the relationship between teacher candidate pre-employment screeners, the level of difference the Form A Interview score has on student reading achievement, and measuring how the level of teacher experience

and the Title1 status of the school the teacher was assigned additionally influenced the relationship of the teacher interview score on student reading achievement.

The first part of the research determined the relationship between the three interview formats when compared to one another. Since the variables were represented by interval values, a linear relationship, the Pearson correlation coefficient test was calculated to determine the level of relationship between the interviews. The Pearson correlation coefficient describes the relationship, between any 2 conditions and the statistical significance in that regard. The percentage of variance, if significant, measured by the 2 variables, which then determines the coefficient of determination equates to the level the application screeners are able to predict a candidate's interview score on the Form A Interview (Creswell, 2012). The hypotheses for this part of the research were:

Null Hypothesis 1: As a teacher applicant achieves higher score on the SCA application screener, there will not be any significant relationship on the Form A Interview score of the same candidate.

Null Hypothesis 2: As a teacher applicant achieves lower scores on the TCA application screener, there will not be any significant relationship on the Form A Interview score of the same candidate.

Null Hypothesis 3: As a teacher achieves a lower score on the TCA application screener, there will not be any significant relationship on the SCA screening score of the same candidate.

Hiring mechanisms on reading achievement. The design of the research for the second quantitative analysis was established to determine the level of difference the score a teacher receives when completing HUMANeX's Form A Interview (2012) has on

impacting student reading achievement as measured by the scale score (0-200) of the student's NeSA-Reading results. This outcome was tested by completing a two-tailed, independent sample *t*-test to measure the significance of the difference between the group of interview scores for the newly hired teachers and student achievement outcomes as measured by NeSA-Reading scale scores. A .05 alpha level was applied to help control for Type-1 errors. The research compared a group or category to the results of a single dependent variable, achievement scores, the inferential statistics such as the *t*-test was appropriate and proper for this study (Creswell, 2012).

Null Hypothesis 4: As a teacher achieves a higher score on the HUMANeX's Form A Interview, there will be no significant difference on the scale score of the NeSA-Reading assessment for students taught by that specific teacher.

Teacher experience and poverty influences. The final quantitative analyses used two univariate two-way analyses of variance (ANOVA) for the NeSA-Reading scale score dependent variable. The independent variables for the first 2 x 2 ANOVA were teaching experience (less than 5 years and equal to or greater than 5 years) and Form A score (less than 39 and equal to or greater than 39). The independent variable for the second 2 x 2 ANOVA were Title 1 building assignment (yes or no) and Form A score (less than 39 and equal to or greater than 39). Because multiple statistical tests were conducted a .05 alpha level was employed to help control for Type I errors. Since the research compared the interaction of two conditions on related groups, the 2 x 2 ANOVA was the appropriate research format to determine the results of student achievement under such testing conditions (Creswell, 2012).

Null Hypothesis 5: As a teacher achieves a higher score on the Form A Interview and is placed in the teacher group with five or more years of teaching experience, there will not be a significant difference on student reading achievement when compared to the teacher group consisting of students being taught by a teacher with less than five years of teaching experience.

Null Hypothesis 6: As a teacher achieves a higher score on the Form A Interview and is placed in the teacher group assigned to a school with a higher SES level (Title I building status), there will not be a significant difference on student achievement when compared to the teacher group assigned to a school with a lower SES level (Non-Title 1).

Study Participants

Groups of teacher participants. The study involved all elementary intermediate regular education classroom teachers, grades three through six hired by a suburban school district in the Central United States since the start of the 2012-2013 school year through 2015-2016. These academic years were selected for the study as 2012 denoted the timing of the implementation of the current district hiring protocol and provided a sample size adequate for the research methodology outlined in this study.

A total of 56 elementary classroom teachers were hired for the school district during the four years being studied. The 2012-2013 school year involves seven teacher hires with 2013-2014, 2014-2015, and 2015-2016 representing 12, 24, and 13 intermediate teachers hired, respectively. Of the four grade levels of educators hired during this time, 16 were in third grade, 13 in fourth grade, 14 in fifth grade, and there were 13 teachers hired for sixth grade classrooms.

Fourteen of the 15 elementary schools comprising the school district have at least one teacher included as part of the study. Five of the elementary schools meet the requirement for being a Title 1 or a high-poverty school as defined by the overall percentage of students eligible for Free or Reduced Lunch status.

The sample of teachers represented a combined 109 years of teaching experience with an average of 1.9 years and a range from a first-year teacher to the high of 15 years of teaching experience. Females represented 44 of the teachers selected during the 3 years being reviewed for this study and there were 12 male educators represented within the study. Of the 56 certified teachers included in this study, 38 individuals hold a Bachelor's Degree, with 18 teachers having earned their Master's Degree when hired by the school district. According to the Assistant Superintendent of Human Resources for the school district, the 3-year sample of the district teachers included in the study was typical of certified teachers hired by the district at the elementary intermediate level on an annual basis (R. Hyde, personal communication, February 2016).

All certified teacher applicants hired for the school district during the 2012-2013 through 2015-2016 school year met the criteria to be included in the study. The selection pool was narrowed to only include elementary teachers in grades three through six as that specific grade span coincides with the required elementary NeSA testing grade levels for the State of Nebraska.

To select the study participants, the district's online application system, TalentED Recruit and Hire, was utilized to access teacher interview scores for each of the participants included in this study. The source of student achievement information included for this study was the district's Student Information Management System

(SIMS), which serves as a data warehouse and management system for the school district.

Groups of student participants. The study involved all elementary intermediate students, grades three through six, attending a suburban school district in the Central United States during the school years of 2012-2013 through 2014-2015. This grade span was selected as students in those grade levels were required by the Nebraska Department of Education (NDE) to complete the Nebraska State Accountability (NeSA) assessment in reading.

A total of 899 elementary students were included with the study as they participated in NeSA during the school years outlined. The 2012-2013 school year included 144 students in grades three through six with 2013-2014 and 2014-2015 involving 261 and 494 student population, respectively. Of the population, 9.8% of the student participants receive special education services through their Individual Education Plan (IEP). The demographics for the student participants consisted of White, 80.5%; Black or African American, 6.2%; Multiple Ethnicity, 5%; Hispanic, 5.5%; with the remaining student demographics consisting of 2.7% of the student participants. The gender of the students included 441 females and 448 males. Of the four grade levels of students identified for inclusion of the study, 277 were in third grade, 187 in fourth grade, 219 in fifth grade, and there were 216 students participating as sixth graders.

The district's Student Information Management System (SIMS) was used to select student participants and export student achievement information included for this study. SIMS serves as a student data warehouse and management system for the school district.

The conditions for research questions 2-4 consisted of the following: all students were enrolled with a suburban school district in the central United States in grades 3-6 between the 2012-2015 school years, students were placed with a newly hired classroom teacher, and students completed the NeSA-Reading assessment. Research question 3 additionally includes analysis for the level of teaching experience of the classroom teacher while research question 4 added a focus on Title 1 status specific to the school within the district across the dependent variable of NeSA-Reading scale score outcomes.

Student NeSA-Reading achievement scores were measured for all students enrolled with a suburban school district in the central United States in grades 3 through 6 for the 2012-2013 through 2014-2015 academic school years. Student NeSA-Reading scale scores ranging from 0-200 were used to determine reading achievement level of the students. NeSA-Reading scale scores were grouped into three categories: 0-84 not proficient as a reader, students scoring a scale score of 85 to 134 are considered proficient as a reader, and students with a scale score of 135 to 200 exceeded expectations in reading (Data Recognition Corporation, 2015). However, student reading achievement success was measured by NeSA-Reading scale score he/she received where a scale score of 85-200 was proficient and not proficient represented student scoring below a scale score of 85. Only student achievement scores from teacher's first year in the district were included as part of the analysis.

Research Questions and Data Analyses

The research questions below served as the foundation for the quantitative research related to the impact of teacher selection measures on student achievement:

Research Question #1. Was there a significant relationship between the pre-employment score a teacher received on the HUMANeX Ventures Teacher Style Profile Builder (i.e. Teacher Centered Assessment and Student Centered Assessment) and their corresponding Form A Interview for the teachers hired 2012-2013 through 2015-2016?

Sub-Question #1a. Was there a relationship between the pre-employment score a teacher received on the Teacher Centered Assessment and the Form A Interview for teachers hired 2012-2013 through 2015-2016?

Sub-Question #1b. Was there a significant relationship between the pre-employment score a teacher received on the Student Centered Assessment and the Form A Interview for teachers hired 2012-2013 through 2015-2016?

Sub-Question #1c. Was there a significant relationship between the pre-employment score a teacher received on the Teacher Centered Assessment and the Student Centered Assessment for teachers hired 2012-2013 through 2015-2016?

Data analyses. The analyses consisted of calculating Pearson correlation coefficients to measure the level of relationship between the three data sets: Teacher Centered Assessment, Student Centered Assessment, and the corresponding Form A Interview scores. Since the variables were represented by interval values and represent a linear relationship, the Pearson correlation coefficient test was utilized to determine the level of relationship between the variables. The Pearson correlation coefficient research design suits this research question as the analysis will determine if the application screeners correspond to a candidate's interview score on the Form A. The data values represent different interview scores for the teachers hired by the school district ($n = 56$)

and the three correlation analyses determined the degree to which the three measurements are interrelated via the TCA, SCA, and the Form A interview values (Creswell, 2012).

Research Question #2. Was there a statistically significant difference with the score a teacher received on the Form A Interview Protocol with NeSA-Reading achievement for students in grades three through six of the teachers hired for the school years of 2012-2013 through 2014-2015?

Data analysis. The outcome of this analysis determined the significance of the difference a teacher's interview score, Form A, had on impacting intermediate student reading achievement as measured by the NeSA-Reading assessment. This research question was measured by completing a two-tailed, independent sample *t*-test to measure the significance between the group of interview scores for the newly hired teachers ($n = 43$) and their impact on student achievement in reading. The researcher utilized an alpha level of .05 to minimize the potential of Type I error. Since the research was comparing a group or category to the results of a single dependent variable, achievement scores, the inferential statistics such as the *t*-test is appropriate and proper for this study (Creswell, 2012).

Research Question #3. When accounting for a teacher's years of experience and the pre-employment score a teacher received on the Form A Interview, was there a statistically significant difference with NeSA-Reading achievement for his/her students in grades three through six for teachers hired for the academic school years of 2012-2013 through 2014-2015?

Data analysis. When recently hired teachers ($n = 43$) were grouped by level of experience and the pre-employment score they received on the Form A interview, the

analysis measured the level of impact on the reading achievement scale score for all students as measured by the NeSA-Reading assessment. The first group was divided into the following, teachers having less than five years of teaching experience and the other group of having five or more years of teaching experience when hired. These same teachers were additionally grouped by their score when they completed the Form A Interview. The district average on the Form A Interview was 39 so the teachers were divided into two groups, those scoring below the district average of 39 and those scoring at or above the average district score when hired.

The research design consisted of a 2 x 2 ANOVA with evaluation of main and interaction effects with post hoc review to be completed for the NeSA-Reading scale score dependent variable. The independent variables consisted of the Form A interview score (less than 39 and equal to or greater than 39) and teaching experience (less than 5 years and equal to or greater than 5 years) on student reading achievement for students taught by the study group. Since the research was comparing an interaction of the two conditions on related groups, the 2 x 2 ANOVA was the appropriate research format to determine the results of student achievement under such testing conditions. The researcher utilized an alpha level of .05 to mitigate the potential of Type 1 errors. Since the research compared the interaction of two conditions on related groups, the 2 x 2 ANOVA was the appropriate research format to determine the results of student achievement under such testing conditions (Creswell, 2012).

Research Question #4. When accounting for a school's Title 1 status and the pre-employment score a teacher received on the Form A Interview, was there a statistically significant difference with NeSA-Reading achievement for his/her students in

grades three through six for teachers hired for the academic school years of 2012-2013 through 2014-2015?

Data analysis. When grouped by level of school poverty (Title 1 or Non-Title 1) the teacher was assigned and the teacher's interview score on the Form A ($n = 43$), the analysis measured the level of impact on the reading achievement scale score for all students as measured by the NeSA-Reading assessment. The newly hired teachers were separated into two groups, one group reflective of their teaching assignment, Title 1 status of their school, and the other contingent on their Form A interview score. Teachers were assigned in the district as either Title 1 (high poverty) or Non-Title 1 (low poverty). These same teachers were additionally grouped by their score when they completed the Form A Interview. The district average on the Form A Interview was 39 so the teachers were divided into two groups, those scoring below the district average and those scoring at or above the average district score when hired.

The design consisted of a 2 x 2 ANOVA and evaluation of main and interaction effects with post hoc review to be completed for the NeSA-Reading scale score dependent variable. The independent variables of structured teacher Form A interview score (less than 39 and equal to or greater than 39) and if assigned to Title 1 building (yes or no), on student reading achievement for students taught by the study group. Since the research was comparing an interaction of the two conditions on related groups, the 2 x 2 ANOVA was the appropriate research format to determine the results of student achievement under such testing conditions. The researcher utilized an alpha level of .05 to mitigate the potential of Type 1 errors. Since the research compared the interaction of two conditions on related groups, the 2 x 2 ANOVA was the appropriate research format

to determine the results of student achievement under such testing conditions (Creswell, 2012).

CHAPTER FOUR

Results

The purpose of this research was to study the hiring mechanisms of one suburban school district in the central United States selected elementary classroom teachers and the subsequent impact on student reading achievement as an indication of teacher efficacy. The study focused on hiring the best teacher during the selection process and how the use of a commercially available teacher interview format resulted in hiring elementary teachers that affect their students to achieve at higher levels of reading success.

This quantitative study consisted of analyzing the results of interview values for all teachers grade three through six hired by the school district since the start of 2012-2013 academic year. The analysis of research question 1 and the following sub-questions 1a, 1b, and 1c, consisted of completing a Pearson correlation coefficient to measure the level of relationship between Teacher Centered Assessment, Student Centered Assessment, and the corresponding Form A Interview scores. The second research question analyzed the significance of a teacher's interview score, Form A, on impacting student reading achievement as measured by the NeSA-Reading assessment. This research question was calculated by completing a two-tailed, independent sample *t*-test to measure the significance between the group of interview scores for the newly hired teachers ($n = 43$) and their impact on student achievement in reading. The design for both research questions three and four consisted of a 2 x 2 ANOVA with evaluation of main and interaction effects with post hoc review completed measuring the interaction of two independent variables. Research question three consisted of the Form A interview score and teaching experience where research question four consisted of the Form A interview score and teaching assignment when grouped by the level of school poverty

(Title 1 or Non-Title 1). Both research questions had the same established dependent variable of student scale scores on NeSA-Reading. The same teachers were additionally grouped by their completed Form A Interview score, those scoring below the district average and those scoring at or above the average district score when hired. The average Form A interview score for the district was 39.

Research Question #1

Was there a significant relationship between the pre-employment score a teacher received on the HUMANeX Ventures Teacher Style Profile Builder (i.e. Teacher Centered Assessment and Student Centered Assessment) and their corresponding Form A Interview for the teachers hired 2012-2013 through 2015-2016?

Sub-Question #1a. Was there a relationship between the pre-employment score a teacher received on the Teacher Centered Assessment and the Form A Interview for teachers hired 2012-2013 through 2015-2016?

The descriptive statistics for Form A with TCA is represented in Table 1. A correlation of the data revealed there was not a significant negative relationship between Teacher Centered Assessment and the Form A Interview ($r = -.18$, $p = .18$ (2 tailed), $n = 56$).

Table 1

Descriptive Statistics for Teacher Applicants – Form A Interview Scores to TCA Scores

	<i>N</i>	<i>M</i>	<i>SD</i>
Form A	56	38.55	3.78
TCA	56	9.09	4.76

Sub-Question #1b. Was there a significant relationship between the pre-employment score a teacher received on the Student Centered Assessment and the Form A Interview for teachers hired 2012-2013 through 2015-2016?

As represented on Table 2, the descriptive statistics for the variables of SCA with Form A are displayed. A correlation of the data revealed there was not a significant positive relationship between Student Centered Assessment and the Form A Interview ($r = -0.03$, $p = .84$ (2-tailed), $n = 56$).

Table 2

Descriptive Statistics for Teacher Applicants – Form A Interview Scores to SCA Scores

	<i>N</i>	<i>M</i>	<i>SD</i>
Form A	56	38.55	3.78
SCA	56	51.02	7.83

Sub-Question #1c. Was there a significant relationship between the pre-employment score a teacher received on the Teacher Centered Assessment and the Student Centered Assessment for teachers hired 2012-2013 through 2015-2016?

The descriptive statistics for SCA and TCA are displayed in Table 3. A correlation of the data revealed there was a significant negative relationship between Teacher Centered Assessment and the Student Centered Assessment ($r = -.34$, $p = .011$, (2-tailed), $n = 56$). The resulting negative correlation coefficient has a low magnitude indicating a low relationship between TCA and SCA (Creswell, 2012).

Table 3

Descriptive Statistics for Teacher Applicants – TCA Scores to SCA Scores

	<i>N</i>	<i>M</i>	<i>SD</i>
TCA	56	9.09	4.76
SCA	56	51.02	7.83

Research Question #2

Was there a statistically significant difference with the score a teacher received on the Form A Interview Protocol with NeSA-Reading achievement for students in grades three through six of the teachers hired for the school years of 2012-2013 through 2014-2015?

Research question two was analyzed using a two-tailed, independent sample *t*-test to measure the significance between the group of teacher interview scores on the Form A that were average (<39) and above average (≥ 39) for the newly hired teachers and average scores on the NeSA-Reading assessment. The difference in student average NeSA-Reading scale scores was not statistically significant $t(41) = 0.34, p = .73$ when students were provided instruction by a teacher ($n = 23$) with a Form A interview score above the district average score ($M = 125.09, SD = 12.59$) or by a teacher ($n = 20$) with a below the district average Form A interview score ($M = 126.35, SD = 11.41$). Table 4 displays the data results of the independent samples *t*-test.

Table 4

Independent t-test for Form A Teacher Interview Scores to NeSA-Reading Scale Score Average

	Form A	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>t</i>	<i>df</i>	<i>p</i>
NeSA-R SS	< 39	20	126.35	11.41	2.55	0.34	41	0.73
	≥ 39	23	125.09	12.59	2.63			

Research Question #3

When accounting for a teacher's years of experience and the pre-employment score a teacher received on the Form A Interview, was there a statistically significant difference with NeSA-Reading achievement for his/her students in grades three through six for teachers hired for the academic school years of 2012-2013 through 2014-2015?

Table #5 illustrates the average and standard deviation for the first 2 x 2 ANOVA for NeSA-Reading scale score averages across years of experience (< 5 years and ≥ 5 years) and Form A outcomes above and below the district average (< 39 and ≥ 39). The results of the first univariate two-way analysis of variance (ANOVA) for NeSA-Reading scale scores were as follows. The data did not produce a significant interaction between years of experience and Form A interview scores across NeSA-Reading outcomes ($F(1,39) = .05, p = .823$). The years of experience main effect was not significant ($F(1,39) = .84, p = .36$). The Form A main effect was not significant ($F(1,39) = .01, p = .91$).

Table 5

NeSA-Reading Scale Score Averages by Form A Interview Scores and Teachers' Years of Experience

	Form A < 39			Form A \geq 39		
	<i>M</i>	<i>SD</i>	n	<i>M</i>	<i>SD</i>	n
< 5 Years	126.11	11.67	19	123.68	12.47	19
\geq 5 Years	131.00		1	131.75	12.61	4

Research Question #4

When accounting for a school's Title 1 status and the pre-employment score a teacher received on the Form A Interview, was there a statistically significant difference with NeSA-Reading achievement for his/her students in grades three through six for teachers hired for the academic school years of 2012-2013 through 2014-2015?

Table #6 illustrates the average and standard deviation for the second 2 x 2 ANOVA for NeSA-Reading scale score averages across Form A outcomes above and below the district average (< 39 and ≥ 39) and building Title 1 status (Title 1 and Non-Title 1). The results of the first univariate two-way analysis of variance (ANOVA) for NeSA-Reading scale scores were as follows. The data did not produce a significant interaction between Form A values and Title 1 building status across NeSA-Reading outcomes ($F(1,39) = .02, p = .88$). The Form A main effect was not significant ($F(1,39) = .19, p = .67$). However, the Title 1 status main effect was significant ($F(1,39) = 8.03, p = .01$) collapsed across Title 1 status, there was a statistically significant difference in NeSA-Reading outcomes, which is depicted in Table #6.

Table 6

NeSA-Reading Scale Score Average by Form A Interview Scores and Title 1 Status

	Form A < 39			Form A \geq 39		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Non-Title 1	131.44	13.29	9	130.46	11.07	11
Title 1	122.18	7.99	11	120.17	12.28	12

CHAPTER FIVE

Discussion and Conclusions

The purpose of this study was to evaluate how the hiring mechanisms of one suburban school district in the central United States selects grades 3-6 classroom teachers and the subsequent effect on student reading achievement as an indication of teacher efficacy. The study focused on hiring the best teachers during the selection process and how the utilization of a commercially available teacher interview format, HUMANeX's Ventures (2012), resulted in hiring elementary teachers that affect their students to achieve at higher levels of reading success. The intent of this study was to affirm the existing district process and procedures utilized to select and place the most effective teachers in the classroom.

The results of this study affirmed effective teachers were hired for the district by following the established hiring mechanisms to recruit, review, and hire teachers to join the school district, yet there was still uncertainty in that no significant interactions or differences were noted via Form A outcomes. The level of teacher efficacy, as measured by the achievement level for student outcomes on NeSA-Reading across all cross comparisons suggest other factors could be influencing these results. Although the HUMANeX SCA and TCA screeners coupled with the Form A served as a critical foundation as part of the district's overall selection process, the only significant relationship rested between the SCA and TCA, putting into question whether the time, money and effort spent on Form A outcomes is worth the financial investment.

The remainder of this section will explore each of the research questions in greater detail and pose questions for policies, practice, and research.

Research Question #1

The first research question and its sub-questions measured the relationship between the pre-employment score a teacher received on HUMANeX's Teacher Style Profile Builder (i.e. Teacher Centered Assessment and Student Centered Assessment) and the Form A Interview for the teachers hired 2012-2013 through 2015-2016. The analyses consisted of calculating Pearson correlation coefficients to measure the level of relationship between the three data sets: Teacher Centered Assessment (TCA), Student Centered Assessment (SCA), and the corresponding Form A interview scores.

(1a). The correlation of TCA to Form A lacked significance at the .05 level ($p = .18$) with a minimal negative correlation of $r = -.18$. When taking teacher selection into account, the negative correlation between the two variables was anticipated as they are reverse keyed. As self-reported by HUMANeX, a candidate was anticipated to have a lower TCA with a higher Form A outcome, which was predictive of a more effective applicant (2012). A far stronger negative correlation was expected by the researcher with the format of the two measures having an indirect relationship with one another.

(1b). The correlation of SCA to Form A lacked significance at the .05 level ($r = -.03$, $p = .84$ (2 tailed), $n = 56$). The negative correlation between the two variables was very unanticipated as the two variables are to have a direct relationship with the other. As the applicant scores better on the SCA screener, he/she should also perform better on the Form A Interview. The higher the score on both of these two screeners based on internal reviews of the instrument, the more effective the candidate should be as an applicant (HUMANeX, 2012). This mismatch could be the tools, one being the

screeners and the other to be defined in upcoming conversation which will be addressed in the coming sections of Chapter Five.

(1c). The correlation results for SCA to TCA produced a significant relationship between these two variables at the .05 level ($r = -.339$, $p = .011$ (2 tailed), $n = 56$). This outcome was anticipated as the measure of each variable is reverse keyed to the other condition, where TCA is anticipated to have a lower value on the 0-100 scale and the results on the SCA are expected to have a higher score on the same scale. A quality teacher candidate should have a higher score on the SCA with a lower score on the TCA; therefore, the results from the study affirmed this indirect relationship between the two measures (HUMANeX, 2012). However, the researcher believed the relationship would have had a higher magnitude.

Research Question #2

The second research question analyzed the score a teacher received on the Form A interview and NeSA-Reading achievement for students. The analysis was completed utilizing a two-tailed, independent sample *t*-test to measure the significance between the group of teacher interview scores on the Form A interview that were below the district average (<39) and above the district average (≥ 39) for teachers via average scale scores on the NeSA-Reading assessment.

Research question two analyzed the structured interview Form A score of a teacher hired by the district with the corresponding student reading scale score of his/her students during their first year of employment with the school district. When comparing teachers hired with an interview score below the district average of 39 to the teachers having an average or above average score to the reading achievement of their students,

there was not a significant difference between the two groups $t(41) = .34, p = .73$.

Regardless of the Form A interview score when hired, there was an overall quality and consistency of the reading achievement across the district. All teachers included in this study had a classroom average at or above the reading scale score of 85, which serves as the threshold to meet expectations on the state reading assessment. Furthermore, 11 of the 43 teachers or 20.0% of new teachers had student achievement results exceeding expectations with student participants achieving a scale score in reading of 135 or greater (NDE, n.d.).

The overall strong reading achievement generated across all teachers involved within this study speaks potentially to the continuous focus on improving achievement within the school district and less on the interview Form A outcomes. Across the district, there are systemic and systematic school improvement structures in place to support teaching and learning. For example, there is an active culture of collaboration to push the status quo of the district to a higher level of overall success. All certified staff members and building school improvement teams complete action research reviewing data to target areas of improvement. There also exists an active collaborative philosophy across the school system where teachers are active in Professional Learning Communities (PLCs), curriculum and assessment development, and instructional resource selection. For the past several years, elementary schools of similar demographics have been partnered together to reflect on professional practices and to plan and facilitate professional development inclusive of the multiple buildings. A recent example of the district-wide collaboration and focus on improving instructional pedagogy is the multiple-year Marzano Instructional Model professional development being provided to

every teacher in the district. The district demonstrates collaboration at the classroom, grade level, building, and at the district level; all working to support and increase teacher effectiveness and therefore, student success. Overall, teacher efficacy is held as a priority when hiring teachers and through the collaborative nature of joining a district focused on being reflective and improving as a professional educator once hired could be a difference maker in regard to achieving these results.

Research Question #3

Research Question #3 analyzed the NeSA-Reading achievement of students when accounting for a teacher's years of experience and Form A interview outcomes with no interaction being significant. Although a consistent high level of student achievement held true when teacher's years of experience were tested they were not significant. The analysis resulted in a ratio of $F(1,39) = .84, p = .36$ indicating no significant difference with student achievement between teachers with less than five years of teaching experience ($M = 124.90, SD = 11.97$) and for teachers with five or more years of experience ($M = 131.60, SD = 10.92$).

Since the results indicated a lack of significance between the interaction of Form A and teacher experience on student reading achievement, the overall strong reading achievement generated across all teachers involved within this study speaks potentially to the ongoing support on professional development, collaboration, and mentoring within the school district and less on the interview Form A outcomes. All new teachers to the district are assigned a mentor and participate in a district induction program. New teachers are also supported through collaboration with grade level teams. Literacy coaches, and PLCs. Ongoing professional development focusing on Marzano

instructional strategies, annual action research projects, and staff development days incorporated as part of the district calendar. The district continuously strives to select the most effective teachers and further develop their capacity and efficacy once hired.

Research Question #4

Research Question #4 consisted of an analysis of NeSA-Reading achievement when accounting for a school's Title 1 status (Title 1 or Non-Title 1) and teacher Form A score (< 39 or ≥ 39). Any difference regarding student achievement was not attributed to the interaction of the variables tested as the analysis of Research Question #4 lacked significance ($F(1,39) = .02, p = .88$). Even though there were no significant interaction between Form A outcomes and Title 1 building status, there was a statistically significant main effect regarding NeSA-Reading outcomes across Title 1 and Non-Title 1 buildings ($F(1,39) = 8.03, p = .01$). The student achievement in Non-Title 1 schools ($M = 130.90, SD = 11.79$) was significantly lower than students attending a Title 1 school ($M = 121.13, SD = 10.27$).

The results support the student achievement for these newly hired teachers continued to remain high as the teachers were assigned to a district school regardless of the building's Title 1 designation. The similarity of the average scale scores regardless of which newly hired teacher a student was assigned, produced a consistent result of high level of student achievement by the district on the NeSA-Reading assessment. However, implications to the corresponding achievement difference between Title 1 and Non-Title 1 schools will be explored later in this chapter as an implication to research.

In summary, the district hiring mechanisms did not directly have any significant impact in selecting teachers who demonstrate a higher level of efficacy on student reading achievement even when based on years of teacher experience or Title 1 status.

Implications to Policy and Practice

Hiring mechanisms. Additional study of SCA and TCA as screeners and the lack of a strong correlation between the screeners and Form A structured interview may be of importance for the school district, since neither of the screeners associated to a significant degree necessary to be able to anticipate how the applicant will likely perform during the structured Form A interview. An implication for district practice may include elimination of the pre-employment screeners from the application process to reduce the time it takes teacher candidates from completing the online application and/or potentially reduce the amount of administrative time to complete the instrument and the financial investment to maintain access to the commercial protocols. Additionally, since the screeners did not have a strong correlation with the Form A interview, the possibility exists for potential effective teachers to not advance through the selection process as a result of their performance on the screening assessments. A limitation of this study was the researcher not knowing the Form A interview scores for applicants not moving beyond initial consideration or the student NeSA-Reading scale score results of those teachers, if they had indeed been hired. Only participants hired by the district were included in the research. Not being able to review every applicant's information presented the potential of not being able to affirm the most effective teachers were being selected from the applicant pool.

Hiring mechanisms and achievement scores. The hypothesis stated in Chapter Three was for student achievement to be increased by teacher efficacy when students were taught by a teacher with a higher Form A score. However, the study results contained as part of Research Question #2 were counter to the notion that teachers performing better on the structured Form A interview would have a greater impact on student achievement. However, the teacher selection process is more complex than just a single score. A wide range of considerations are all taken into account when selecting the best applicant to hire. The school district has established effective teacher selection mechanisms that identify the desired target attributes of the teachers making application to the district; therefore, maximizing the selection of teachers with the greatest potential, regardless of the result of their Form A interview score is a priority. These results are supported by the research of Loeb et al. (2012) determined school leaders are able to differentiate highly effective teachers from less effective teachers during teacher selection process. The overall decision regarding the best teacher to hire must be more than a single score but more of a composite of multiple pieces of information surrounding the applicant (Finch, 2014). These additional considerations such as reference checks, credential information, certification, ancillary application materials, a mock lesson, or organization fit all need to be interwoven to work to compliment and determine the overall best applicant. The decision must be based on more than a single quantitative score deduced from a list of structured questions. The information gained from a candidate's Form A score is just one piece to the overall process and information in place to assist the selection of the best applicant to fill the opening (Brown, 2016). The

selection process is about hiring the best individual to strengthen the organization and positively impact student achievement (Little & Miller, 2007).

The consistent and high student reading success outlined by this study was not reflective of the district's selection mechanisms in that there were no significant interactions related to the teacher's Form A interview score being above or below the district average. As such, additional consideration should potentially be given to the candidates having the greatest organizational fit for the team or building. Implications such as job satisfaction, culture, employee commitment, and length of service can be enhanced for both the employee and school district when there is a solid organizational fit (Bretz, et al., 1989, Kristof-Brown et al., 2005; Rutledge et al., 2008). Therefore, the district is able to additionally select teachers beyond their Form A interview score enabling the potential to select individuals that align to the established collaborative culture and the pursuit of continuous improvement.

Effective teacher selection. One remaining implication is the general level of parity with the teachers hired during the duration of this study. When looking to the main effects results from Research Question #3, Form A interview score and teacher experience, there was not a significant impact on reading achievement. There are some corresponding implications for the district as 88% or 39 of 43 of the teachers selected during this study were teachers having less than five years of teaching experience when hired. Those 38 teachers accounted for and were representative of a large number of students being directly impacted. In that the Form A outcomes did not predict teacher efficacy and to address the number of teachers hired each school year and with such a large percentage of the teachers having less than five years of experience, the district may

consider a review of the existing mentoring and induction program in order to ensure the programs are effective in developing the capacity of newly hired teachers and increasing retention of teachers once hired (Loeb et al., 2012; Normore & Loughry, 2006; Sprogoe & Rhode, 2009; Strawn, Fox, & Duck, 2008). The collaborative nature of the mentor and mentee relationship has positive implications on both contributing members involved with a mentoring program to build the capacity of the organization (Sprogoe & Rhode, 2009). To some extent the teachers hired with less than five years of experience can be accounted for through the school district's partnership with a local university to place teachers in classrooms with increased mentoring support while they complete an accelerated graduate program to better develop educational theory and instructional pedagogy during their first year of teaching. This school district should continue to participate in such programs while looking for additional partnerships with community organizations and/or the same university to continue to support the development of teacher efficacy for the newly hired educators joining the district. Finally, as the district is able to support and retain newly hired and existing educators, there would not be as great of a need to hire as many new teachers in future years.

Implications to Research

A range of implications for additional research surfaced while reflecting on the results of the analyses completed as part of this study.

Correlation values. A point of consideration and potential for future study relates to why the correlation values included in the first research questions produced the outcomes described in Chapter Four. SCA to Form A were to have a direct relationship yet the results demonstrated a contradiction with the Pearson correlation result $r = -.028$.

There should have existed a strong positive correlation between these variables so it is even more of an opportunity to study further why a negative correlation was present within this study. The correlations of the other two interview scores were anticipated to have negative relationships as they are reverse keyed to the other. TCA to Form A resulted in a $-.028$ correlation and SCA to TCA indicated a $-.339$ correlation. Both resulting correlations were anticipated to have a greater negative relationship. This will be an important area to study and better understand as the three screening measures are designed to be an informative value to help screen applicants to move forward during the selection process (Creswell, 2012).

Form A and achievement. The second research question analyzed the impact of the Form A interview score to student reading achievement. Since there was no statistical significance between Form A outcomes and NeSA-Reading scale scores, additional study incorporating TCA and SCA to student achievement could determine which, if either, of these two measures are better able than Form A to quantitatively gauge the impact on student achievement. This research may determine if one auspice of the teacher selection protocol is a better predictor of teacher efficacy than was included in the focus of this research study.

Impact beyond reading. The results of this study indicated a lack of a statistically significant difference between the teacher selection interview scores for teachers in grades 3-6 and the subsequent student achievement results in reading. Additional study of other reading achievement sources (e. g. Terra Nova, Iowa Test of Basic Skills, etc.) may or may not affirm the results obtained through this research. There is also the opportunity to extend the scope of the study to other content areas

analyzing achievement in math. Dobbie (2011) provided support to the use of teacher selection scores as a link to improved student math achievement with less of an impact on achievement in language arts. It may also be worthy of study to see if any significant relationship results with teacher and students at the primary or secondary level as this study looked exclusively at teachers hired in grade 3-6. Future study could also be expanded to include additional school districts in Nebraska to have a comparison of teacher interview scores, demographics, and student achievement across a broader range of study participants.

Poverty influences. One final implication from this study was the difference in student achievement outcomes across Title 1 and Non-Title 1 buildings within the school district. Even though there were no significant interaction between Form A outcomes and years of experience for Title 1 building status, there was a statistically significant main effect regarding NeSA-Reading outcomes across Title 1 and Non-Title 1 buildings ($F(1,39) = 8.03, p = .01$). The student achievement in Non-Title 1 schools ($M = 130.90, SD = 11.79$) was almost 10 scale scores higher than the students attending a Title 1 school ($M = 121.13, SD = 10.27$). This consideration was addressed as an assumption in Chapter One of this study. It was anticipated any potential implications for the variances between schools of differing socioeconomic status would be compensated for by the additional supports and interventions (i.e. class size reduction, Reading Recovery programming, etc.) offered in those designated buildings. For the NeSA-Reading assessment, NDE (n.d.) established a scale score range of 0-200 with 85 for a student to be considered proficient and 135 for a student to be exceeding expectation. Even with this achievement difference, the average reading scale score for students in Title 1

buildings ($M = 121.13$, $SD = 10.27$) was still a high proficient reading achievement score or just 13.9 scale scores from exceeding expectations as an average. This high level of student performance suggests the school district selects effective teachers able to educationally impact student achievement as measured in this study.

Although, Form A outcomes did not predict achievement, other factors of the district's hiring mechanisms may influence teacher efficacy. One consideration was this study only measured the overall achievement difference and did not account for the starting level of student achievement or pre-requisite knowledge or educational experience of students prior to third grade. Students taught by a teacher participating in this study may have demonstrated a considerable level of growth with their learning but just not able to completely close the achievement gap. Additional research regarding the implication of students and families experiencing higher levels of poverty may assist the district in evaluating the programming in those schools and for students across the school district subject to conditions of poverty.

The intent of this study was to research the interaction of Title I building status and Form A outcomes and years of teacher experience and Form A outcomes on student NeSA-Reading achievement. In that there was no interaction between the variables of Form A interview outcomes and Title 1 building status, Form A does not account for the statistically significant NeSA-reading achievement difference between Title 1 and Non-Title 1 district schools. Additional research, in regard to other factors (e. g. professional development, student mentoring, background knowledge, academic interventions, student home language, parent education level, etc.) accounting for the significant difference in reading achievement between the Title 1 and Non-Title 1 schools could be warranted.

This research focus may better inform the district as it continuously works to close any achievement gaps as part of the process for continuous improvement. As such, the district may choose to study the existing programming for district Title 1 schools to affirm or influence changes for schools supporting a higher percentage of their students and families experiencing conditions resulting from poverty. A review of the programming and resources available to students, families, and educators in the Title 1 buildings may provide insight and potential opportunity to reduce the difference in student achievement regardless of the student condition or building attended within the district.

Summary

One of the primary reasons for conducting this study was to determine if this district selects the most effective classroom teachers hired and placed in the classrooms who subsequently have the greatest impact on students' achievement. When looking more specifically at the research questions included as part of this study, the selection criteria utilized by the district to attract, screen/interview, and select the highest quality applicants was not statistically associated with significant higher levels of reading achievement. The majority of the research questions and sub-questions findings did not produce a significant level of difference when measuring one specific part of the broader process the district utilized to hire effective teachers.

In the end, there is much more to effective teaching than the tools and process utilized to hire the very best. In fact, Hattie (2003) speaks to the powerful impact of teachers as they are one of the most important factors influencing student achievement. Therefore, the quality of a comprehensive process to select and hire those individuals to

make this level of impact may constitute the most essential factors for school districts.

As one small part of a much broader picture, this research study informed the importance of successfully recruiting and hiring effective teachers during the selection process as the teacher accounts for the greatest impact on student achievement (Danielson, 2007; Hattie, 2009; Littky & Grabelle, 2004; Marzano et al., 2012; Marzano et al., 2001; Nye et al., 2004; Sanders & Horn, 1998; Tucker & Stronge, 2005; Whitaker, 2004). Although the school district has effective teacher selection mechanisms, inclusive of the HUMANeX protocols, measuring the level of teacher efficacy using only one score to predict results of students' reading achievement is not enough. Teaching is complex and multi-faceted encompassing a range of diverse learners. Being an effective teacher is part art and part science. The same blend of art and science is emerging with hiring mechanisms working to select teachers predictive of the highest level of efficacy.

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