

THE USE OF AN APPLICATION SCREENING ASSESSMENT AS A PREDICTOR
OF TEACHER RETENTION AT A MIDWESTERN, K-12, PUBLIC SCHOOL
DISTRICT

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By

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THE USE OF AN APPLICATION SCREENING ASSESSMENT AS A PREDICTOR
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A QUANTITATIVE ANALYSIS

DEDICATION

This dissertation is dedicated to a special someone in heaven. I continue to be inspired by you. Knowing the battles you conquered every single day while you were on this earth is never-ending motivation for me to live my best life and achieve all that I can.

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ABSTRACT

This quantitative study examined the retention of new hires at a Midwestern, K–12, public school district using the scores of an application screening assessment as a predictor. New teacher hires' overall performance results on a screening assessment were compared to the retention of those hires after 1 year of employment. In addition to the overall scores, the impact of subscale results in the areas of cognitive ability, teaching skills, and attitudinal disposition were also compared to the retention of new hires.

The study results indicate that differences exist in the application screening assessment scores of new hires and their retention after 1 year of employment. The study concludes with recommendations designed to aid school leaders in objective hiring practices that yield retention of teachers with a strong fit to the organization.

SECTION ONE

Introduction to the Dissertation in Practice

The field of K–12 education is facing a challenge. The number of educators entering the field is declining, a large number of teachers are leaving the profession, and the demand to provide a wide-variety of specialized services to students is growing; thus, the need to hire high-quality teachers is at an all-time high (Carver-Thomas & Darling-Hammond, 2017; Daresh & Daresh, 2013; Kullar & Cunningham, 2020). School leaders must find teachers who can increase student engagement while being a good fit with the school culture. The applicant pools are often slim; in the absence of time, many school leaders engage in subjective hiring practices to make quick hires (Ingersoll, 2001). This type of practice can yield low-quality teacher hires. Using objective measures as part of the hiring process could assist school leaders with identifying teachers who are a good fit for the school and ultimately increase the likelihood of retaining those teachers.

Hiring the right people is essential to the success of any organization. Investing in human capital management can improve the performance outcomes of an organization (Bassi & McMurrer, 2007; Konosk-Graf, Partelow, & Benner, 2016). It is suggested that schools invest in using innovative hiring practices and focusing on retention (Crook, Todd, Combs, Woehr, & Ketchen, 2011). Effective organizations attract top candidates by using innovative recruiting strategies and having selection processes that effectively evaluate employee fit (Poldolsky, Kini, Bishop, & Darling-Hammond, 2016). This study investigates the use of a screening assessment in the teacher hiring process as a way to measure fit.

This study is important in the context of teacher retention. The number of teachers leaving the profession has substantially increased over the past twenty years (Carver-Thomas & Darling-Hammond, 2017). Teacher shortages could be greatly reduced through improved teacher retention and reduced teacher attrition. The researcher strives to positively contribute to the efforts of improving the educator workforce by finding ways to improve retention.

In this study, the researcher attempted to assess whether an application screening assessment given to teacher candidates at a Midwestern K–12 public school district could predict teacher retention. The Teacher Practitioner Assessment (TPA; a pseudonym) was used in this study. Each applicant received an overall score upon completion of the TPA. In addition to an overall TPA score, assessment results included the subscale scores in the areas of cognitive ability, teaching skills, and attitudinal disposition. The assessment scores were compared to teacher retention data, which was determined by the recommendation for reemployment. This section addresses the significance of the study, details of the present study, review of literature, and research design.

Statement of the Problem

Problem of practice. Information is lacking on the use of an application screening assessment to predict teacher retention in a public school district. The teacher turnover rate in the United States is approximately 8% each year (Carver-Thomas & Darling-Hammond, 2017). The high turnover rate and a teacher shortage have resulted in a crisis in PK–12 education (Garcia & Weiss, 2019; Kullar & Cunningham, 2020). The teacher shortage is approximately 110,000 teachers each year, up from relatively no shortage in 2013 (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Teachers are

leaving the profession for a variety of reasons, including dissatisfaction with accountability pressures, lack of administrative support, and undesirable working conditions (Carver-Thomas & Darling-Hammond, 2017). Creating information-rich hiring processes can result in identifying employees who are a good fit for the organization (Liu & Johnson, 2006). Good employee fit could result in higher retention rates.

This study used Holland's (1985/1997) person-environment (P-E) fit theory framework to investigate if teacher fit can be predicted using a screening assessment in the application process. Evidence was gathered from the Hamilton Village School District (HVSD; a pseudonym), a Midwestern, K–12 public school district. This study highlighted the use of the TPA. The use of a predictive model for hiring managers and school leaders may contribute valuable information towards improving the hiring practices of public schools. If school districts can use screening assessment scores as a predictor for teacher retention, the possibility of using screening tools to establish fit within an organization may prove beneficial to K–12 school districts across the country.

Existing gap in literature. Existing data does not identify how prediction models can forecast the retention of teachers by using an online application screening assessment (Borman, Hedge, Ferstl, Kaufman, Farmer, & Bearden, 2003). Hiring high-quality teachers is a priority of K–12 school districts (Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2007; Carver-Thomas & Darling-Hammond, 2017; Sutchter, et al., 2016); however, school leaders often resort to resumes, applications, and interviews as the only means to determine if a candidate is a good fit (Liu & Johnson, 2006). Developing prediction models is particularly important, given the pressure placed on K–12

educational leaders to hire high-quality teachers who positively impact student achievement (Kullar & Cunningham, 2020; Podolsky et al., 2016; Ralph, Kesten, Lang, & Smith, 1998; Schleicher, 2012).

Current empirical evidence does not address how prescreening assessment scores can predict retention of new hires at a Midwestern, K–12 public school district. An understanding of skill assessment is needed. The knowledge base of factors impacting classroom success must be expanded to hire highly effective teachers. School districts can use screening tools to develop prediction models to improve the hiring and retention of highly effective teachers. HVSD used the TPA to predict an applicant’s fit within the organization. The retention of new hires will measure fit, as determined by the recommendation for reemployment.

Purpose of the Study

The purpose of this study was to determine the relationship between the scores of an application screening assessment and the retention of teachers at a Midwestern, K–12 public school district. A correlation analysis was conducted to determine if a relationship existed between the two variables of teacher retention and new hires’ scores on the TPA assessment. *T*-tests were used to determine any significant differences in TPA scores between educators retained and those not retained. I intended to determine whether a TPA score could help predict whether an educator will be retained or not. Retention will be determined after 1 year of employment with HVSD.

There is a lack of research on how the use of a screening assessment impacts teacher retention. This study filled an existing void in the literature regarding the application of P-E fit theory to teacher retention. In addition to identifying fit, data from

this study could aid school leaders in assisting their new teachers by identifying teachers' strengths and growth opportunities as determined from teachers' TPA scores.

Theoretical Framework

To better understand and inform practice this dissertation will explore the Person-Environment fit theory as it relates to teacher retention and the educator workforce. Holland's (1985/1997) P-E fit best identifies how the TPA screening assessment can be viewed in relationship to predicting new teacher retention through identifying fit.

Holland's P-E fit theory.

P-E fit has been studied as far back as 1935, when Lewin (1935) explained behavior as a function of the person and the environment. The basis for the P-E fit theory is that the level of compatibility is directly related to how people behave within an organization (Kristof-Brown, Zimmerman, & Johnson, 2005; Liu, 2005). P-E fit can be defined as the match between individual and environmental characteristics (Kristof-Brown et al., 2005; Dawis & Lofquist, 1984; French, Caplan, & Van Harrison, 1982; Kristof-Brown et al., 2005; Muchinsky & Monahan, 1987). Needs, values, goals, abilities, and personality are examples of individual characteristics (Kristof-Brown et al., 2005). Environmental characteristics include demands of the job, rewards and recognition, and cultural values and norms (Kristof-Brown, Zimmerman & Johnson, 2005). P-E fit can be determined by the interactions between a person and their environment. P-E fit generally has positive outcomes in the form of job satisfaction, job performance, and overall individual well-being (Holland, 1997; Liu, 2005; Ostroff & Schulte 2007). Organizations that recruit and hire people who fit in their organization are

more likely to retain their employees (Schneider, 2006; Schneider, Smith, & Goldstein, 2000).

Theories of fit address how employees engage in their work environment and determine the factors that lead to the desired outcomes of increased employee performance and retention (Kristof et al., 2005). Scholars have characterized fit into two distinct but related concepts: complimentary fit and supplementary fit (Edwards & Cooper, 1990). Complimentary fit are situations where an individual's characteristics (skills, abilities, and values) fill the needs of a job or organization (Edwards, Caplan, & Van Harrison, 1998). Supplementary fit are situations where people and organizations are similar in their characteristics (Edwards & Cooper, 1990).

Measures of good fit include reduced stress, increased trust, and high job satisfaction (Arthur, Bell, Villado, & Doverspike, 2006). Festinger's (1962) study on the cognitive dissonance theory explained an individual's fit with their environment as an essential human motivator. Fit can be divided into different categories, such as health, stress (Edwards et al., 1998), work adjustment (Dawis & Lafquist, 1984), vocational choice (Holland, 1985), and organizational culture (Schneider, 2006). The root of the fit theory is that individuals differ in personal attributes and seek working environments that best match their unique level of values and abilities (Van Vianen, 2018).

The two basic tenets of P-E Fit Theory are a) the person and the environment together are a better predictor of human behavior, and b) outcomes are optimal when personal and environmental attributes are compatible (Van Vianen, 2018). Greguras and Diefendorff (2009) explained how employees' attitudes and behaviors determine fit. Three types of P-E fit exist: person-organization fit, person-group fit, and job demand-

ability fit (Greguras & Diefendorff, 2009). People who fit in with organizational culture find that their work is aligned with their abilities and personalities; people are at their best when they experience organizational fit (Greguras & Diefendorff., 2009). Employee retention is vital to both organizational success and the success of the individuals who work in the organization.

Fit dimensions provide a framework for understanding employee fit. Divided into four dimensions, the outcomes of P-E fit are: person-vocation fit, person-job fit, person-organization fit, and person-group fit (Kristof-Brown & Guay, 2011; Holland, 1997). The recruitment and selection process is vital to identifying fit (Holland, 1997; Johnson, 2007; Konoske-Graf et al., 2016). Harris, Rutledge, Ingle, and Thompson (2007) examined the concept of fit in the school context. Harris et al. indicated that the frequently used hiring practices in K–12 education—such as resumes, applications, and interviews—may not be able to readily identify the fit of a teacher in the school. While establishing fit is important, information on hiring methods that predict fit is minimal.

Personality is only one measure to determine the level of teacher fit in a school setting (Konoske-Graf et al., 2016). When applying the context of the P-E fit dimensions, good fit within a school must include teaching skills and cognitive ability (Liu, 2005; Liu & Johnson, 2006; Ralph et al., 1998; Young & Delli, 2002). The TPA measures three critical areas in an attempt to find fit: cognitive ability, teaching skills, and attitudinal disposition. This study examined the application of the TPA in the hiring process to predict the retention of new teachers at a Midwestern, K–12 public school district.

Conceptual Underpinnings

The research gleaned from this study will center around the concepts of educator workforce, educator retention, as well as the assessment instrument used in this study.

Educator workforce. The educator workforce in the United States is facing a crisis. The number of K–12 students entering U.S. schools is increasing and the number of teachers entering the profession is decreasing (Darling-Hammond, 2003; Sutcher et al., 2016; Gray & Taie, 2015). A total of 330 articles were written about the teacher shortage during the 2015–2016 academic year (AY), compared to the 24 articles written during the 2013–2014 AY (Sutcher et al., 2016). To compound the issue of the teacher shortage, a large number of teachers will be retirement-eligible within the next 5 years (Missouri Department of Elementary and Secondary Education, n.d.-b; Sutcher et al., 2016). Over the past ten years, the number of students enrolled in teacher preparation programs is down 35% and the number of graduates from teacher preparation programs is down 23% (Sutcher et al., 2016). More than 50% of new teachers leave the teaching profession within their first 5 years, and approximately 30% of new teachers leave after 1 year (Boogren, 2015; Ingersoll & Smith, 2004). A total of 3,028 individuals completed education preparation programs in Missouri in 2017–2018, a decrease from 3,868 in 2016–2017 and 3,908 in 2015–2016 (Missouri Department of Elementary and Secondary Education, n.d.-b). These statistics illustrate why the hiring process is becoming extremely competitive. School administrators are being forced to hire teachers who are not highly qualified, thus providing inequitable learning opportunities for students.

The growing teacher shortage and the current national attrition rate of 8% has resulted in unequal student experiences (Carver-Thomas & Darling-Hammond, 2017).

The significant turnover rates for new teachers has adverse effects on the quality of education students receive (Barnes, Crowe, & Schaeffer, 2007). As a collaborative effort, higher education and K–12 education leaders are focused on recruiting individuals to the education profession and identifying ways to increase retention. School leaders are left to fill fewer positions when fewer teachers leave the classroom before retirement (Missouri Department of Elementary and Secondary Education, n.d.-b).

Educator retention. Positive fit is directly related to increased job satisfaction and employee engagement. Teachers who have positive perceptions about their work environment, colleagues, and leaders are more likely to remain in their schools because of their high levels of satisfaction (Johnson & Birkeland, 2003). Teachers have left the profession at alarming rates in recent years (Carver-Thomas & Darling-Hammond, 2017). A bad hire could cost an organization thousands of dollars (Fatemi, 2016). In addition to financial implications, lack of teacher retention has implications on student achievement, building culture, the stability of programming, and a decrease in institutional knowledge (Carver-Thomas & Darling-Hammond, 2017; Podolsky et al., 2016; Ronfeldt, Loeb, & Wyckoff, 2013). The high turnover and attrition rates have resulted in a need to retain high-quality teachers to positively impact the educator workforce (Carver-Thomas & Darling-Hammond, 2017; Garcia & Weiss, 2019; Ingersoll, 2001; Johnson, 2007). Identifying and understanding the reasons why teachers are leaving the profession is a crucial step to addressing teacher retention.

Teacher Practitioner Assessment (TPA). The TPA is the inventory tool used in this study. Liberty Academy (a pseudonym), an educational technology software company, developed the TPA in a collaborative research effort to meet the needs of K–12

educators (Liberty Academy, 2018). Organizations choose the TPA for three primary reasons: hiring efficiency and accuracy, unbiased hiring, and the development and training pieces to support new hires (Liberty Academy, 2017).

Based on research conducted by an educational consortium, the TPA assesses four factors that predict high-performing teachers (Liberty Academy, 2019). The four areas are teaching skills, cognitive ability, attitudinal factors, and qualifications. Teaching skills include planning for successful outcomes, creating a learning environment, instructing, and analyzing and adjusting instructional strategies. Cognitive ability is awareness perception, quantitative and analytical reasoning, problem-solving, and judgment. Attitudinal factors include motivation to succeed, persistence in the face of adversity, maintaining a positive attitude, and orientation to learning.

The TPA is an online, multi-format assessment. The item formats range from Likert-type scales to multiple choice questions. Every assessment is different, as the test items are randomly ordered, options are re-ordered, and experimental items are included on every form. The assessment is immediately scored upon completion, and the results are automatically uploaded to the applicant's profile. The scores range from 0–100 with a norm of 50. An applicant's overall and subscale scores are available in the results.

Design of the Study

This study sought to determine if the results of an application screening assessment can predict teacher retention. This quantitative study used a quasi-experimental design measured by a *t*-test. Studies with a quasi-experimental design execute an experiment with groups that are not randomized (Creswell, 2014). This study also used a correlational research design that used a regression analysis. Correlation can

be described as the statistical relationship or the association between variables (Warner, 2013). Correlation is defined as the statistical relationship between variables (Warner, 2013; Gall, Gall, & Borg, 2007). The research design section will include information on the setting, participants, data collection, and data analysis. The investigation focuses on the idea that TPA scores can be used as a predictor of fall-to-fall retention of new hires to HVSD. Predictions regarding the criterion variable can be made when considering predictor variables (Lodico, Spaulding, & Voeglte, 2006).

Research questions. Four research questions guided this scholarly study. Table 1 identifies the research questions, the hypotheses, and the null hypotheses for each question. Table 2 identifies the research questions, variables, and the analysis information for this research study.

Identification of variables. The independent variable for this study was fall-to-fall retention for new teacher hires at HVSD. Individuals recommended for reemployment for the following academic year (AY) determined the retention rates for this study. The dependent variables for the study included participation and performance on an application screening assessment used in the hiring process at HVSD. The screening assessment is called the TPA.

Continuous variables for this study are the TPA overall scores and subscale scores. Categorical data were also used. Categorical data points were organized by gender, race, years of teaching experience, and certification route.

Setting. HVSD is a Midwestern, K–12 public school district with a student enrollment of approximately 9,000 students and a staff population of approximately 1,500. The certified staff comprises 63% of the staff population and classified staff

comprises 37% (Hamilton Village School District, 2019). The school district is the second-largest employer in the town of 44,000 (City of Hamilton Village, n.d.). The school district serves an area of 225 square miles in two counties. The district serves its students through 11 elementary schools, two middle schools, two high schools, a career center, an early childhood center, and an alternative school (HVSD, 2019).

Table 1
Research Questions and Null Hypotheses

Research Questions	Hypothesis	Null Hypothesis
1. At HVSD, what are the descriptive statistics of the teachers hired in the study from the 2018–2019 AY and 2019–2020 AY and what are their TPA scores when disaggregated by gender, race, years of experience, and certification route?		
2. At HVSD, is there a difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY?	H1: At HVSD, there will be a significant difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY.	Ho1: At HVSD, there will be no significant difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY.
3. At HVSD, is there a difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	H2: At HVSD, there will be a significant difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.	Ho2: At HVSD, there will be no significant difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.
4. At HVSD, is there a difference between the TPA teaching skills sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	H3: At HVSD, here will be no significant difference between the TPA teaching skills sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.	Ho3: At HVSD, there will be no significant difference between the TPA teaching skills sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.
5. At HVSD, is there a difference between the TPA attitudinal disposition sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	H3: At HVSD, there will be no significant difference between the TPA attitudinal disposition sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.	Ho3: At HVSD, there will be no significant difference between the TPA attitudinal disposition sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.

Note. TPA = Teacher practitioner assessment

Table 2
Research Questions, Variables, and Analyses

Research Questions	Independent Variable	Dependent Variable	Data Type	Statistical Analysis
1. At HVSD, what are the descriptive statistics of the teachers hired in the study from the 2018–2019 AY and 2019–2020 AY and what are their TPA scores when disaggregated by gender, race, years of experience, and certification route?			Categorical & Continuous	Frequencies, disaggregated means, and standard deviations
2. At HVSD, is there a difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA overall score	Continuous	<i>t</i> -test
3. At HVSD, is there a difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA cognitive ability subscale score	Continuous	<i>t</i> -test
4. At HVSD, is there a difference between the TPA teaching skills sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA teaching skills subscale score	Continuous	<i>t</i> -test
5. At HVSD, is there a difference between the TPA attitudinal disposition sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA attitudinal disposition subscale score	Continuous	<i>t</i> -test

Note. TPA = Teacher practitioner assessment

Participants. The study participants were new teacher hires at HVSD for the 2018–2019 AY and 2019–2020 AY. New teachers take the TPA screening as part of the application process. Study participants were selected based on TPA participation and performance. The total number of new teacher hires was 123 in 2018 and 89 in 2019. The total number of new teachers was 212 ($N = 212$). See Table 3, Table 4, Table 5, and Table 6 for disaggregated data for new teacher hires at HVSD in the 2018–2019 AY and

2019–2020 AY. Disaggregated data represents a stratification of the population (Creswell, 2014), as the target population of new teachers were broken into homogeneous subgroups according to race, gender, years of teaching experience, and certification routes.

Table 3
2018 and 2019 Disaggregated Data for Gender of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018–2019	New Teacher Hires AY 2018–2019
Total New Hire	123	89
Male	22	25
Female	100	62
Not-identified	1	2

Note: Retrieved from HVSD Hiring Statistics, 2019.

Table 4
2018 and 2019 Disaggregated Data for Race of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018–2019	New Teacher Hires AY 2018–2019
Total New Hire	123	89
White	112	82
Non-White	11	7

Note: Retrieved from HVSD Hiring Statistics, 2019.

Table 5
2018 and 2019 Disaggregated Data for Years of Experience of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018–2019	New Teacher Hires AY 2018–2019
Total New Hire	123	89
0–4 Years of Experience	60	44
5–10 Years of Experience	26	19
11–15 Years of Experience	17	14
16 + Years of Experience	20	12

Note: Retrieved from HVSD Hiring Statistics, 2019.

Table 6
2018 and 2019 Disaggregated Data for Certification Route of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018–2019	New Teacher Hires AY 2018–2019
Total New Hire	123	89
Traditional Route	102	84
Alternative Route: Master’s Program or other	21	5

Note: Retrieved from HVSD Hiring Statistics, 2019

Data collection tools. Ethical practices should be embedded throughout the research process, including in the collection, analysis, and reporting of the data (Creswell, 2014). Hiring statistics for HVSD were obtained for this study. As an educational technology software company, Liberty Academy (a pseudonym) facilitated the TPA. TPA results were obtained from the HVSD archives’ individual performance data. Permission to use the data was obtained from the HVSD. The superintendent of HVSD granted official permission in the form of a letter in the absence of a school board policy regarding the institutional review board process. To protect the anonymity of the superintendent and the school district, this letter can be found with the secured data in this study. The University of Missouri-Columbia institutional review board approval process was completed (see Appendix A).

The HVSD hiring statistics were obtained from the HVSD and included demographics of new teacher hires and fall-to-fall retention data. All individuals and information were de-identified during the collection, storage, and analysis to protect the identity of the new teacher hires.

The name of the institution was anonymized throughout this study. The intent of the study was to provide information that might help the district in improving their hiring

practices rather than highlight any deficiencies that may or may not exist within those practices.

Instrumentation. All HSVD data was received through Microsoft Excel. Retention information was obtained from the personnel reports submitted to and approved by the HVSD Board of Education. Microsoft Excel was used to collect and Microsoft Excel EZAnalyze was used to analyze the data.

IBM SPSS statistics software was used to analyze the data. Diagnostics were run on the data. While tolerance and collinearity were present, the logistic regression model was not helpful in predicting teacher retention.

Procedures. Queries were developed to collect demographic and TPA performance data for new teacher hires. Additional queries were designed to identify new teacher hires in two cohorts: a) the 2018–2019 AY and b) the 2019–2020 AY. Field (2018) recommended that the significance level for two-tailed tests be a value of .05. Faul, Erdfelder, Buchner, & Lang (2013) recommended a sufficient sample size using an alpha of .05, a power of .80, a medium effect size (odds ratio = 1.72), and a two-tailed test. The minimum recommended sample size is 177 (Statistics Solutions, 2016). The 2 years of data allowed for an anticipated sample size of 212 new teacher hires, which exceeded the recommendation.

Data from the queries were cross-referenced and coded to de-identify the new teacher hires by HVSD human resource office personnel. To protect the anonymity of HVSD, processed data were stored in password-protected spreadsheet files for the duration of the study. All data will be erased and destroyed after a period of 10 years. This process ensures the data are secure and inaccessible to others.

Data analysis. Research questions analysis was conducted using independent-samples *t*-tests. The independent-samples *t*-test is used to compare means of two samples from the same population (Cronk, 2019; Field, 2018). The *t*-test assumes an equality of means, thus, “a significant results indicates that the means are not equivalent” (Cronk, 2019, p. 64). This analysis used the overall scores and the subscale scores on the TPA as the independent variables, and a mean score of “yes,”—indicating the retention of new hires—was the dependent variable. *T*-tests analyses that produced a significant value of *t* less than or greater to .05 indicated strong evidence to reject the null hypotheses.

New teacher retention was the measured variable in this study. This measurement was a yes or no variable, with yes indicating retained and no indicating not retained. The data obtained were used to develop accurate prediction models of the impact of the TPA application screening on teacher retention.

All statistical analyses were executed using Microsoft Excel EZAnalyze and IBM SPSS9 (version 25). Descriptive statistical tests included frequencies, calculations of means and standard deviations, and evaluations of the normal distributions. Confounding variables included the climate and culture of the building in which the teacher had been hired, the leadership of the building, and the instructional barriers the new hires may face.

Descriptive statistics were compiled for gender (male or female), race (White or non-White), years of teaching experience (0 years, 1–4 years, 5–10 years, 11–15 years, and 16+ years), and certification route (traditional and alternative).

Limitations

The first potential limitation in this study was the fact that HVSD has no control over who applies for available positions. Many variables determine who is hired at

HVSD. These variables include school leader perceptions of the applicants, the needs of the school, and the overall depth of the candidate pool.

The second potential limitation was the many variables used to determine teacher retention. These variables include formative and summative data from classroom observations and school leader perceptions of the teacher.

Another potential limitation was the teacher candidate's effort on the TPA. Additionally, the environment where the assessment was taken was not considered for this study. For example, if a candidate rushed through the assessment or randomly selected answers, test results would be skewed. Candidate behavior is treated as a limitation because it is not a factor.

The fourth potential limitation is the school climate and culture in which a teacher is employed. Climate and culture defines a school's persona and the assumptions, unwritten rules, and unspoken beliefs within a school can shape how its members think and do their jobs. This study is not assessing school climate and culture; therefore, the impact of the school's climate and culture on a teacher's performance is treated as a limitation.

Lastly, school leadership effectiveness is considered a limitation. Good leadership is essential in creating good schools (Freiberg & Stein, 1999; Blase & Kirby, 2008; Donaldson, 2001; Sergiovanni, 2001; Snowden & Gorton, 1998). Ultimately, the relationships that shape the culture and climate of the school are strongly influenced by the school principal. This type of limitation would be vital for future researchers to consider when replicating this study (Creswell, 2014).

Delimitations

I delimited TPA data from only one Midwestern, K–12 school district. The population for this study only included new teacher hires at HVSD, which is also a delimitation.

Data for all teacher hires were collected for this study regardless of grade level, content, or the teacher's assigned school within the district. The timeframe in which data were collected for the study was another delimitation. Two years of hiring data (the 2018 AY and 2019 AY) were used for the study because the desired sample size was achieved.

Assumptions

The assumptions of this study focused on the TPA given to new teacher hires at HVSD. The TPA is required of all new hires. Although a technical manual was not provided, Liberty Academy (2019) considers the TPA valid and reliable with an effect size up to .36. Validity means that the assessment measures what it was created to measure, while reliability measures consistency across time (Creswell, 2014; Field, 2018).

The researcher did not contact other public or private K–12 schools in or out of the Midwest to gather TPA and teacher retention data. All continuous variables follow a normal distribution.

Design Controls

The research design for this study required that all teacher applicants at HVSD were given the TPA as part of the application process. HVSD partnered with Liberty Academy, an educational technology software company, to conduct the TPA screening

with teacher applicants. Two years of TPA data were collected from HVSD to ensure the adequate sample size existed for the study.

Definition of Key Terms

Alternative certification route: In an alternative certification route, an individual receives an initial certification upon completion of a college program and once the designative assessment test is passed. With this route, an individual with a bachelor's degree in a content area (such as mathematics or English) returns to a college of education for a program of study that may enable him or her to take courses and teach simultaneously. The teacher works under a 2-year, provisional certificate and usually completes about 30 semester hours. Some programs offer a master's degree while others only offer a certification.

Attitudinal disposition: Attitudinal disposition are the skills assessed on the TPA, such as motivation to succeed, persistence in the face of adversity, maintaining a positive attitude, and maintaining an orientation to learning. Attitudinal disposition questions are 33% (25 questions) of the 75 questions on the TPA (Liberty Academy, 2019).

Bad hire: A bad hire is an employee who does not meet expectations and does not produce the results their organization is expecting. Bad hires can also sabotage a healthy workplace culture. Some behaviors of bad hires include not working well with others, attendance problems, not producing the expected quality of work, and not having the skillset that matches what they claimed to be able to do (Society of Human Resource Management, 2019).

Certification route: Certification routes are methods an individual can take to enter the education profession with a certificate of license to teach (Missouri Department

of Elementary and Secondary Education, n.d.-a). The following routes are referenced in this study: a traditional route and an alternative route.

Cognitive ability: Cognitive ability refers to the skills assessed on the TPA, such as awareness perception, quantitative and qualitative reasoning, problem-solving, and judgment. Cognitive ability questions are 11% of the 75 questions on the TPA (Liberty Academy, 2019).

Educator workforce: The educator workforce are the people engaged in or available for work in K–12 education.

Fit: Fit is the concept that refers to how well an employee is suited for the position in which he or she was hired (Holland, 1985/1997).

Gender: Gender is the male or female division of a species.

Hiring practices: Hiring practices are the processes used to choose new employees. These processes include recruiting, reviewing applications, screening applicants, selecting candidates to interview, and choosing between candidates to make a hiring decision (Society of Human Resource Management, 2019).

Human capital management: Human capital management is the act of recruiting, managing, and developing a workforce (Society of Human Resource Management, 2019).

K–12 education: K–12 education is the term used in education that covers the grade span of kindergarten through grade 12.

Liberty Academy: Liberty Academy is a pseudonym for the company that created the TPA application screening.

New teacher hires: New teacher hires are hires within HVSD that include first-year teachers as well as veteran teachers.

Race: Race is defined as a person's self-identification with one or more social groups (Census Bureau, 2019). For the purposes of this study, race is categorized as White and non-White.

School leader: A school leader is a principal, assistant principal, or other individual who is an employee or officer of an elementary school or secondary school, local educational agency, or other entity operating an elementary school or secondary school. School leaders are responsible for the daily instructional leadership and managerial operations in the elementary school or secondary school building (National Association of Elementary School Principals, 2019).

Teacher: A teacher is an individual who is responsible for facilitating student learning. For this study, teachers are employees of a public K–12 school district who provide classroom instruction.

Teaching skills: Teaching skills are the skills assessed on the TPA, such as planning for successful outcomes, creating a learning environment, and adjusting instruction based on data analysis. Teaching skills questions are 56% of the 75 questions on the TPA (Liberty Academy, 2019).

TPA: The TPA is a pseudonym for the application screening assessment given to teacher candidates at a Midwestern, K–12 public school district.

Traditional certification route: A traditional certification route is when an individual receives an initial certification upon completing a 4-year, college-

recommended course of study, completes student teaching, passes the designated assessment test, and graduates with a bachelor's degree in a field of education.

Significance of the Study

Practice. The number of teachers entering the education profession is decreasing while the number of students enrolled in K–12 schools is increasing (Missouri Department of Elementary and Secondary Education, n.d.-b). This teacher shortage has made the hiring process highly competitive (Carver-Thomas & Darling-Hammond, 2017; Kullar & Cunningham, 2020). A bad teacher hire can have detrimental effects on student achievement and school culture (Ballou, 1996). With this in mind, school leaders seek to hire teachers who are a good fit to their school with the intended outcome of increasing the retention of highly qualified teachers. Using subjective measures in the hiring process makes it difficult to identify fit. Interviews alone cannot adequately predict success in the classroom and interview alone cannot gauge fit (Baker & Cooper, 2005). External measures—such as application screening assessments—would assist school leaders in identifying fit, but it could be costly to districts.

The cost of the TPA for HVSD is approximately \$15,000 per AY. HVSD had roughly 300 applicants for various teaching positions; therefore, the cost of using the TPA would be \$50 per applicant. If broken down by hires, the cost would be approximately \$150 per hire. The information obtained through this study will help determine the return on investment when using screening assessments in the application process. This study used the data obtained from a Midwestern, K–12 school district; however, the findings could potentially impact the hiring processes of K–12 school districts throughout the United States. This study has the potential to provide K–12

human resource personnel and school leaders with valuable information to assist in the hiring and retaining of K–12 teachers.

Scholarship. Literature is lacking regarding the use and effect of application screening assessments in K–12 education to predict fit; however, vast literature addresses the connection between teacher selection and performance outcomes, including student achievement. The current study provided an opportunity to connect to prior findings and fill an existing gap in the literature regarding the use of application screening assessments to predict teacher fit.

This study provided unique, strategic information regarding the impact of using objective hiring practices—such as application screening assessments—on the retention of teachers. It is essential to recognize the variety of factors that influence teacher retention in K–12 education. Individual teacher TPA scores may help educators identify fit in the hiring process, thus providing educators with a valuable tool to improve retention rates. In addition to demographic data, gender and race data were collected to determine trends in identifying fit. Furthermore, this study addressed the gaps in the literature regarding the effectiveness of screening assessments in the hiring process for K–12 teachers to establish fit.

Summary

The researcher used Holland’s Person-Environment Fit Theory (1985/1997) as the foundation for this quantitative study. In this study, the researcher attempted to assess whether an application screening assessment given to teacher candidates could predict retention after one year of employment. This section provided background information on the educator workforce, introduced person-environment fit theory, and outlined the

planned methodology of the study. The study results will use hiring data from HVSD as well as the TPA results for all new hires in AY 2018-2019 and AY 2019-2020. The next section will provide a detailed explanation of the setting in which the study took place. Information regarding the history, organization, and leadership of HVSD will be detailed to provide a solid context for understanding the study and how it can potentially inform scholarship and practice.

SECTION TWO

Practitioner Setting for the Study

The structural organization and leadership styles implemented by HVSD illustrate how recruiting, hiring, and retaining teachers in Missouri is done at the local level.

History of the Organization

HVSD. The history of HVSD dates as far back as 1838 (Hamilton Village School District, 2019). The community of Hamilton Village has a population of 44,000 (The City of Hamilton Village, 2020) and the school district covers approximately 225 square miles in two counties. Eighteen schools serve the 9,000 students of Hamilton Village. The school district hosts 11 elementary schools, two middle schools, two high schools, a career center, an alternative school, and an early childhood center (Hamilton Village School District, n.d.).

HVSD staff population. The school district is the second-largest employer in Hamilton Village, with approximately 1472 employees. In the 2018 AY, 973 certified and 499 classified staff were employed by HVSD. Certified staff includes teachers, school leaders, counselors, and instructional staff. Classified staff includes secretaries, nutrition services, maintenance, and custodial staff (Hamilton Village School District, 2019).

HVSD teaching staff. In the 2018 AY, 667 of the 973 certified staff were teachers; 524 female teachers and 143 male teachers were part of the certified staff. Approximately 90% of those teachers were White and 10% were non-White. The average

teacher salary was \$46, 448, with the beginning teacher salary set at \$37,900. The student-teacher ratio at HVSD was 13:1 (Hamilton Village School District, n.d.).

HVSD student population. In the 2018 AY, 9,000 students attended school within HVSD. Approximately 62% of the students were White and 38% were non-White. In 2019, the poverty rate (the percentage of students who received free and reduced lunch) was 60% (Hamilton Village School District, n.d.).

Organizational Analysis

The organizational analysis of a public school district is complex and challenging. Legal mandates compound the challenges of local politics when trying to recruit, hire, and retain the best employees. The organization can be analyzed through a variety of frames. Bolman and Deal (2013) provided four ways to frame organizations: a) structural frame, b) political frame, c) human resources frame, and d) symbolic frame. Without an understanding of these frames, school district employees put themselves at risk of dismissing stakeholders' needs, questions, and concerns.

Bolman and Deal's structural frame. The structural frame emphasizes the importance of matching individuals with appropriate roles and relationships to maximize the efficiency of the organization (Bolman & Deal, 2013). Goals and expectations are communicated and monitored regularly, and delineation of responsibilities allows for each entity within an organization to focus on their specialization. The structural frame assumes that a) organizations have a structure that fits the context of the organization, b) roles are clearly defined with labor equitably distributed, and c) problems are managed through a problem-solving process (Bolman & Deal, 2013).

Power and responsibilities are disseminated within organizations (Bolman & Deal, 2013). Power structures are categorized as vertical or lateral alignment. Vertical alignment is top-down control of decisions and responsibilities, while lateral alignment focuses on collaborative efforts and flexibility. To meet organizational goals, organizations must use both vertical and horizontal decision-making procedures (Bolman & Deal, 2013).

Organizational structure. The organizational structure of the HVSD follows the typical structure of a K–12 public school district in Missouri. The typical structure is categorized as a bureaucratic, hierarchical organization governed by a locally elected school board. This body of seven members is charged with creating policies that govern the school district. A district-level administrative team is responsible for executing local, state, and national guidelines and statutes. Building leaders such as principals are given authority to lead specific buildings designated by grade level or specialization, such as elementary, middle school, high school, alternative school, and career center.

A superintendent leads the district administration team. Putting a knowledgeable and effective team together is one of the superintendent's primary responsibilities. This team is comprised of 10 members: a chief of learning, a chief of operations or chief financial officer, an assistant superintendent for elementary education, assistant superintendent for secondary education, director of communications, director of human resources, director of technology, director of student services, director of quality improvement, and director of data and assessment. This organizational structure is in place to distribute duties and formalize a chain of command throughout HVSD. Figure 9 displays the district leadership organization at HVSD.

The next level of leadership happens at the individual building level. Based on student enrollment and student need, each school within HVSD has a building principal, and in some cases, schools also have assistant principals. The building-level organization is semi-autonomous, with the school leaders in these positions operating in accordance with district guidelines. These guidelines are based on policies approved by the HVSD Board of Education. Included in these policies are the hiring guidelines to govern human capital management.

Human capital management is the responsibility of all employees within HVSD. A combination of vertical and lateral coordination are used when evaluating the hiring process. Vertical coordination occurs when hiring managers follow the district human resource processes, board policies, and state and federal labor laws. An example of vertical coordination is the positing of positions that are outlined in school board policy. Lateral coordination takes place when the hiring is decentralized and building teams are able to screen and interview candidates and select and recommend hires. The organization of human capital management is entrusted to the HVSD human resource department. Five employees make up this department: a director, a manager, and three personnel specialists. This group is charged with employee onboarding, benefits, and support.

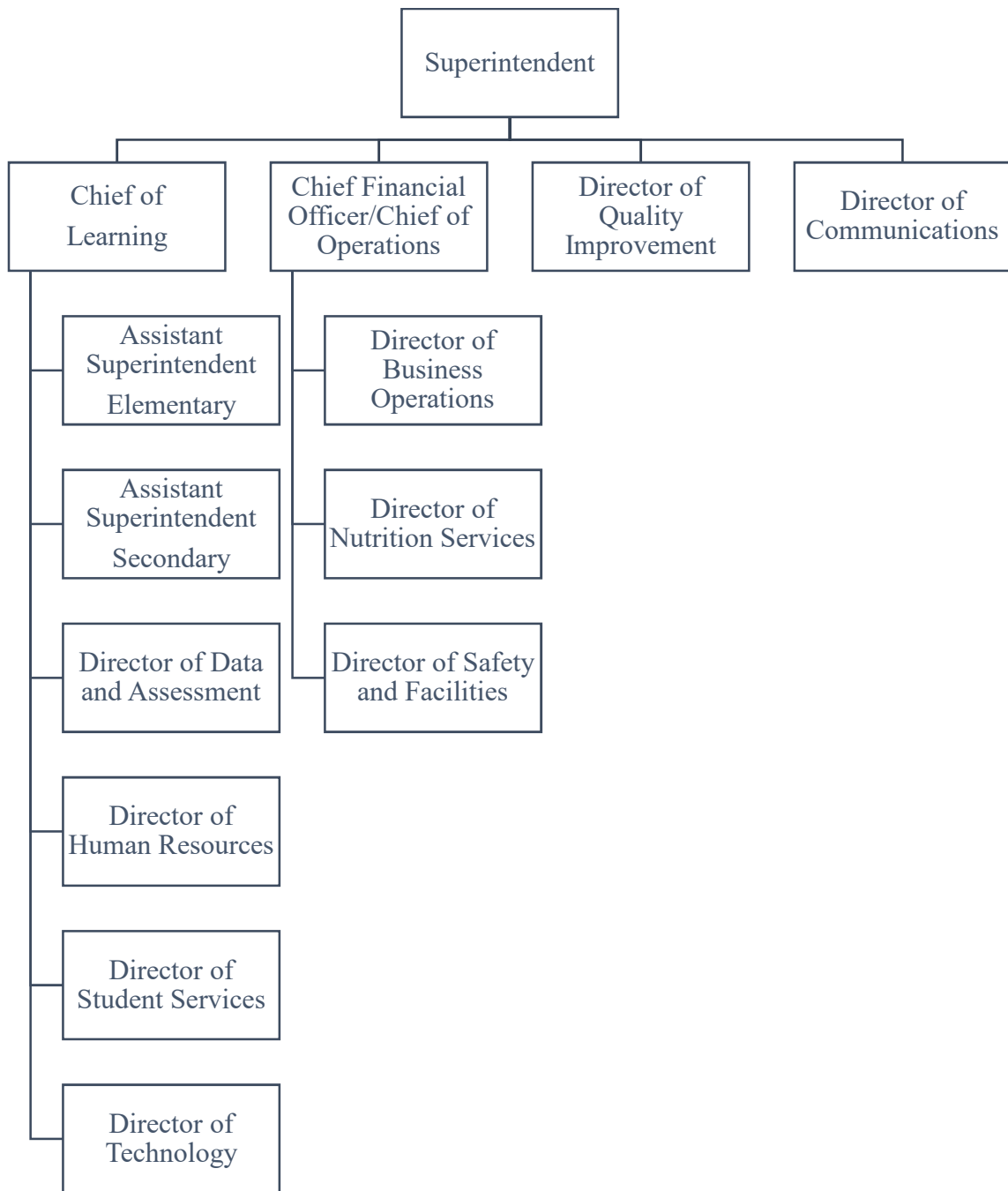


Figure 1. 2019 HVSD leadership organizational chart.

Bolman and Deal's political frame. Public school districts are embodied in internal politics. Effective political leaders focus on advocacy, networking, and negotiating skills (Bolman & Deal, 2013). The political arena encompasses conflict between individuals or different interest groups. Conflict can arise during the hiring

process or individuals may put pressure on school leaders to hire someone in particular, regardless of the potential hire's fit or qualifications. State and federal labor laws prevent political interference in the hiring process. Board of Education policies reflect these laws, which are administered and overseen by the HVSD human resource personnel. The Equal Employment Opportunity Commission and the Society of Human Resource Management provide current information on employment laws, job aids, and hiring trends. The HVSD human resources staff can use these resources to put processes and procedures in place to ensure legal hiring practices. These defensible practices are in place to avoid discriminatory allegations in the hiring, promotion, transferring, or termination process. Putting processes in place prevents power from being too broadly dispersed, which can result in organizational problems (Bolman & Deal, 2013).

Bolman and Deal's symbolic frame. The symbolic frame focuses on how individuals within an organization use beliefs and meanings to create a culture (Bolman & Deal, 2013). In 2019, HVSD opened a second high school. With the addition of this school, the district rebranded the school district. The "tradition of excellence" was the slogan used to describe the high level of pride throughout the entire organization. The HVSD director of communications shared that the slogan was placed on apparel, stickers, or school buildings to create unity within the district and add meaning to the culture through a common belief of being "stronger together" (HVSD, 2019).

A convincing marketing plan that includes the motto of images must be in place to hire high-quality employees (Bolman & Deal, 2013). When recruiting employees, focus on the motto and images of the district brand is used to motivate and inspire future employees and share the vision of HVSD. Leaders within the symbolic frame use the

brand of the organization to motivate and inspire followers, share the vision with all stakeholders, and recognize excellent performers who are carrying out the vision (Bolman & Deal, 2013).

Bolman and Deal's human resource frame. Bolman and Deal (2013) described the human resource frame as the framework that highlights the relationship between people and organizations: "Organizations need people...and people need organizations...good fit benefits both: individuals find meaningful and satisfying work, and organizations get the talent and energy they need to succeed" (p. 135). One of the most basic approaches to viewing the human resources frame within an organization is to focus on the human needs of their employees. Bolman and Deal provided an illustration of Maslow's hierarchy of needs when explaining the conditions that must be met for humans to maximize their potential. Leaders within the human resource frame place emphasis on allowing people to perform their job well (Bolman & Deal, 2013). Through coaching, motivating, guiding, and supporting the individual needs of each employee leaders create an optimal working environment (Bolman & Deal, 2013). This approach is key to helping employees establish their role and their fit within the organization. Good fit benefits both the employee and the organization (Bolman & Deal, 2013).

Individuals hired at HVSD are thoroughly vetted for the academic and non-academic strengths they will bring to the organizations. This is done through traditional methods of the online application process, reference checks, and behavior-based interviews.

Teacher turnover can have adverse effects on a learning environment and student achievement (Podolsky et al., 2016; Uline & Tschannen-Moran, 2008). HVSD district

administrators were concerned after analyzing the turnover rate at the end of the 2016–2017 school year. Exit survey data indicated that employees were leaving HVSD for other opportunities in neighboring districts. The top two reasons for leaving were unpleasant work conditions and ineffective building leaders. The hiring process for the 2017–2018 school year was challenging because HVSD had to hire over 100 new people. HVSD’s hiring practices had few objective measures in place. The district employed the TPA to be used for the 2018–2019 school year in hopes of establishing fit by using a research-based screening tool. HVSD aimed to hire well-rounded employees who had a good fit with the organization. Good fit helps employees find their work meaningful and satisfying, which in turn provides the organization with high employee engagement and reduced turnover (Bolman & Deal, 2013).

Leadership Analysis

Northouse (2016) described leadership as, “a process whereby an individual influences a group of individuals to achieve a common goal” (p. 6). Focusing on operational leadership development is vital to the success of educational organizations (Veres & Catalafamo, 2019). Setting goals, focused planning, effective communication, and trust are all components of a highly effective team (Bolman & Deal, 2013; Lencioni, 1995; Levi, 2017). Analyzing and developing leadership styles and structures can be challenging; the numerous academic and societal demands placed on public schools require a wide variety of leadership traits for the organization to be successful (Northouse, 2016). The following section is a leadership analysis of the HVSD leadership team using the adaptive leadership theory, the leader-member exchange leadership theory, and the situational leadership approach theory.

Yukl and Mahsud adaptive leadership theory. The superintendent works collaboratively with the leadership team to set the vision and mission for HVSD. The superintendent empowers employees to do the jobs they have been hired to do and offers the necessary training and support for employees to do their jobs efficiently and effectively. Northouse (2016) wrote, “Adaptive work develops from the communication process that occurs between the leader and followers, but is primarily the work of the followers” (p. 273). Adaptive leadership requires appropriate behavior changes as situations arise (Yukl & Mahsud, 2010). Being flexible and adaptive are essential traits of effective leaders (Northouse, 2016). Additional traits of effective and ethically sensitive leaders include accepting personal responsibility, being an active listener, and being open to other points of view (Johnson, 2018).

Northouse (2016) shared a model of adaptive leadership that outlines three situational challenges that require leaders to be adaptive: a) technical, b) technical and adaptive, and c) adaptive. Technical challenges are difficulties with clearly defined solutions; technical and adaptive challenges are struggles with no straightforward solutions. Adaptive challenges are situations where the problems are not easily identified. An example of an adaptive challenge facing HVSD is the teacher shortage. This struggle is also happening across the state and country, which compounds the problem. The leaders of HVSD have demonstrated adaptive leadership behaviors as they actively recruit, hire, and retain highly effective teachers. It is important to recognize practices that need improvement and challenge those practices (Jansson, 2013). Leadership in highly effective organizations is defined by leaders who find innovative ways to address problems and opportunities (Yukl & Mahsud, 2010). HVSD explored innovative ways to

enhance their hiring practices. After researching their options, HVSD employed the TPA as a tool to assist in the hiring process.

Graen leader-member exchange theory. The leader-member exchange theory analyzes the relationship between managers and team members (Northouse, 2016). The effectiveness of leadership resides in the quality of the relationship developed between leaders and their followers. High-quality exchanges are characterized by trust, friendship, and mutual respect. This relationship quality has implications for job-related well-being and the effectiveness of employees (Graen & Uhl-Bein, 1995; Northouse, 2016). Knowing employees' strengths and growth opportunities allow leaders the opportunity to put measures in place for appropriate training and development. Good fit within an organization is evident when team members have high-quality relationships with their leaders. These relationships result in higher morale and increased productivity among employees.

Finding employees with fit is not an easy task. Finding employees with fit is more than just hiring people who think similarly to the supervisor doing the hiring. Finding employees with good fit involves finding trustworthy individuals who support and promote the organization's mission and vision.

Supporting new employees is an essential function of an effective organization. The leadership team at HVSD focuses on development plans, feedback, and evaluations. The development plans are reflective of growth goals, and support on those goals is ongoing.

New teachers in the HSVD spend 5 days onboarding before the start of the school year. This time is a commitment the leadership team makes to new hires by introducing

them to the essential functions of the school district. The quality of leader-member exchange is determined early in the dyadic relationship (Liden, Wayne, & Stilwell, 1993). Early positive exchange promotes positive, stable relationships with building and district administration. The human resources office also holds a new employee onboarding seminar to assist new employees with onboarding tasks. This positive interaction promotes positive, trusting relationships with new employees (Heneman & Judge, 2006).

Successful organizations are full of interactions between leaders and followers that expand beyond traditional hierarchical boundaries (Northouse, 2016). The leadership team at HVSD has employed the rounding for improvement model (Studer & Pilcher, 2015). This model allows for frequent and ongoing communication between leaders and all organizational employees (Studer & Pilcher, 2015). The purpose of rounding is to build relationships, improve communication, and foster a culture of trust. Focused questions are asked of stakeholders during rounding. The questions capture what is going well, what needs to be improved, and who should be recognized as a difference-maker. These questions foster reflection inquiries that are fundamental tenets of learning organizations (Gill, 2010; Watkins & Marsick, 1993).

Hersey and Blanchard situational leadership approach. Not all teachers come to HVSD with the same skillsets and desires (Hamilton Village School District, 2019). Situational leadership theory requires responses based on the situation (Graeff, 1997; Grint, 2011; Northouse, 2016). Leaders must choose to be either directive or supportive in response to each employee's level of skill and maturity (Chen & Silverthorne, 2005; Konoske-Graf et al., 2016). Leaders must inspire and develop veteran staff who have

been in the district for a long time, along with new staff who are coming to HVSD with years of experience and staff who are new to the profession. Leaders must adjust accordingly to get everyone moving in the same direction. The leadership style of the principal has a direct impact on the culture of their building. The four primary leadership styles are telling, selling, participating, and delegating. Leaders with the telling style tell people what to do and how to do it. Leaders with the selling style sell their ideas and work to get group members to buy into their process. Leaders with the participating approach offer less direction and enable members of the group to take an active role in making decisions. Delegating leaders are less involved and allow group members to make most of the decisions.

Hersey and Blanchard (1996) identified four levels of maturity in the situational model. Hersey and Blanchard asserted that leadership must adjust to the employees' level of maturity; school leaders cannot expect group members to adjust to their leadership style. Principals can use TPA scores to understand new hires' cognitive ability, teaching skills, and attitudinal dispositions. Principals can use this information to adjust their leadership style to meet the individual needs of their teachers.

Situational leadership is dependent on two key behaviors: supporting and directing (Chen & Silverthorne, 2005). Directing behaviors include giving specific directions and instructions and attempting to control the behavior of group members. Supporting behaviors include actions such as encouraging subordinates, listening, and offering recognition and feedback. At HVSD, supporting behaviors are provided through job expectations, growth goals, feedback, support, and evaluation.

Implications for Research in Practitioner Setting

This study could lead to more research on the use of application screening assessments to predict teacher retention. The researcher hopes to develop a process to predict teacher retention by measuring fit during the hiring process.

Educator workforce. Recruiting, hiring, and retaining educators who have the skills needed to increase student achievement and improve educator practices is a priority of school leaders. Placing teachers in mutually beneficial positions is also a desired outcome. Using an application screening assessment as a means to measure fit could increase retention of teachers with a high fit to the school. In addition, the screening assessment results would assist school leaders with identifying the growth opportunities of new teacher hires to provide support to increase fit and retention. Increased retention strengthens the educator workforce by putting teachers in classrooms who have the necessary skills to increase student achievement. Teachers who have a strong fit to the school are more likely to be engaged and contribute to the overall climate and culture of the school.

Educator retention. Retaining teachers requires a comprehensive approach that ensures teachers are well-prepared for the challenges of teaching and are provided a working environment that supports their growth and development. Teachers leave schools when the working environment is challenging for them; these challenges include overwhelming stress and unreasonable expectations with no support from leadership. Successful retention of teachers involves providing effective preparation, enhanced hiring and induction practices, and collaborative and supportive environments. Teachers who have a job that matches their qualifications, fulfills their specific needs, and meets their

goals and values increases teacher retention. School districts should take an intra-individual approach when looking at potential hires to determine who fits best with the interests, needs, and values of their environment.

Holland's P-E fit theory. Holland's (1985/1997) P-E fit theory is the compatibility between individual and environmental characteristics (Kristof-Brown et al., 2005). Needs, values, goals, abilities, and personality are examples of personal characteristics (Kristof-Brown et al., 2005). Environmental characteristics include demands of the job, rewards, recognition, and cultural values and norms (Kristof-Brown et al., 2005). Measures of positive P-E fit include job satisfaction, job performance, and overall individual well-being (Ostroff & Schulte, 2007). Taking steps to identify fit during the hiring process could increase the likelihood of retention. Furthermore, the P-E fit theory could help conceptualize hiring practices to improve employee engagement and increase student achievement.

Considerations for K–12 hiring practices. Evaluation is a crucial component of ongoing, systemic improvement processes (Cafferella & Daffron, 2013). Program evaluation identifies effective measures of program operations and determine if outcomes are met (Cafferella & Daffron, 2013). Understanding the hiring process is a critical component of K–12 human capital management. Using objective measures to assess the desired competencies and skills of candidates is necessary in the hiring process. These measures would enable school leaders to identify individuals with a strong fit to their school. School leaders could achieve the desired outcome of increasing teacher retention by having measures in place to measure fit and assess the necessary competencies and skills.

Considerations for school finance. The cost of a bad hire in education is approximately \$20,000 (Kullar & Cunningham, 2020). Over time, the lack of highly qualified teachers has financial implications and threatens students' abilities to learn (Darling-Hammond & Sykes, 1999; Ladd & Sorenson, 2017). Using third-party platforms can be costly to school districts. The use of screening assessments such as the TPA could cost districts \$10,000 to \$20,000. The cost of the TPA may seem like a hefty expense; however, if a district prevents one bad hire, they have recouped the cost of using the assessment.

Summary

HVSD has a structural organization similar to other K–12 school districts in the United States. The district leadership team at HVSD possesses a variety of leadership styles to guide the mission and vision of the school district. These styles include situational leadership, leader-member exchange, and adaptive leadership.

District leaders are committed to hiring employees with good fit in an effort to retain high quality staff. People are the most important investment of an organization (Bolman & Deal, 2013). Having a strong understanding of human capital management is essential for organizations. Hiring practices and employee retention can be improved through decreasing subjective measures and identifying fit in the hiring process.

This study addressed the influence of fit on teacher retention and provided insight on the impact of identifying fit in the hiring process. Furthermore, the P-E fit theory helps conceptualize hiring practices to improve employee engagement and increase student achievement.

SECTION THREE

Scholarly Review

Introduction to the Problem

This quantitative study is the analysis of new teacher hires' scores on the TPA application screening as a predictor of teacher retention. The conceptual underpinnings of this study are the educator workforce and educator retention; these underpinnings will overlap using the theoretical underpinning of Holland's (1985/1997) P-E fit theory.

Human capital management is an essential component to the success of organizations (Bassi & McMurrer, 2007; Boudreau & Ramstad, 2007). Highly effective organizations can recruit, hire, and retain high-quality staff by focusing on their hiring practices (Society of Human Resource Management, 2019). This study aimed to determine the relationship between the use of an application screening assessment and the retention of new full-time teachers at a Midwestern, K–12 public school district.

The literature review informed the current study through the investigation of related studies (Creswell, 2014). This literature review examined the evolution of Holland's P-E theory, the current educator workforce at the local, state, and national level, the use of application screening assessments, as well as the importance of employee engagement and retention as it applies to K–12 education.

Limited data is available on the use of a screening assessment to predict employee fit. This study aimed to fill a gap in the existing literature on how predicting fit can increase teacher retention.

P-E Fit Theory

P-E fit is the compatibility between individual and environmental characteristics (Kristof-Brown et al., 2005). Needs, values, goals, abilities, and personality are examples of personal characteristics (Zimmerman & Johnson, 2005). Environmental characteristics include job demands, rewards, recognition, and cultural values and norms (Zimmerman & Johnson, 2005). Measures of positive P-E fit include job satisfaction, job performance, and overall individual well-being (Ostroff & Schulte, 2007).

An individual's functioning and survival depends on the fulfillment of the individual's needs. The effectiveness and survival of an organization relies on the achievement of demands the organization places on its employees (Ostroff & Judge, 2007; Ostroff, Kinicki, & Muhammad, 2012). Less turnover occurs when organizations can meet their employees' needs (fit), thus increasing retention and improving organizational performance (Irving & Meyer, 1994; Wanous, Poland, Premack, & Davis, 1992). P-E fit studies suggest that misfit is related to job dissatisfaction, low self-esteem, and decreased performance (O'Reilly, Chatman, & Caldwell, 1991). Organizations benefit from good fit by reduced employee withdraw, cynicism, and turnover (Harold, Oh, Holtz, Han, & Giacalone, 2016).

For job-seekers, finding or having fit in a job matters (Van Vianen, 2018). When looking for a job, people spend a considerable amount of time and effort in finding a job that matches their needs and desires. Organizations spend a great deal of time recruiting and selecting candidates who will fit the job and the organizational culture (Van Vianen, 2018). Employers strive to find employees who can improve convergence. High convergence will likely result in employees with compelling performance and high

engagement (Irving & Meyer, 1994; Becker, Huselid, & Ulrich, 2001; Wanous et al., 1992).

Teachers leave their schools for a variety of reasons. Teachers often leave school districts when the school becomes a challenging environment for them (Mulvahill, 2019). Recruitment and retention of teachers can be enhanced when teachers work in collaborative and supportive environments, thus increasing the strength of fit (Podolsky et al., 2016). Improving the educator workforce can be done by putting these measures in place to increase P-E fit for all school employees. Teacher retention requires a comprehensive approach that ensures teachers are well-prepared for potential challenges. Teachers should also be provided with an environment that supports their personal and professional growth. Identifying fit in the hiring process could help school leaders be aware of new hires' needs and provide support to new hires accordingly.

Review of Extant Literature

Educator workforce. The most important influential school-based factor of a great school is the teacher (Blasé & Kirby, 2008; Boogren, 2015; Terada, 2019). When hiring teachers, school administrators are doing more than finding people who can instruct students; administrators are finding people who impact lives (Kullar & Cunningham, 2020).

Human capital management is an essential component to the success of any organization (Becker et al., 2001). Investing in human capital is one of the most significant investments organizations can make (Bassi & McMurrer, 2007). The cost of a bad hire has financial implications and can impact the climate and culture of the organization (Fatemi, 2016).

Determining employee fit is vital in the employee selection process. Prior literature supports the notion that investing in human capital can improve the performance outcomes of an organization (Konoski et al., 2016). These investments include employee retention and effectiveness (Crook et al., 2011). The attraction-selection-attrition framework explains that individuals are attracted to, selected by, and retained by organizations that match their attributes (Schneider, 2006). Effective organizations have characteristics to improve the performance outcomes of the organization, and their values are directly related to the organizational culture (Schein, 2010). Understanding the workforce is a vital component of improving the human capital within an organization (Fatemi, 2016).

Recruitment to establish fit. Teacher retention is also rooted in teachers' professional development (Garcia & Weiss, 2019; Kullar & Cunningham, 2020). Professional development opportunities provide teachers with the information necessary to improve student learning (Darling-Hammond, Hyler, & Gardner, 2017). In Missouri, the teacher evaluation process follows a growth model. The growth model requires teachers to identify growth goals, strategies, and performance outcomes on how certain strategies impact student achievement. It is difficult for new teachers to set goals without knowing what their experience in the classroom will be. The TPA results provide school leaders with the strengths and growth opportunities of applicants. School leaders can review the assessment results to determine if a teacher is being hired for fit and determine if the school has enough resources to assist the teacher in meeting their goals. The individual needs, concerns, and interests of teachers should be a crucial part of professional development, not just organizational priorities (Dilworth & Imig, 1995).

Hiring practices. The overall vision set by a building principal has a significant impact on the way a school operates (Daresh & Daresh, 2013). New staff must feel connected to the vision of the school. Building principals must ensure that new hires fit within the culture of the building and contribute skills that aid in achieving the vision of the school (Kullar et al., 2020; Daresh & Daresh, 2013). Assessing an applicant's qualifications and attitudes is one way to determine if the applicant is a good fit (Becker et al., 2001; Cable & Gilovich, 1998; Heneman & Milanowski, 2007; Konoske-Graf et al., 2016); however, this is difficult to do with traditional, subjective hiring practices (Konoske-Graf et al., 2016; Liu & Johnson, 2006; Wilk & Cappell, 2003). It is necessary to identify more highly qualified teachers; however, it is equally important to determine if a hire is going to be a good fit within the culture of the school (Daresh & Daresh, 2013).

K–12 human capital management. When focusing on human capital management in K–12 education, school district leaders must understand the teacher workforce. The teacher shortage makes the hiring process for school districts essential for increased student success (Missouri Department of Elementary and Secondary Education, n.d.-b). The hiring practices of school districts must have measures to determine fit. In their exit interviews, teachers indicated that information-poor hiring processes do not result in an accurate preview of their positions (Ellis, Skidmore, & Combs, 2017). Information-rich hiring processes can assist schools with hiring teachers with a higher level of fit (Liu, 2005).

Bourke and Brown (2014) shared that schools must vary hiring practices to hire the most qualified teachers. Some methods of hiring practices include team interviews, on-paper credentials, and a short interview (Liu & Johnson, 2006). Online resources have

changed the landscape of the hiring process (Delli & Vera, 2003; Ellis, Skidmore, & Combs, 2017). Recruiting teachers is problematic for schools because of the amount of time, money, and training recruitment requires; most schools do not invest in this process (Peterson, 2002). School districts engaged in problematic hiring practices have adverse effects on hiring high-quality teachers (Peterson, 2002). These practices include hyperlocal and untargeted recruitment strategies, an application and selection process focused on static materials such as applications and resumes rather than performance-based measures, and no strategy to recruit diverse candidates.

Schools often make hiring decisions without any performance assessments; however, performance-based measures could help determine fit (Smith, 2019). Principals often view teachers as “interchangeable parts” (Weisberg et al., 2009). Principals are often concerned about filling positions with appropriately certified people instead of hiring highly effective teachers with a high level of fit (Weisberg et al., 2009). In a 2008 study, a majority of principals surveyed indicated that they conduct interviews without much guidance from district-level administration (Grove, 2008). For this reason, conducting interviews has been identified as a shortcoming in the hiring process (Grove, 2018). It is essential to have multiple opportunities for candidates and school interviewers to engage so that both parties can identify and determine fit. Previous studies indicated the need to have an assessment for determining how well a candidate matches the culture and values of the school (Liu, 2005).

The cost of teacher attrition. The cost of teacher attrition is “significant and can ripple across an entire school” (Poldolsky et al., 2016, p. 8) Teacher job satisfaction has reached the lowest point in 25 years (Ellis et al., 2017). Teacher satisfaction was 39% in

2012, compared to 62% in 2008 (Markow, Macia, & Lee, 2013). In their exit interviews, teachers indicated that information-poor hiring processes did not result in an accurate preview of their positions (Ellis et al., 2017). Dissatisfied employees have lower job performance and demonstrate a reduced effort to assigned tasks and responsibilities (Judge, Thoresen, Bono, & Patton, 2001).

Hiring and retaining high-quality teachers is vital to the success of a school (Ronfeldt et al., 2013). The ability of a school to retain a sufficient number of high-performing teachers has a significant impact on the schools' success over time (Ingersoll, Merrill, & May, 2012). High rates of turnover mean fewer teachers develop the teaching experience that leads to positive academic benefits for students (Ellis et al., 2017). It is challenging to maintaining employee motivation; employees often struggle to work at a high level over an entire career (Holland 1985/1997; Judge et al., 2001; Kristof-Brown et al., 2005; Kristof, 1996).

Teacher quality has been consistently identified as one of the most important school-based factors in student achievement (Daresh & Daresh, 2013; Kullar & Cunningham, 2020; Schleicher, 2012). Teacher effectiveness is subject to good leadership (Heneman et al., 2007). The feeling of identification with a school leads to a stronger attachment to the teaching profession and, ultimately, more time in the profession (Van Beurden, Van Veldhoven, Nijendijk, & Van De Voorde, 2017). Contextual factors may influence teachers' careers. These factors include performance levels, management, or leadership style (Van Beurden et al., 2017).

An essential step in supporting teacher effectiveness is through the induction and mentoring process (Childress, Elmore, Grossman, & Moore-Johnson, 2007). Teachers

can use specific individualized mentoring to improve teaching practice, learn new skills, and engage in continuous professional growth. Mentoring can be a powerful way to provide individualized learning to benefit employees of an organization (Gill, 2010). Schools can influence teachers' perceptions about the profession and their teaching practices through climate and value fit (Van Beurden et al., 2017).

Educator retention. Educator retention is the rate at which educators remain in the profession. Teacher turnover has been a persistent challenge; more teachers are leaving the profession, contributing to teacher shortages in hard-to-staff subjects and schools (Podolsky et al., 2016).

Fit and retention. Good fit has long term effects on the success of an organization (Bolman & Deal, 2013). Employee fit is strongly related to job performance and turnover (Arthur et al., 2006; Kristof-Brown et al., 2005). Organizations benefit from good fit by decreased employee withdrawal, decreased cynicism, and less turnover (Harold et al., 2016). Individual outcomes are most optimal if the person and the environment are highly congruent (Arthur et al., 2006; Bourdreau & Ramstad, 2007). Fit can promote or hinder individual performance (Van Vianen, 2018). P-E fit has multiple facets, all of which have an impact on employee effectiveness and retention (Follmer, Talbot, Kristof-Brown, Astrove, & Billsberry, J., 2018). Organizations strive to find employees who best meet the demands of the job, adapt to training and changes in job requirements, and remain loyal and committed to the organization. Prospective employees seek organizations that make sure their particular abilities and needs are met (Edwards et al., 1998).

Attraction-selection-attrition model. Individuals have greater difficulty adapting and performing in environments that do not meet their needs or values (Van Vianen,

2018). Prior literature does not address fit to performance outcomes or the personal and environmental attributes that are relevant for fit perception (Van Vianen, 2018). The attraction-selection-attrition model proposes that organizations are functions of the people who are within the group, and the people within that group are functions of the attraction-selection-attrition model (Schneider et al., 2000). Under this model, employees with low fit typically leave their work voluntarily or involuntarily (Schneider et al., 2000). P-E fit theory supports the concept that the match between a person and their environment (organization) will result in better work-related attitudes and behaviors and increased performance (Hoffman & Woehr, 2006; Ostroff, Shin, & Kinicki, 2005).

Why people leave the profession. Teachers have indicated that they leave the profession due to dissatisfaction with a) accountability pressures, b) lack of c) administrative support, d) teaching as a career, and e) poor working conditions (Carver-Thomas & Darling-Hammond, 2017). Lack of support is one of the top five reasons why teachers leave the profession (Podolsky et al., 2016). Teachers have positive perceptions about their work when they feel supported (Liu, 2005). One definition of support states that “providing them with the right training, backing them up, rewarding them for their work, supervising them properly and regularly, keeping the morale high, and making sure they have whatever they need to do their jobs successfully” (Vilela, Nagy, & Faucett, 2018). Support is defined in multiple ways (Kullar et al., 2020).

It is necessary to support new teachers to retain them in their respective buildings and within the teaching profession (Boogren, 2015; Kullar & Cunningham, 2020; Stansbury & Zimmerman, 2000). School leaders can increase retention rates when these

leaders are able to identify new teachers with good fit to the organization (Cain-Caston, 1999; Dunton, 2001; Konoske-Graf et al., 2016).

Strategies to retain teachers. New teachers have expressed frustration that they are expected to perform to the level of experienced colleagues without the necessary support to do so (Feiman-Nemser, 2003; Podolsky et al., 2016). Mentoring programs are one of the ways school districts can support new teachers (Podolsky et al., 2016). As part of the TPA process, school leaders receive a report that identifies an individual's strengths and growth opportunities. It would be beneficial to match teacher's growth opportunities with a mentor who has strengths in those areas, thus providing new teachers with strategic mentor support (Elmore & Burney, 1999; Kullar & Cunningham, 2020).

Improvements to the hiring process. Van Vianen (2018) detailed ways schools can improve organizational hiring practices. Some Van Vianen's recommendations included a) finding ways to assess the fit between applicants' values and the values central to the organization, b) assessing the fit between applicants, c) task and role preferences, and d) specific activities of the job.

Organizations should make an effort to minimize the "first impression error" (Levi, 2017, p. 265). This error occurs when individuals make a judgment based on first impressions and ignore vital information that contradicts their perceptions (Levi, 2017). Subjective hiring measures based on feelings or perceptions are shortcomings in the hiring process. Defendable practices are imperative in meeting local, state, and federal hiring guidelines while trying to determine fit. Analyzing applicant and employment demographic data is an essential component of determining if an organization has equitable hiring practices. Generally, assessing a candidate's personality through

subjective criteria is the process to determine fit (Liu & Johnson, 2006). It is important to note that optimal fit seldom exists; lack of fit can undermine employees' capacity to learn, develop, and adapt (Bandura, 1991). Organizations should have personal and objective environmental measures in place to assist with identifying fit before an employee starts with an organization (Starbuck & Mezias, 1996). Objective assessments can determine an applicant's ability to deliver results (Van Vianen, 2018). The use of an application screening assessment attaches an objective measure to the hiring process.

TPA application screening. The TPA is the inventory tool used in this study. Liberty Academy, an educational technology software company, developed the TPA in a collaborative research effort to meet the needs of K–12 educators (Liberty Academy, 2018). Organizations choose the TPA for three primary reasons: hiring efficiency and accuracy, unbiased hiring, and the development and training pieces to support new hires (Liberty Academy, 2017).

Efficient and accurate hiring methods allow human resource personnel and hiring managers the ability to identify which candidates are most likely to succeed and determine which hires provide the highest level of fit. Unbiased hiring allows hiring managers to select candidates based on objective data rather than subjective measures. Hiring managers can use behavioral-based interview questions to assess candidates' strengths and growth opportunities.

The TPA also gives human resource personnel and hiring managers the ability to select candidates who are more likely to return year after year. The TPA helps new hires maximize their strengths and improve using a personalized professional development profile.

Research consortium. The research consortium data used to create the TPA was comprised of renowned universities and scholars who defined the relationship between teacher proficiency and student achievement. A combined nine universities and scholars developed the SUB. TPA data were compiled over many years in collaboration with a research consortium that included award-winning scholars, respected universities, and highly regarded education research partners, such as the Northwest Evaluation Association, the University of Chicago, and Ron Ferguson from Harvard University. The research consortium used 140,161 teachers from all 50 states and Canada to conduct their studies. The teachers represented a cross-section of urban, suburban, rural, and charter schools (Liberty Academy, 2019).

The TPA data from the research consortium led to the identification of four factors that predict high-performing teachers. The four areas are teaching skills, cognitive ability, attitudinal factors, and qualifications. Teaching skills include planning for successful outcomes, creating a learning environment, instructing, and analyzing and adjusting instructional strategies. Cognitive ability is awareness perception, quantitative and analytical reasoning, problem-solving, and judgment. Attitudinal factors include motivation to succeed, persistence in the face of adversity, maintaining a positive attitude, and orientation to learning. Qualifications include an applicant's educational background, academic credentials, prior teaching experience and positions, and career accomplishments.

TPA format. The TPA is an online, multi-format assessment. The item formats range from Likert-type scales to multiple choice questions. Every assessment is different, as the test items are randomly ordered, options are re-ordered, and experimental items are

included on every form. The assessment is immediately scored upon completion, and the results are automatically uploaded to the applicant’s profile. The scores range from 0–100 with a norm of 50. Overall and subscale scores are available in the results. The subscale areas are cognitive ability, teaching skills, and attitudinal dispositions. As shown in Table 12, questions on teaching skills comprised 56% of the items on the assessment. Attitudinal dispositions comprised 33% of the questions, while cognitive ability comprised 11% of the questions. Samples of the assessment questions can be found in Appendix B.

Teaching skills framework. The research consortium developed the teaching skills framework in partnership with subject matter experts such as Charlotte Danielson (2007). This group identified the essential elements of effective teaching. These elements, as shown in Figure 10, include planning for successful outcomes, analyzing and adjusting instructional practice, creating a learning environment, and instruction.

Table 7
TPA Blueprint

Domain	Assessment Blueprint			
	% of Test Items	# of Items on Test	# of Competencies	# of Objectives
Attitudinal Dispositions	33%	25	10	47
Cognitive Ability	11%	8	3	8
Teaching Skills	56%	42	4	20
Total	100%	75	17	75

Note: Retrieved from Liberty Academy, 2019

Six objectives are included under the planning for successful outcomes component. These six objectives are knowing standards, knowing students, setting interim and annual goals, creating or selecting assessments, developing standards-based unit plans and objective-driven lesson plans, and optimizing learning time.

Three objectives are included under the analyzing and adjusting component.

These three objectives are analyzing student data and instructional practice, modifying unit plans and daily lessons, adjusting instructional practice, and reteaching.

Six objectives are included under the creating a learning environment component.

These six objectives are a) interact positively and respectfully with students, b) create a culture for learning, c) implement behavioral expectations, d) reinforce positive behavior, and e) correct off-task behavior, and f) create a student-centered classroom.

Seven objectives are included under instructing. The first objective is to engage students in understanding lesson objectives (teach for understanding). The second objective is to provide multiple ways for students at different levels to access rigorous standards. The third objective is to use effective questioning to develop a higher-level understanding of the standards. Providing multiple opportunities for student-to-student interactions and structured academic talk is the fourth objective. Checking for academic understanding and responding appropriately during the lesson is the fifth objective. The sixth objective is to implement evidence-based pedagogical practices. The seventh and final objective is to encourage independent learning.



Figure 2. TPA framework for teaching skills (Liberty Academy, 2019).

Cognitive ability framework. Thinking skills—including learning, remembering, and problem-solving—are assessed through the cognitive ability framework. The core competencies and objectives included in this assessment are verbal ability, quantitative ability, and analytical reasoning ability. Verbal ability is the ability to use written texts to comprehend meanings, complete sentences based on word context, and have a critical view towards written speech (Liberty Academy, 2019). Quantitative ability is the ability to solve mathematical calculations, word problems, and numerical equations. Analytical reasoning ability is using visual sequencing and deductive logical problem-solving to recognize and determine the meaning of patterns (Liberty Academy, 2019). These elements are shown in Figure 11.

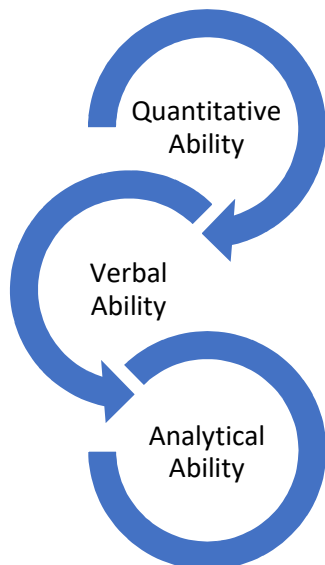


Figure 3. TPA competencies for cognitive ability framework (Liberty Academy, 2019).

Attitudinal dispositions framework. The attitudinal dispositions framework measures the values, commitments, and professional ethics that influence an individual's behavior towards others. Through multiple-choice questioning, 10 competencies are measured through the attitudinal dispositions framework. The 10 competencies are agreeableness, commitment, conscientiousness, and expectations of students, extroversion, learning orientation, perseverance, life satisfaction, resourcefulness, and self-efficacy (see Figure 12).

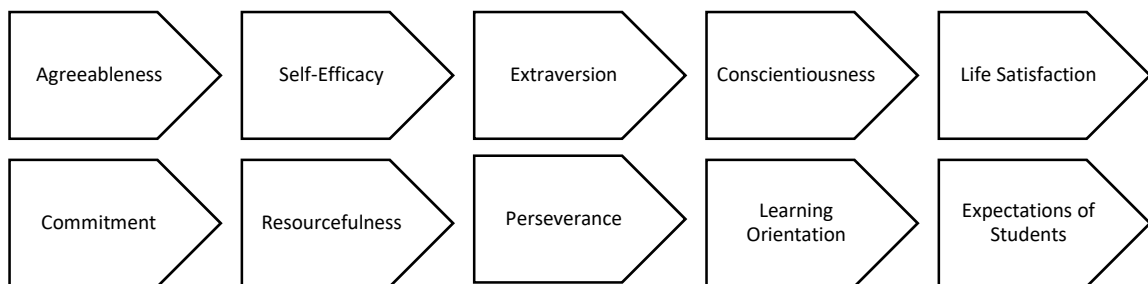


Figure 4. TPA competencies for attitudinal dispositions framework (Liberty Academy, 2019).

Theoretical Framework and Conceptual Underpinnings

Holland's (1985) P-E fit theory. Personality is only one measure of determining the level of teacher fit in a school setting (Konoske-Graf et al., 2016). Good fit within a school in relation to the P-E fit dimensions must include teaching skills and cognitive ability (Liu, 2005; Liu & Johnson, 2006; Ralph et al., 1998; Young & Delli, 2002). The TPA measures three critical areas in an attempt to find fit: cognitive ability, teaching skills, and attitudinal disposition. This study examined the application of the TPA to the hiring process to predict the retention of new teachers at a Midwestern, K–12 public school district.

Determine how to identify fit and why. Caplan (1987) stated the following regarding organizational fit.

Organizations wish to select persons who will best meet the demands of the job, adapt to training and changes in job demands, and remain loyal and committed to the organization. Prospective employees want to find organizations which make sure of their particular abilities and meet their specific needs. (p. 248)

Positive responses occur for the employee and for the organization when this fit occurs. Finding employees with organizational fit takes a substantial amount of time and does not always yield the desired results of employees who have a high congruence of fit. This approach applies to K–12 schools. School leaders spend a considerable amount of time on hiring new teachers. Subjective measures are often used during the hiring process, which may not result in hiring teachers with high fit. Using objective measures in the hiring process would help identify new teachers' skills and determine how new teachers' will fit within the organization and improve the workforce.

Educator workforce. Of the 3.6 million public school teachers in 2018, 8% moved to a new school the following year. This is the equivalent of replacing 1 in 6 teachers in 1 year (Feng & Sass, 2017). Higher turnover rates mean that fewer teachers develop the necessary experience to compound academic benefits for their students (Podolsky et al., 2016). Additionally, teacher turnover is over 50% higher in high-poverty schools (Podolsky et al., 2016). Dissatisfied employees display lower levels of job performance (Ellis et al, 2017). Teachers with a low fit often seek change by moving to another district or leaving the profession all together. Finding quality teachers to replace teachers who are leaving the district has become increasingly difficult due to a decline in the number of individuals entering the education profession. Demographic trends and economic changes have increased the demand for new teachers; however, the supply of new teachers has diminished. This decrease in the supply of new teachers is due to a steady stream of teachers fleeing the profession each year (Podolsky et al., 2016). It is crucial to develop an understanding of why teachers enter and leave the profession and understand what might encourage teachers to stay or return. This understanding would assist in identifying fit and improve the educational opportunities for all students.

Educator retention. HVSD is faced with the challenge of creating a stable teaching force that is responsive to the ever-increasing and complex needs of students. Turnover is costly and undermines student achievement and school improvement efforts (Podolsky et al., 2016). Hiring practices, professional development, classroom performance, student demographics, teacher characteristics, and working conditions are all contributing factors to a teacher's fit within the organization.

Summary

Teaching students is important work and most educators have a desire to do well for their students and for their profession. However, altruism cannot be the only measure to attract and retain highly effective teachers. When hiring for fit, long-term success for individuals creates long-term success for organizations.

Human capital management is an essential component to the success of any organization, including K–12 schools. Schools have a growing need to recruit, hire, and retain high-quality teachers (Daresh & Daresh, 2013). Schools that cannot retain a sufficient number of high-performing teachers have a significant impact on student achievement. Deficiencies in K–12 education hiring practices often result in hiring individuals with a low level of fit. Schools can determine a candidates fit before offering employment by using objective measures to include in hiring practices. Hiring teachers with a high level of fit may result in increased job satisfaction, engagement, and performance: the very characteristics that can increase the likelihood of teacher retention.

Further research is needed to understand how application screening assessments are a predictor of employee fit. This area of study is critical for the field of educational leadership and human resources.

SECTION FOUR

Contribution To Practice

Plan for Dissemination of Practitioner Contribution

Who: Attendees at American Association of School Personnel Administrators (AASPA) Annual Conference are school administrators, human resource directors, human resource specialists, and aspiring school personnel administrators.

When: October 13–16, 2020. The proposal deadline is June 1, 2020; submit proposal to AASPA at <https://aaspa.org/events/annual-conference/>

How: A slide-show presentation will be delivered during a professional development break-out session

Type of Document

The primary document will be a slide-show presentation. The study process and results will be shared. Participants will look through the lens of hiring practices and educator retention to understand the correlation between scores on the TPA application screening and the retention rates of new hires. The scholarly, research-based presentation will encompass the setting, participants, limitation, findings, and recommendations suggested by the study data.

Participants will be presented with data that answer each research question.

RQ1. What are the descriptive statistics of the new teacher hires at HVSD during the 2018–2019 AY and 2019–2020 AY when disaggregated by gender, race, years of experience, and certification route?

RQ2. Is there a difference in educator retention based on overall scores on the TPA application screening at HVSD during the 2018 AY and 2019 AY?

RQ3. Is there a difference in educator retention based on the cognitive ability subscale scores on the TPA application screening at HVSD during the 2018 AY and 2019 AY?

RQ4. Is there a difference in educator retention based on the teaching skills subscale scores on the TPA application screening at HVSD during the 2018 AY and 2019 AY?

RQ5. Is there a difference in educator retention based on the attitudinal disposition scores on the TPA application screening at HVSD during the 2018 AY and 2019 AY?

An executive summary of the study process and findings will be shared with participants. The documents will address the practical and theoretical considerations to increase retention of teachers by using an application screening assessment to predict fit and retention.

Rationale for this Contribution Type

The AASPA provides promotes effective human resource practices in education through professional development activities and a broad-based resource network. AASPA was founded in 1938 and is the only organization that specifically targets and represents K–12 schools' human resource professionals. The mission of AASPA is to provide every member with services, resources, and information vital to successful school human resource practices.

This scholarly research presentation will provide data on the educator workforce, educator retention, and strategies on how to identify fit in the hiring process. This presentation proposal will provide a strong, data-driven addition to the conference.

Outline of Proposed Contents

- Overview of K–12 education hiring practices at a Midwestern, K–12 public school district
- Information regarding Holland’s P-E fit and the importance of predicting fit
- Information on the educator workforce as it applies to fit
- Information on educator retention as it applies to fit
- Findings (quantitative analysis of TPA scores and teacher retention)
 - TPA scores and new teacher retention data
 - Implications for hiring practices and school finances
 - Recommendations for HVSD

Identifying teacher fit during the hiring process - can it be done?

Shelby Scarbrough
AASPA Conference
Seattle 2020

Welcome

Introduce myself

- Who I am
- My experiences
- My perspective on teacher retention and how it impacts students

Employee “fit” – what is it?

Introduce “fit” as defined by Holland’s Person Environment Fit Theory (1985/1997).

Introduction to the quantitative study

- New teacher hiring process
- Application screening assessment explanation
- Collected and analyzed screening assessment data and compared it to the retention data of HVSD new hires

*Attracting, hiring, developing & retaining
the best isn't just something we do;
it's the most important thing we do.*



- What metrics do you have in place in your districts to measure employee engagement?
- Do you know your retention rates?
- Tracking employee data is extremely important to the success of your district.
- This quantitative study was designed to determine if it is possible to quantify objective measures in the hiring process as a way to measure fit.

Resume Round-Up

- Review your stack of resumes and quickly identify **two people** to bring in for an interview.
- Write the names of your two interviewees on a piece of paper and hold it up for collection.
- Just like real life, you never have enough time.



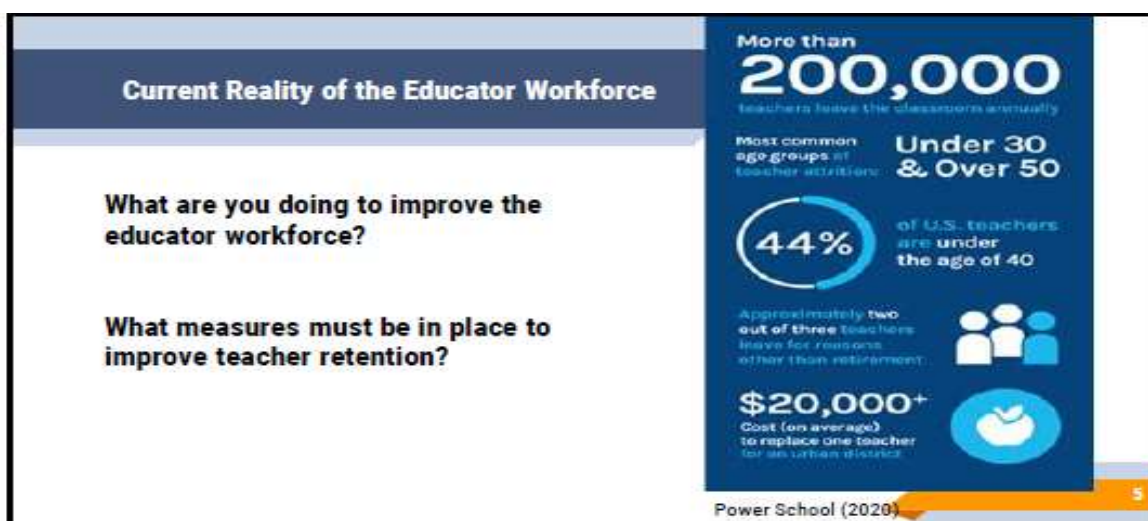
3

- Samples of resumes will be provided to each table.
- The activity is for the tables to decide on two people to interview for a teaching position based on resumes only.
- After the allotted time, tables will share who they decided to interview and why.
- This activity is designed to show participants the importance of adding objective measures to the hiring process.

Agenda

- ★ Currently reality of the educator workforce
 - The reality of Hamilton Village
- ★ Identifying fit in the hiring process
- ★ Research Questions & Results
- ★ Recommendations

- Share with participants the agenda for the sessions.



Discussion questions for each table:

- 1) What are you doing to improve the educator workforce?
- 2) What measures must be in place to improve teacher retention?
- 3) Using the infographic, what statistics are alarming to you?
 - Each table will have a spokesperson to share with the group on their thoughts about the educator workforce and teacher retention.

Educator Workforce

- The most influential school-based factor of a great school is a teacher (Kullar & Cunningham, 2020).
- The number of teachers leaving the profession has substantially increased over the past two decades Carver-Thomas & Darling-Hammond, 2017).
 - Approximately 8% turnover each year
 - Teacher turnover is 50% higher in high-poverty schools which creates disproportionate learning opportunities
- The teacher shortage has made the hiring process highly competitive (Daresh & Daresh, 2013).

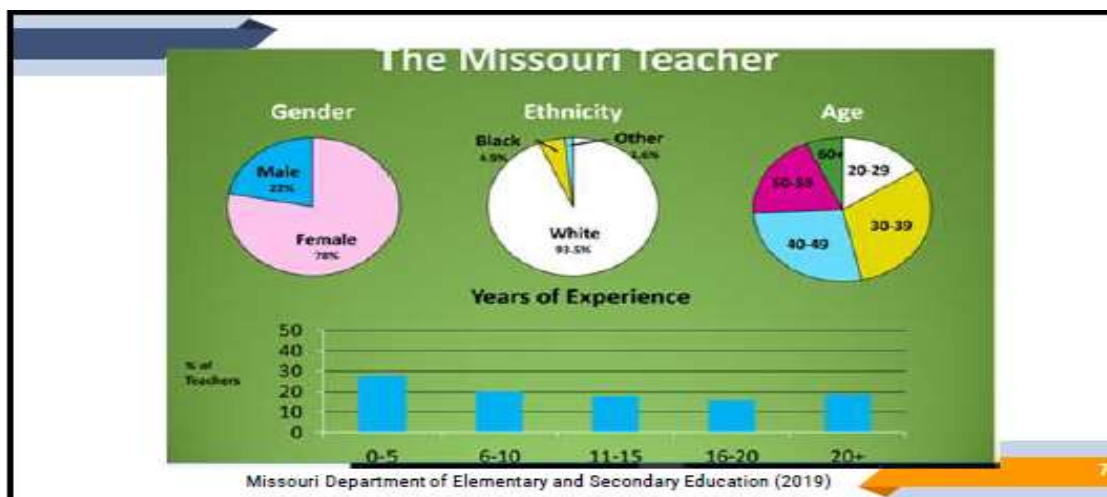
WHAT WE KNOW

6

The amount of research surrounding the educator workforce has increased substantially in recent years (Carver-Thomas & Darling-Hammond, 2017; Daresh & Daresh, 2013; Kullar & Cunningham, 2020).

- The most influential school-based factor of a great school is a teacher.
- The number of teachers leaving the profession has substantially increased over the past two decades.
 - Approximately 8% turnover each year
 - Teacher turnover is 50% higher in high-poverty schools which creates disproportionate learning opportunities
 - The teacher shortage has made the hiring process highly competitive.


Ask participants to share some of the challenges they are facing with the hiring process and what they are doing to combat those challenges.



Since this will be presented at a National Conference, I would like to share Missouri specific data and ask participants how this data compares to their respective states.

The Cost of a Bad Hire

- A bad teacher hire does not meet expectations and does not produce results which could cost a school district thousands of dollars (Fatemi, 2016)
- The lack of highly qualified teachers has financial and cultural implications on schools, and it also threatens students' abilities to learn (Ingersoll, 2001)



- Bad hires exist.
- Ask participants to share some examples of bad hires they have made and what they did about it. Were there “red flags” they ignored in the hiring process?
- Bad hires have financial and cultural implications on schools.
- Bad hires also have a significant impact on students' inability to learn.

Hamilton Village School District

Transition into descriptive information about HVSD.

- The next part of the presentation will be specific to our district organization, district employee statistics, and a description of our hiring practices.



Reality of Hamilton Village School District

**Hamilton Village
employs approximately
1500 employees,
including both full-time
and part-time.**

**Reducing the turnover rates is a goal
of the Hamilton Village School
District**

	2017-18	2016-17
Turnover rates certified	4.5%	8.3%
Turnover rates non certified	6.5%	8.7%

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I would like to share some of the challenges specific to the Hamilton Village School District.

Although turnover rates showed a decline, we are still not happy with the rates. We know we need to do a better job of retaining employees.

- When conducting exit interviews, many employees reference leaving our district due to lack of “fit.”
- When meeting with principals on why employees leave their respective buildings, they elude to a lack of “fit.”
- What is “fit” as it applies to the recruiting, hiring, and retaining of employees?

- **Midwestern K-12 public school district with a student enrollment of approximately 9,000 & a staff population of approximately 1,500.**
- **Certified staff comprises 63% of the staff population, and classified staff comprises 37%.**
- **The school district is the second-largest employer in the town of 44,000**
- **The school district serves an area of 225 square miles in two counties.**
- **The district serves its students through eleven elementary schools, two middle schools, two high schools, a career center, an early childhood center, and an alternative school**

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- This is our district leadership organizational chart as well as a snapshot of our district statistics. Ask for questions about our organizational structure.
- Ask participants how our district aligns to theirs based on the number of students and staff.

Hamilton Village Statistics

	2014	2015	2016	2017	2018
Avg. Enrollment (District)	8,904	8,932	8,762	8,979	9,082
FTE	873.15	891.46	897.10	929.39	973.80
Average Salary	\$45,712	\$45,830	\$45,409	\$44,736	\$44,700
Student per FTE (District)	10.2	10.0	9.8	9.7	9.3
Avg. Exp. - Total	13	12	12	12	12
Number of Teachers	626.7	637.5	636.1	644.1	667.2
Student to Teacher Ratio (District)	14.2	14.0	13.8	13.9	13.6
Average Admin Salary	\$118,412	\$127,213	\$125,731	\$120,657	\$98,290
Average Teacher Salary	\$47,495	\$47,489	\$47,143	\$46,436	\$46,448

Missouri Department of Elementary and Secondary Education, 2019

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- Here is a 5- year snapshot of HVSD as provided by the Missouri Department of Elementary and Secondary Education.
- Ask participants to share their thoughts about our data.

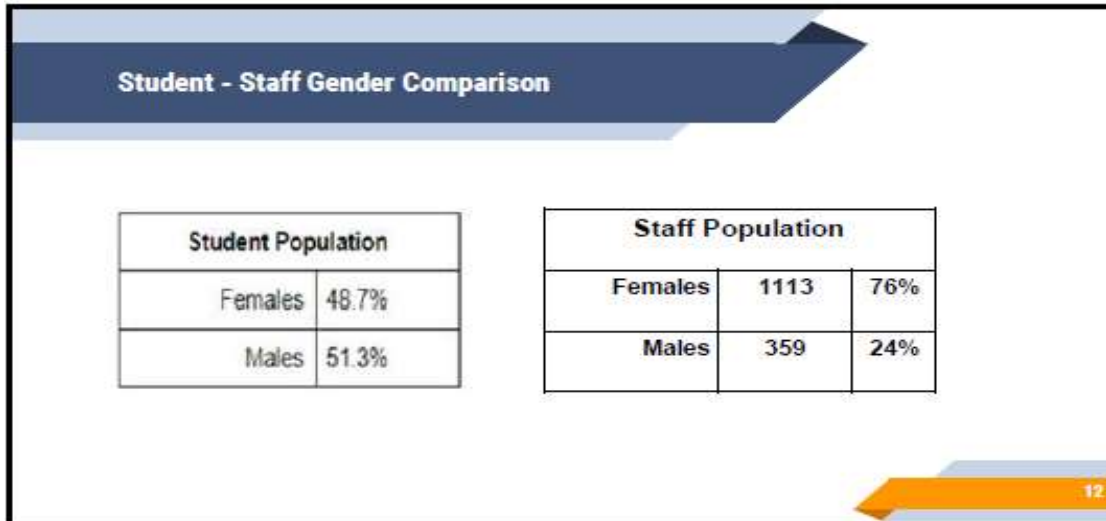
Student Population		Staff Population		
White	61.2%	Race	Count	Percentage
Black or African American	20.8%	White	1356	92.1%
Multi-Racial	9.0%	Black or African American	67	4.6%
Hispanic	6.9	Two or More Races	21	1.4%
Asian	1.6%	Unidentified	14	1%
Indian	.2%	Asian	11	0.7%
Pacific Islander	.1%	American Indian or Alaskan Native	3	0.2%
Other	.1%			

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As all school districts in America, we are striving to have a staff population that mirrors our student population. This is a challenge because the demographics of pre-service teachers will not allow school districts to meet that goal.

These are the statistics of HVSD. Share the measures we are using to diversify our workforce.

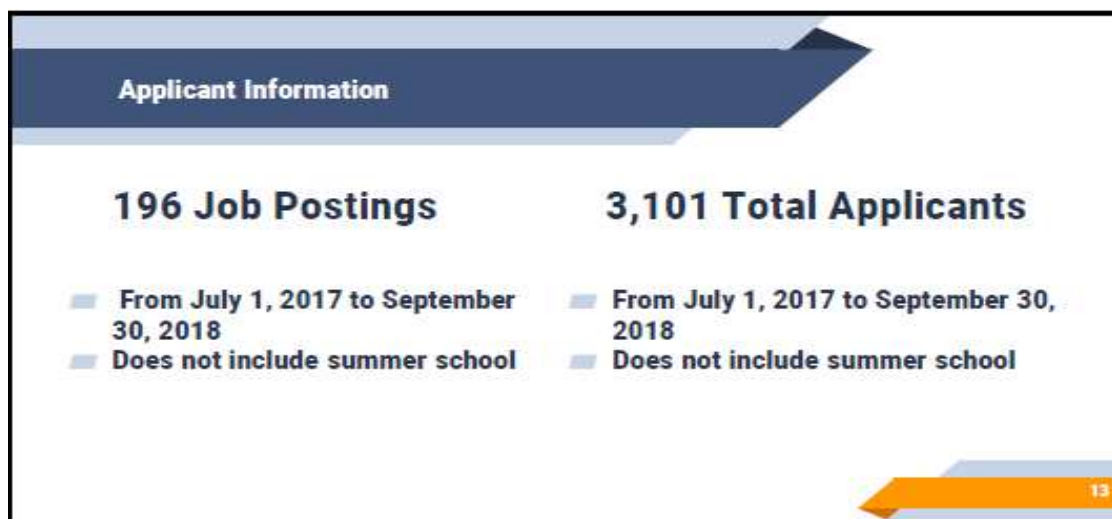
- Grow Your Own
- Partnering with colleges and universities in our area
 - Career fairs
 - We tried a reverse career fair this year and it was highly successful.



Not only do we strive to diversify our staff based on race, we also would like to diversify our staff based on gender. These are our current statistics.

Ask participants:

- How do they align with your district?
- What have you found successful in recruiting, hiring, and retaining in your districts?



What type of impact does the number of job openings have on your HR Department?

- Responsiveness
- Customer Service
- Delivery of onboarding tasks to new employees

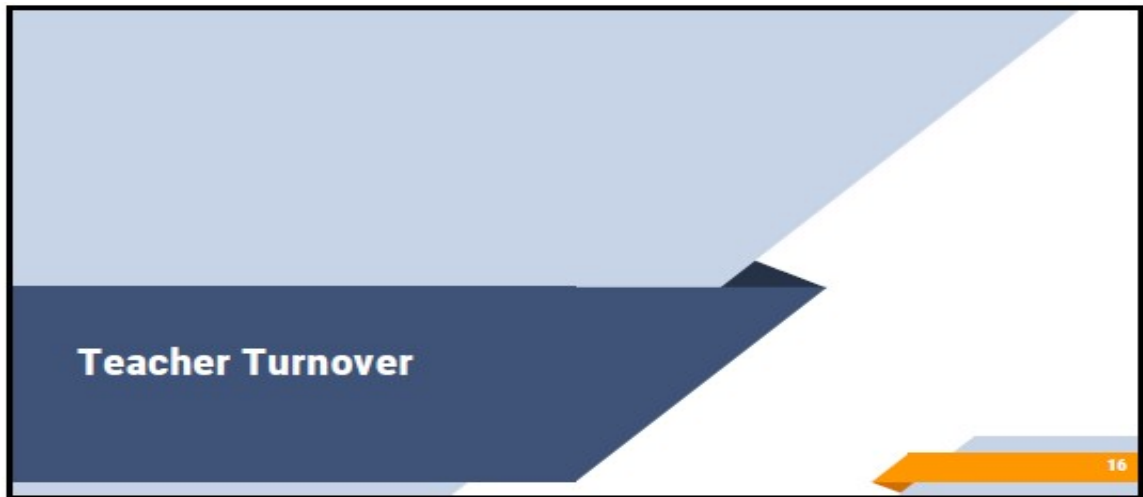
The cost of a bad hire needs to factor the number of hours it takes to execute the hiring process.

Ask the participants to share their thoughts on the number of job postings and the number of applicants processed in comparison to the size of our district.

Discussion Questions:

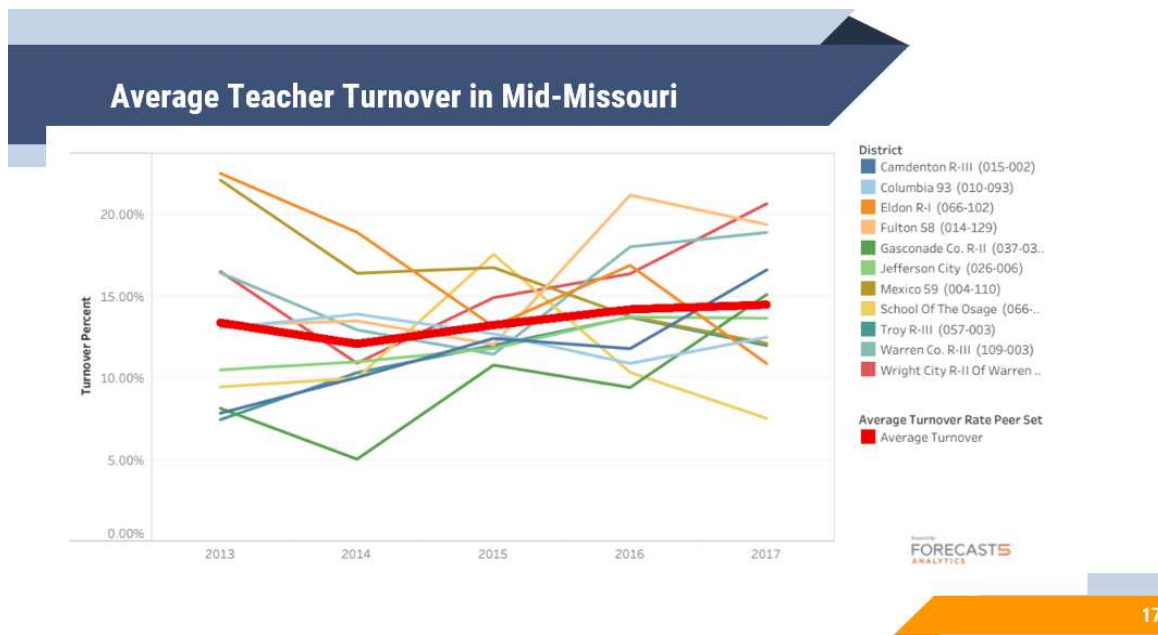
How can hiring process impact teacher turnover?

What can be done in the hiring process to increase retention and reduce turnover?

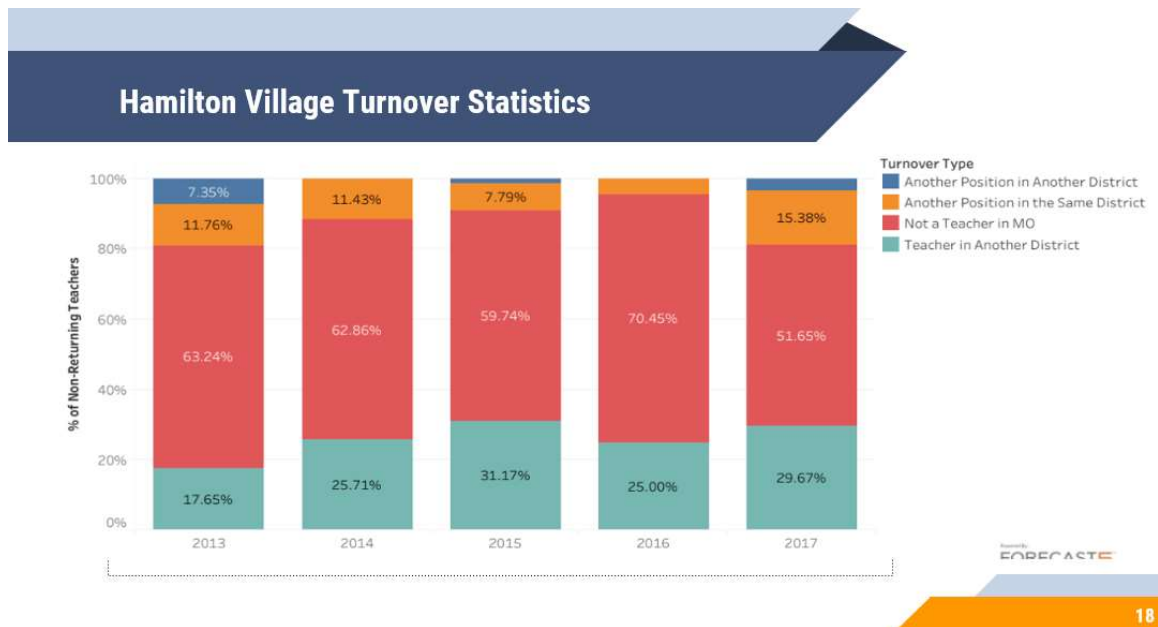


The field of K-12 education is facing a challenge. The number of educators entering the field is declining, a large number of teachers are leaving the profession, and the demand to provide a wide-variety of specialized services to students is growing: thus, the need to

hire high-quality teachers is at an all-time high (Carver-Thomas & Darling-Hammond, 2017)



Group discussion:
Based on DESE data, here are the average teacher turnover rates for eleven Mid-Missouri school districts. What do these statistics tell you?



If you were to analyze this data as an HR Director, what does this data tell you about HVSD teacher workforce?

Global Teacher Shortage



In 1975, 22% of all students in college were majoring in Education.

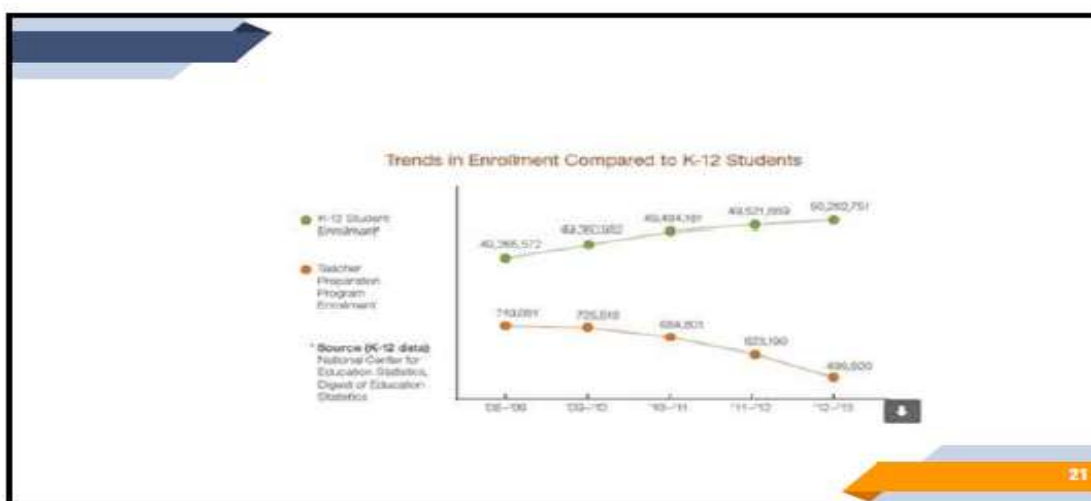
By 2015, it was down to 10% and a recent poll of students going to college found only 4.6% want to major in education.

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The information shared about HVSD is indicative of many school districts in our country. There is a crisis in education and we need to find ways to increase our educator workforce based on these frightening statistics:

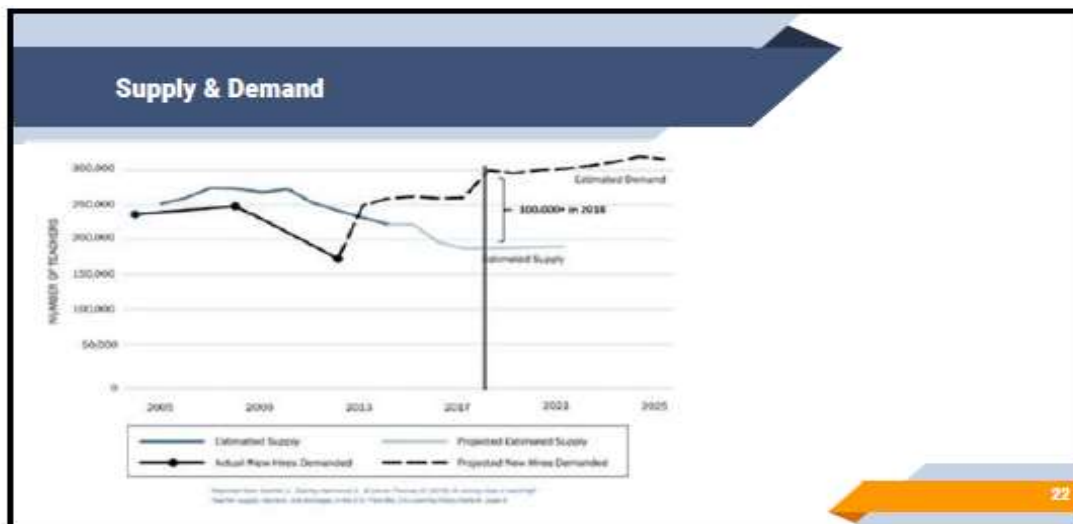
- In 1975, 33% of all students in college were majoring in education.
- By 2015, it was down to 10% and in 2019, only 4.6% planned to major in education.

Discussion question: What can we do about this?

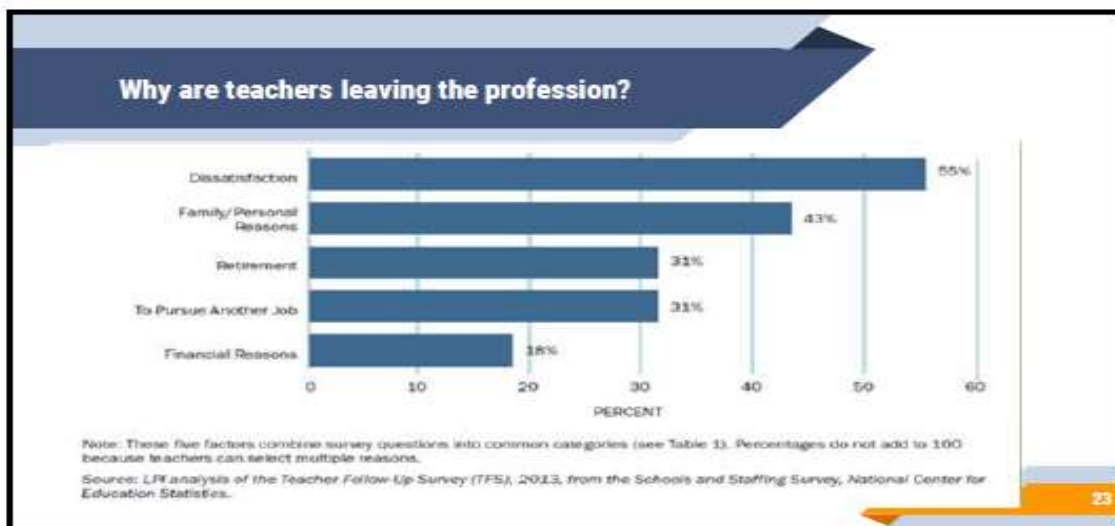


- Although this data is over 10 years old, the purpose of sharing this with you is that we knew what the trends were, so what have we done over the last two years to fix?
- The number of students who need to be educated in our schools is on the incline and the number of teachers entering the field of education is declining. What

have you done in your districts to help this trend? Are there opportunities we are missing?



- What does this information tell you?
- What concerns you about this information?
- What do we do about this?



One step to address the teacher shortage is to increase teacher retention. When teachers were asked why they were leaving the profession, the top five reasons were: dissatisfaction, family/personal reasons, retirement, to pursue another job, and financial reasons. What do you currently do in your districts to address #1: dissatisfaction?

What do teachers consider factors of dissatisfaction?


- Lack of leadership
- Assessment fatigue and pressure to perform

- High standards, little support
- Student behavior
- What else?

Identifying Fit in the Hiring Process

What is fit?

The basis for fit is the level of compatibility between employees and employers. It can be also be defined as the match between individual and environmental characteristics. (Holland, 1985/1997)

- How of you define fit?
 - How is it measured?
 - What objective measures do you have in your hiring process?
- 
- When we are able to identify the dissatisfaction factors, what are doing about it? Do we embrace feedback from disgruntled employees?
 - Current employees can deliver some of our best recruiting. Are we giving them something good to say?
 - Do you hire by committee?
 - The basis for P-E fit is the level of compatibility between employees and employers and can be defined as the match between individual and environmental characteristics. Discussion question: How do you identify “fit” in the hiring process?
 - Many times when people describe “fit” they are actually describing subjective feelings instead of objective fit.

Identifying the best teachers

Subjective measures, like resumes, provide limited information about the characteristics that influence success in schools.



- Subjective measures, like resumes, provides limited information about the characteristics that influence success in schools.
- Group discussion: what are objective measures that can and should be included in the hiring process?

How does HVSD identify the best teachers?

We use a screening assessment as part of our hiring process.

Can this assessment predict retention?



The screening assessment is the TPA (a pseudonym) which was developed by a research consortium. There are four scores our district obtains on each applicant

Question 1

What are the descriptive statistics of the teachers hired in the study from academic year (AY) 2018-2019 and AY 2019-2020 when disaggregated by gender, race, years of experience, and certification route?

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- Categories for gender = males and females
- Categories for race = white and non-white
- Categories for years of experience = 0, 1-4, 5-10, 11-15, 16+
- Categories for certification route = traditional and alternative

What the research says....

Quantitative Study: The use of an application screening assessment as a predictor of teacher retention at a Midwestern, K-12, public school district.

- This study examined the retention of new hires using the scores of an application screening assessment as a predictor.
- New hires' overall performance results on the screening assessment were compared to the retention of those hires after 1 year of employment.
- In addition to the overall scores, the impact of subscale results in the areas of cognitive ability, teaching skills, and attitudinal disposition were also compared to the retention of new hires.
- As the presentation will highlight, the study results indicate that differences exist in the application screening scores of new hires and their retention after 1 year of employment.

Disaggregated Data for Gender of New Teacher Hires at HVSD

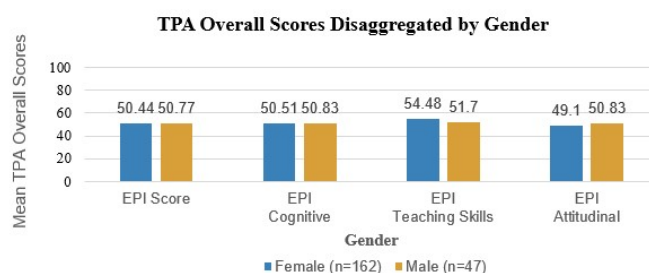
2018 and 2019 Disaggregated Data for Gender of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018-2019	New Teacher Hires AY 2018-2019
Total New Hire	123	89
Male	22	25
Female	100	62
Not-identified	1	2

Note: HVSD = Hamilton Village School District, Retrieved from HVSD Hiring Statistics, 2019

Disaggregated data for gender of new teacher hires at HVSD in AY2018 and AY 2019.

Assessment Results Disaggregated by Gender



The gender categories include male and female. The sample size was 209. This was a smaller sample size compared to the other disaggregated groups, as three individuals did not identify as male or female. Females had a significantly higher mean on the teaching skills subscale (54.48), while males had higher means on the overall score (50.77), cognitive subscale (50.83), and attitudinal subscale (50.83).

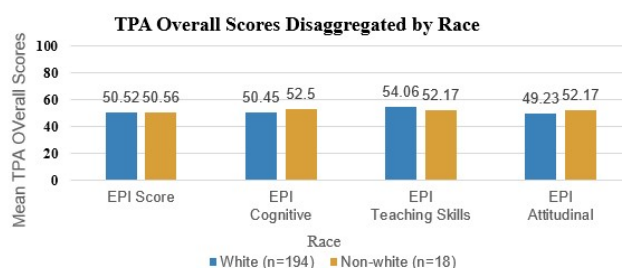
Disaggregated Data for Gender of New Teacher Hires at HVSD

2018 and 2019 Disaggregated Data for Race of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018-2019	New Teacher Hires AY 2018-2019
Total New Hire	123	89
White	112	82
Non-White	11	7

Disaggregated data for race of new teacher hires at HVSD in AY2018 and AY2019

Assessment Results Disaggregated by Race



The race categories include White and non-White. The overall mean scores were similar for White (50.52) and non-White teachers (50.56). The mean score for the teaching skills subscale was higher among White teachers, while non-White teachers had higher mean scores for the cognitive subscale (52.5) and attitudinal subscale (52.17).

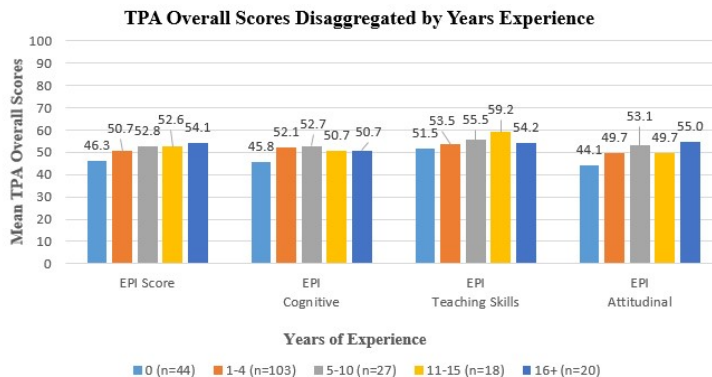
Disaggregated Data for Years of Teaching Experience of New Teacher Hires at HVSD

2018 and 2019 Disaggregated Data for Years of Experience of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018-2019	New Teacher Hires AY 2018-2019
Total New Hire	123	89
0-4 Years of Experience	60	44
5-10 Years of Experience	26	19
11-15 Years of Experience	17	14
16 + Years of Experience	20	12

Disaggregated Data for Years of Teaching Experience of New Teacher Hires at HVSD in AY2018 and AY2019.

Assessment Results Disaggregated by Years of Experience



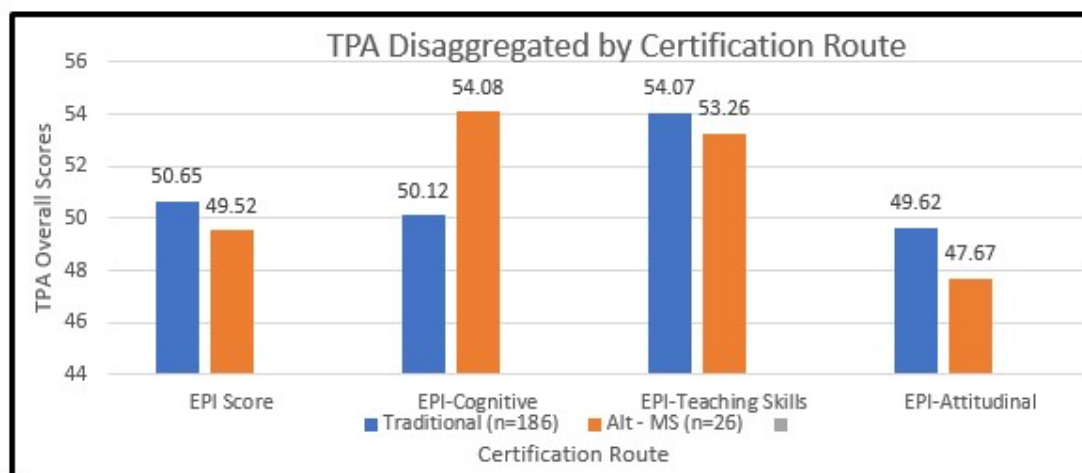
Teachers with 11–15 years of experience performed at a higher rate than those with fewer years of experience. Newer teachers had the lowest scores in all TPA categories. Lower attitudinal scores were found among teachers with more experience. Teachers with 16+ years of experience had a lower mean on teaching skills than those with 5–10 years of experience and 11–15 years of experience.

Disaggregated Data for Certification Route of New Teacher Hires at HVSD

Table 6
2018 and 2019 Disaggregated Data for Certification Route of New Teacher Hires at HVSD

Category	New Teacher Hires AY 2018–2019	New Teacher Hires AY 2018–2019
Total New Hire	123	89
Traditional Route	102	84
Alternative Route: Master's Program or other	21	5

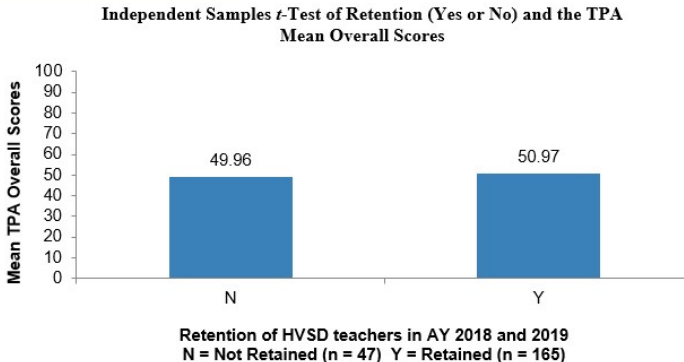
Note: Retrieved from HVSD Hiring Statistics, 2019



The certification categories include traditional route and alternative route. The sample size was 212. Teachers who completed a traditional route to certification scored higher in three of the four categories: overall scores, teaching skills, and attitudinal disposition.

What does the data tells us?

Is there a difference in educator retention based on overall scores on the TPA application screening assessment at HVSD during AY 2018 and AY 2019?

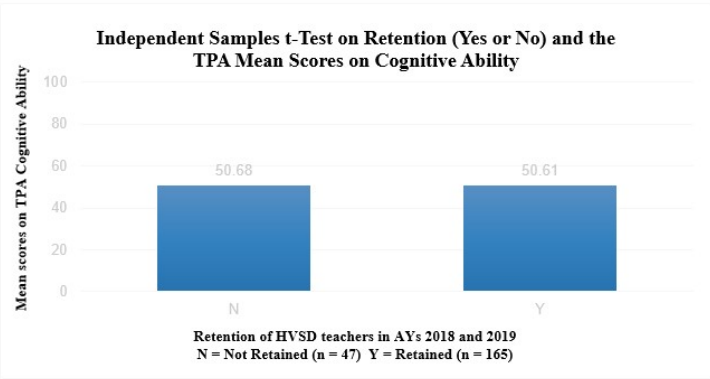


Research Question 2

- Why this information is important?
- What this information tells us and how does it inform our hiring practices?

What about cognitive ability?

Is there a difference in educator retention based on the cognitive ability sub-scale scores on the TPA application screening assessment at HVSD during AY 2018 and AY 2019?

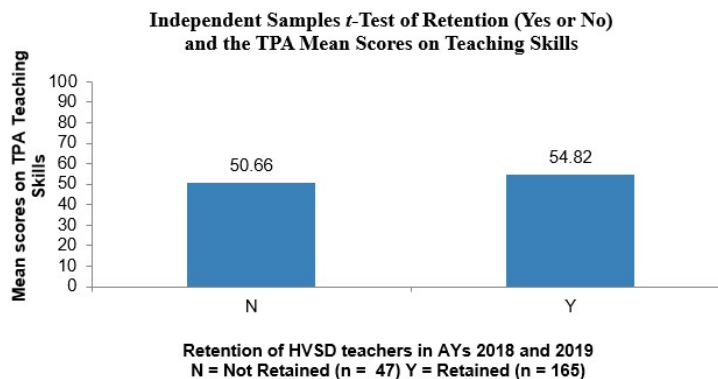


Research Question 3

- Why this information is important?
- What this information tells us and how does it inform our hiring practices?

What about teaching skills?

Is there a difference in educator retention based on the teaching skills sub-scale scores on the TPA application screening assessment at HVSD during AY 2018 and AY 2019?

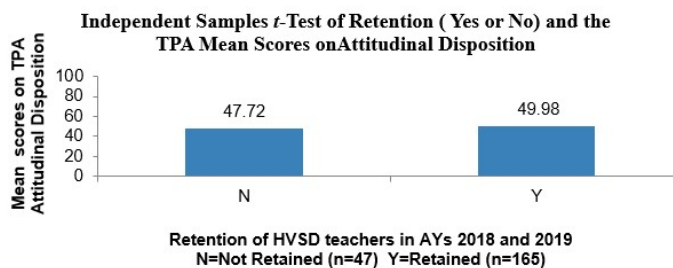


Research Question 4

- Why this information is important?
- What this information tells us and how does it inform our hiring practices?

What about attitudinal disposition?

Is there a difference in educator retention at HVSD during AY 2018 and AY 2019 based on the attitudinal disposition sub-scale scores on the TPA application screening assessment?



Research Question 5

- Why this information is important?
- What this information tells us and how does it inform our hiring practices?



Recommendations

- Successful retention of teachers involves providing enhanced hiring and induction practices
 - Collaborative and supportive environments that promote fit
 - Person-environment fit is related to job satisfaction, career satisfaction, and commitment
 - Identify the specific attributes worth looking at when trying to hire the right applicant
 - Schools should take an intra-individual approach when looking at potential hires to find which will meet the interests, needs, and values of environment
-
- Objective hiring practices that help to identify fit.
 - Focus on ways to promote employee engagement and collaboration.
 - Showcase these strategies when trying to hire new employees so they see your commitment to employee engagement and support.



Retention of Staff

- Build our Teacher Leaders
- Support Principals, Supervisors, & Managers as Human Capital Leaders
- Study Data Trends
- Growth Model Evaluation System
- Training Hiring Manager on effective recruiting and interviewing
- Climate & Culture Survey

Employee Engagement Focus

- Exit Interviews
- New hire follow-ups
- Turnover rates
- Absenteeism
- Results from Climate and Culture Survey



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- What are your metrics to measure employee engagement?
- If we are aware of these measures we can put energy into improving those areas and we can also highlight areas that may result in a high congruence of fit.



Questions



Comments



Suggestions

THANK YOU



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Opportunity for participants to ask questions, share comments, and offer suggestions.

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Resources

Fatemi, F. (2016). The true cost of a bad hire—It's more than you think. *Forbes*.

Holland, J.L. (1985). *Making vocational choices: A theory of vocational personalities and work environments*. Prentice Hall: Englewood Cliff, NJ.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. Psychological Assessment Resources.

Ingersoll, Richard M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499-534.

Ingersoll, Richard M. (2003). *Is there really a teacher shortage?* Seattle: University of Washington and Center for the Study of Teaching and Policy and The Consortium for Policy Research in Education.

Missouri Department of Elementary and Secondary Education. (2019b). *Teacher Recruitment and Retention*. Retrieved from <https://dese.mo.gov/educator-quality/recruitment-retention>.

Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators*. Palo Alto, CA: *Learning Policy Institute*.

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SECTION FIVE

Contribution To Scholarship

Target Journal

The target journal for publication is the *AASPA Perspectives*. This publication focuses on best practices in K–12 education human capital management.

Rationale for this Target

The primary purpose of *AASPA Perspectives* is to promote effective human resource practices within K–12 education through professional development activities and a broad-based resource network. Published quarterly, the magazine content focuses on best practices for school human capital management on topics of interview strategies, government regulations, recruitment ideas, and retention tips.

Outline for Proposed Manuscript

- Title (brief and precise description, 10–12 words)
- Abstract (200 word limit)
- Introduction
- Methods
- Results and discussion
- Summary
- Literature cites

Plan for Submission

Who: *AASPA Perspectives*

When: Fall 2020

How: Submit electronically to <https://aaspa.org/resources/aaspa-publications/>What: All articles must meet the following requirements:

- Approximately two pages
- Written in APA style

Title

The Use of an Application Screening Assessment as a Predictor of Teacher Retention at a Midwestern, K–12 Public School District

Abstract

The field of K-12 education is facing a challenge: the educator workforce is seeing a decline in the number of people entering the field, a large number of teachers are leaving the profession, and there is a growing demand to provide a wide-variety of specialized services to students. With these challenges, hiring high quality teachers is at an all-time high. School leaders need to find teachers who can increase student engagement but who are also a good fit with their school culture. The applicant pools are often slim and, in the absence of time, many school leaders engage in subjective hiring practices to make quick hires. This type of practice can yield bad teacher hires. Having objective measures as part of the hiring process could assist school leaders with identifying teachers who are a good fit for their school and ultimately increase the likelihood of retaining those teachers.

This quantitative study explored the use of an application screening assessment (TPA- a pseudonym) as a predictor of teacher retention at a Midwestern K-12 public school district. The results of this study will show an application screening assessment is

one tool that can be used in the hiring process and supports the idea that objective measures in the hiring process could increase teacher retention and improve the educator workforce. The study results indicate that differences exist in the application screening assessment scores of new hires and their retention after 1 year of employment. The study concludes with recommendations designed to aid school leaders in objective hiring practices that yield retention of teachers with strong fit to the organization.

Introduction

Hiring the right people is essential to the success of any organization (Fatemi, 2016). Investing in human capital management can improve the performance outcomes of an organization (Bassi & McMurrer, 2007; Konosk-Graf, Partelow, & Beaner, 2016). Using innovating hiring practices and focusing on retention are some of the suggested investments (Crook, 2011). As research shows, effective organizations attract top candidates by using innovative recruiting strategies and having selection processes that effectively evaluate employee fit (Poldolsky, Kini, Bishop, & Darling-Hammond, 2016). Building upon previous research, the purpose of this study is to investigate the use of a screening assessment in the hiring process for teachers as a way to measure fit (Holland, 1985/1997).

This study is important in the context of teacher retention. The number of teachers leaving the profession has substantially increased over the past two decades (Carver-Thomas & Darling-Hammond, 2017). Finding ways to improve teacher retention and reduce teacher attrition could greatly reduce the teacher shortage problem (Carver-Thomas & Darling-Hammond, 2017). By finding ways to improve retention, the

researcher hopes to positively contribute to the efforts of improving the educator workforce.

The teacher turnover rate in the United States is approximately 8% each year (Carver-Thomas & Darling-Hammond, 2017). The high turnover rate and a teacher shortage have resulted in a crisis in PK-12 education (Garcia & Weiss, 2019; Kullar & Cunningham, 2020). Researchers have concluded the teacher shortage is approximately 110,000 teachers each year, up from relatively no shortage in 2013 (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Teachers are leaving the profession for a variety of reasons. These reasons include dissatisfaction with accountability pressures, lack of administrative support, and undesirable working conditions (Carver-Thomas & Darling-Hammond, 2017). Creating information-rich hiring processes can result in identifying employees with good fit to the organization (Liu & Johnson, 2006).

This researcher attempted to assess whether an application screening assessment given to teacher candidates at a Midwestern K-12 public school district could predict teacher retention. The assessment used in this study was the Teacher Practitioner Assessment (a pseudonym). Upon completion of the Teacher Practitioner Assessment (TPA), each applicant receives an overall score. In addition to an overall score, TPA assessment results include the sub-scales of cognitive ability, teaching skills, and attitudinal disposition. The assessment scores were compared to the teacher retention data which was determined by the recommendation for re-employment.

By creating a predictive model for hiring managers and school leaders, the researcher may contribute valuable information towards improving the hiring practices of public schools. If school districts can use screening assessment scores as a predictor for

teacher retention, the possibility of using screening tools to establish fit within an organization may prove beneficial to K-12 school districts across the country.

Educator workforce. The educator workforce in the United States is facing a crisis. The number of K–12 students entering America’s schools is increasing and the number of teachers entering the profession is decreasing (Darling-Hammond, 2003; Sutchter et al., 2016; Gray & Taie, 2015). A total of 330 articles were written about the teacher shortage during the 2015–2016 academic year (AY), compared to the 24 articles written during the 2013–2014 AY (Sutchter et al., 2016). To compound the issue of teacher shortage, a large number of teachers will be retirement-eligible within the next 5 years (Missouri Department of Elementary and Secondary Education, n.d.-b; Sutchter et al., 2016). Over the past five years, the number of students enrolled in teacher preparation programs has decreased 35%, and the number of graduates from teacher preparation programs has decreased 23% (Sutchter et al., 2016). More than 50% of new teachers leave the teaching profession within their first 5 years and approximately 30% of new teachers leave after 1 year (Boogren, 2015; Ingersoll & Smith, 2004). In Missouri, a total of 3,028 individuals completed education preparation programs in 2017–2018, a decrease from the two previous years. A total of 3,868 individuals completed education preparation programs in 2016–2017 and 3,908 individuals completed programs in 2015–2016 (Missouri Department of Elementary and Secondary Education, n.d.-b). The hiring process for teachers is becoming extremely competitive; due to the status of the current educator workforce, schools are hiring teachers who are not highly qualified. This provides inequitable learning opportunities for students.

The growing teacher shortage and the current national attrition rate of 8% results in inequality among student experiences (Carver-Thomas & Darling-Hammond, 2017). The significant turnover rates for new teachers has adverse effects on the quality of education students receive (Barnes, Crowe, & Schaeffer, 2007). As a collaborative effort, higher education and K–12 education leaders are focused on recruiting individuals to the education profession and identifying ways to increase retention. Administrators have fewer positions to fill when fewer teachers leave the classroom before retirement (Missouri Department of Elementary and Secondary Education, n.d.-b).

Educator retention. Positive fit is directly related to increased job satisfaction and employee engagement (Holland, 1985/1997). Teachers who have positive perceptions about their work environment, colleagues, and leaders are more likely to remain in their schools due to their high levels of satisfaction (Johnson & Birkeland, 2003). Teachers have left the profession at alarming rates in recent years (Carver-Thomas & Darling-Hammond, 2017). A bad hire could cost an organization thousands of dollars (Fatemi, 2016). In addition to financial implications, bad hires have implications on student achievement, building culture, the stability of programming, and a decrease in institutional knowledge (Carver-Thomas & Darling-Hammond, 2017; Podolsky et al., 2016; Ronfeldt, Loeb, & Wyckoff, 2013). The high turnover and attrition rates increase schools' need to retain high-quality teachers to positively impact the educator workforce (Carver-Thomas & Darling-Hammond, 2017; Garcia & Weiss, 2019; Ingersoll, 2001; Johnson, 2007). Identifying and understanding the reasons why teachers are leaving the profession is a crucial step to address teacher retention.

Research Methods

Four research questions were answered in this quantitative study. Table 1 identifies the research questions, variables, and analyses information for this study. Continuous variables for this study are the overall and subscale scores on the application screening assessment.

Participants. The hiring data on new teachers at Hamilton Village School District (HVSD; an acronym) for the 2018–2019 AY and 2019–2020 AY was used in this quantitative study. New teachers take the TPA as part of the application process. Selecting individuals for this study was based on TPA participation and performance. The total number of new teacher hires was 123 in 2018 and 89 in 2019. The total number was 212 new teachers ($N = 212$). Retention of the new teachers was determined by the recommendation for reemployment the following school year.

Data collection tools. Ethical practices should be embedded throughout the research process, which includes the collection, analysis, and reporting of the data (Creswell, 2014). Hiring statistics for HVSD were obtained for this study. Liberty Academy (a pseudonym), an education technology software company, facilitated the TPA. TPA results were obtained from the HVSD; HVSD archives individual performance data. Permission to use the data was obtained from the HVSD. The superintendent of HVSD granted official permission in the form of a letter in the absence of a school board policy regarding the institutional review board process. To protect the anonymity of the superintendent and the school district, this letter can be found with the secured data in this study. The researcher completed the University of Missouri-Columbia institutional review board approval process.

The HVSD hiring statistics were obtained from HVSD, which included demographics of new teacher hires and fall-to-fall retention data. All individuals and information were de-identified during the data collection, storage, and analysis to protect the identity of the new teacher hires.

To protect the privacy of the school district, the name of the institution was anonymized throughout this study (Field, 2018). The researcher did not intend to expose the hiring process deficiencies of the school district; instead, the results of the study are to highlight the need to improve hiring practices to increase employee retention.

Limitations

A potential limitation of the study is the fact that HVSD has no control over who applies for available positions. Many variables determine who is hired at HVSD. These variables include school leader perceptions of the applicants, the needs of the school, and the overall depth of the candidate pool.

Another potential limitation in this study are the many variables used to determine teacher retention. These variables include formative and summative data from classroom observations and school leader perceptions of the teacher.

A third potential limitation in this study is a teacher candidate's effort on the TPA. Additionally, the environment in which the assessment was taken was not considered. For example, test results would be skewed if a candidate rushed through the assessment or randomly selected answers. Candidate behavior is not a factor; therefore, it is treated as a limitation.

A fourth potential limitation in this study is the school climate and culture in which a teacher is employed. Climate and culture defines a school's persona, and the

assumptions, unwritten rules, and unspoken beliefs in a school can shape how its members think and do their jobs. This study did not assess school climate and culture; therefore, the impact of the school's climate and culture on teacher performance is treated as a limitation.

Lastly, school leadership effectiveness is considered a limitation. Leadership is essential in creating effective schools (Freiberg & Stein, 1999; Blase & Kirby, 2008; Donaldson, 2001; Sergiovanni, 2001; Snowden & Gorton, 1998). Ultimately, the relationships that shape the culture and climate of the school are strongly influenced by the school principal. It is vital that future researchers consider this type of limitation when replicating this study (Creswell, 2014).

Table 1
Research Questions, Variables, and Analyses

Research Questions	Independent Variable	Dependent Variable	Data Type	Statistical Analysis
1. At HVSD, what are the descriptive statistics of the teachers hired in the study from the 2018–2019 AY and 2019–2020 AY and what are their TPA scores when disaggregated by gender, race, years of experience, and certification route?			Categorical & Continuous	Frequencies, disaggregated means, and standard deviations
2. At HVSD, is there a difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA overall score	Continuous	<i>t</i> -test
3. At HVSD, is there a difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA cognitive ability subscale score	Continuous	<i>t</i> -test
4. At HVSD, is there a difference between the TPA teaching skills sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA teaching skills subscale score	Continuous	<i>t</i> -test
5. At HVSD, is there a difference between the TPA attitudinal disposition sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY?	Teacher Retention	TPA attitudinal disposition subscale score	Continuous	<i>t</i> -test

Note. TPA = Teacher Practitioner Assessment

Results and Discussion

Research question 1. The first research question was as follows: At HVSD, what are the descriptive statistics of the teachers hired in the study from the 2018–2019 AY and 2019–2020 AY and what are their TPA scores when disaggregated by gender, race, years of experience, and certification route? When considering the disaggregated data, new teachers with no experience had the lowest mean scores on all four categories.

Teachers with 16+ years of teaching experience had the highest overall but had the highest mean scores on teaching skills. These results support the research on teacher retention. Teachers new to the profession leave at alarming rates during the first 5 years of teaching (Kullar & Cunningham, 2020).

New teacher hires at HVSD who completed the traditional certification route had higher mean overall TPA scores than teachers who completed non-traditional routes. These same teachers also scored higher in teaching skills and attitudinal disposition. Those who completed an alternative route had higher scores in cognitive ability.

Male new teacher hires had higher mean scores in three of the four TPA categories; however, male new hires had a lower retention rate than female new hires. Females had higher mean scores on the TPA teaching skills subscale. Previous literature asserted that the TPA teaching skills subscale scores are higher for individuals who have been retained after 1 year of employment; this assertion is supported by the study findings. Further research is needed to identify why male teachers have a lower retention rate and to determine what teaching skill competencies male teachers are lacking.

When disaggregating data for the race of new hires at HVSD, White and non-White teachers' mean scores differed by .04. These results may be useful to studies highlighting equity in the educator workforce.

Research question 2. The second research question was as follows: At HVSD, is there a difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean overall TPA scores of new teacher hires at HVSD to their retention after 1 year of employment. Results were statistically significant.

Research question 3. The third research question was as follows: At HVSD, is there a difference between the TPA cognitive ability subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean overall TPA scores of new teacher hires at HVSD to their retention after 1 year of employment. Results were statistically insignificant.

A significant difference did not exist between the TPA cognitive ability subscale scores of teachers who were retained and those who were not. Only 11% of the total questions on the TPA address cognitive ability competencies. This information will be useful to share with school leaders as leaders evaluate the TPA scores of their new hires when making hiring decisions.

Research question 4. The fourth research question was as follows: At HVSD, is there a difference between the TPA teaching skills subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean teaching skills subscale scores to teacher retention. Results were statistically significant.

A majority of the questions (56%) on the TPA assess the teaching skills competencies. This information will be beneficial to school leaders as they are making hiring decisions. Understanding new hires' knowledge of teaching skills is a valuable measurement in identifying teacher fit.

Research question 5. The fifth research question was as follows: At HVSD, is there a difference between the TPA attitudinal disposition subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared

the mean attitudinal disposition TPA scores of new teacher hires at HVSD to their retention after 1 year of employment. Results were statistically insignificant.

Attitudinal disposition has been identified as a measure to determine employee fit (Van Vianen, 2018). A statistical difference was not present between the TPA attitudinal disposition subscale scores of retained and not retained new hires. Further research could be done to determine if attitudinal disposition scores have an impact on teacher fit.

Conclusion

The TPA application screening is one tool that can be used in the hiring process. The study findings indicate that investing funds in an application screening assessment can assist school districts with identifying teachers with the right fit. Using a hiring tool with objective data can provide principals with information to support employees and ultimately increase retention and decrease the expense of bad hires. The educator workforce can be improved through increased retention. The study findings support further research on identifying teacher fit through the application screening assessment as a way to predict retention.

Recommendations

The researcher was able to make recommendations through highlighting the impact of the TPA screening on teacher retention at HVSD. These recommendations include the application of person-environment (P-E) fit (Holland, 1985/1997) and future research opportunities for HVSD. Each recommendation is addressed in this section.

Application of P-E fit. P-E fit is the match between individuals and environmental characteristics (Holland 1985/1997; Caplan, 1985). With a decreasing educator workforce, fit must be identified during the hiring process with the hopes of

increasing retention. An increase in retention would prevent schools from needing to hire as many teachers from a declining educator pipeline (Garcia & Weiss, 2019).

HVSD should continue to use the TPA as part of the hiring process. This objective measurement assists school leaders in making informed hiring decisions, identifying the fit of teachers, and puts measures in place to support new teachers. The cost of the TPA is roughly \$20,000; however, \$20,000 is the cost of one bad hire (Fatemi, 2016). Bad hires have financial and cultural implications on schools and threaten student achievement (Ingersoll, 2001). The study data indicates that the return on investment of the TPA could be justified by HVSD as well as other schools utilizing the TPA as part of the hiring process.

Summary

HVSD has a structural organization similar to other K–12 school districts in the United States. The district leadership team at HVSD possesses a variety of leadership styles to guide the mission and vision of the school district. These styles include situational leadership, leader-member exchange, and adaptive leadership.

District leaders are committed to hiring employees with good fit in an effort to retain high quality staff. People are the most important investment of an organization (Bolman & Deal, 2013). It is essential that organizations have a strong understanding of human capital management. The use of subjective measures in the hiring process should be decreased to better identify fit, thus improving hiring practices and employee retention.

This study may provide insight on the impact of identifying fit in the hiring process. Furthermore, the P-E fit theory could help conceptualize hiring practices to improve employee engagement and increase student achievement.

Teaching students is important work and most educators have a desire to do well for their students and for their profession; however, altruism cannot be the only measure to attract and retain highly effective candidates to the profession. When hiring for fit, long-term success for individuals creates long-term success for organizations.

Human capital management is an essential component to the success of any organization, including K–12 schools. School leaders have a growing need to recruit, hire, and retain high-quality teachers (Daresh & Daresh, 2013). The inability of a school to retain a sufficient number of high-performing teachers has a significant impact on student achievement. Deficiencies in K–12 education hiring practices often result in hiring individuals with a low level of fit. The use of objective measures in hiring practices would assist schools in determining the fit of a candidate before offering an employment opportunity. Hiring teachers with a high level of fit may result in increased job satisfaction, engagement, and performance: the very characteristics that can increase the likelihood of teacher retention.

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SECTION 6

Scholarly Practitioner Reflection

I know I must be constantly learning to be the best leader I can be. I have had the opportunity to reflect on my skills, learn new strategies, and gain confidence in my leadership abilities throughout my experience in the educational leadership and policy analysis doctoral program at the University of Missouri-Columbia. Leaders of the most successful school systems influence results by maximizing their own performance: “Accountable leadership means leaders consistently perform certain behaviors using targeted tools and techniques that create the excellence needed to provide the highest-quality educational experiences for students and their families” (Studer & Pilcher, 2015, p. 43). Numerous and meaningful learning opportunities have broadened my horizons, enabled me to lead others effectively, and inspired my colleagues to be better versions of themselves. Understanding my strengths and growth opportunities are critical components of effective leadership (Schein, 2010). I aspire to be an accountable and effective leader; through this reflection, I have highlighted my growth as a learner and the application of my learning.

Leadership Theory and Practice

One of my most profound learning opportunities was taking the StrengthsQuest assessment (Gallup, 2017) to identify my five strengths. Throughout my doctoral journey, I have made it a priority to capitalize on my strengths (belief, responsibility, significance, restorative, and discipline) as a learner, leader, and change agent. Individuals with the belief strength are known to work long hours on tasks rooted in worthy causes (Clifton,

Anderson, & Schreiner, 2006). As human resource director for a K–12 public school district, I believe my success comes from knowing what I value and believe. I work tirelessly to provide meaningful personal and professional development opportunities for all of our staff. Conscientiousness, diligence, and trustworthiness were identified as strengths by my colleagues when completing the leadership trait questionnaire (Northouse, 2016). This assessment validated my knowledge-base, my ability to understand what to do in challenging situations, and my mission to do what is right for the success of our people and our organization. George, Sims, McLean, and Mayer (2007) state the following about authentic leadership.

Authentic leaders recognize that leadership is not about their success or about getting loyal subordinates to follow them. They know the key to a successful organization is having empowered leaders at all levels, including those who have no direct reports. They not only inspire those around them; they empower those individuals to step up and lead. (p. 137)

People want to know their leaders are knowledgeable and confident (Northouse, 2016). Preskill and Brookfield (2009) stated that “hope will not make change happen, but without hope, change is impossible” (p. 175). Change will not happen if people do not have confidence in leadership (Bolman & Deal, 2013).

Creating a vision and providing hope are crucial to the success of an organization (Dufour & Marzano, 2011). I play a significant role on our district leadership team by using my adaptive leadership strengths. I can regulate distress, recognize challenges, identify barriers to possible solutions, and put strategic improvement measures in place (Northouse, 2016). Using my strengths, I remain calm in times of adversity, stay positive

and encourage others, and assist in achieving our vision of becoming a premier school district.

Agents of change must identify problems, determine needs, and put measures in place to improve (Jansson, 2013). The idea of “we have always done it this way” seems to be a common theme in our organization. As a district leadership team, we often ask ourselves, “Why do our people not like change and how can we convince them of the need to make changes?” We must communicate why we make the decisions we do, establish goals, provide support and training to meet those goals, and use metrics to monitor our progress and success (Northouse 2016). Support and training for employees are pieces lacking within our organization. Change agents are needed to create a learning culture (Gill, 2010). People must know where data comes from in order to understand it (Bolling & Zetzmeyer, 2014). More importantly, people must have metrics in place to ensure the right information is being collected to measure desired outcomes (Spikard, 2017). More importantly, our organization has recognized that making data-driven decisions must be our norm. Data-driven decisions require us to communicate the “why” to convince our stakeholders of the importance of our data, especially when data does not correlate with opinions (Cardoza & Gold, 2018).

I had the privilege of working on a leadership case study project during the Fall 2017 semester. Through this opportunity, my group and I had the honor of interviewing the Missouri Secretary of State and members of his staff. We were excited about the possibility of seeing the political frame in action; however, we witnessed overwhelming evidence of the human resources frame during our interviews and observations of the office climate and culture. As outlined by Bolman and Deal (2013), useful human

resource strategies can exist in all organizations because success happens through people. Bolman and Deal also described the human resource framework as: “the relationship between people and organizations. Organizations need people...and people need organization...a good fit benefits both: individuals find meaningful and satisfying work, and organizations get the talent and energy they need to succeed” (p. 135). Bolman and Deal further stated, “(w)hen individuals find satisfaction and meaning in work, organizations profit from the effective use of their talent and energy” (p. 159).

Working as a public school leader requires me to be an adaptive leader. I must “give(s) the work back to the people” to avoid micromanaging (Northouse, 2016, p. 270). Northouse (2016) wrote, “Adaptive work develops from the communication process that occurs between the leader and followers but is primarily the work of the followers” (p. 273). It is vital to hire the right people and put them in positions where they can succeed. Influential leaders empower others, and leaders who try to micromanage hinder the success of the organization (Northouse, 2016).

The essential features of the human resource frame are to provide training to develop new skills, encourage involvement and participation among all employees, and provide the necessary support to promote success (Bolman & Deal, 2013). Our quality improvement director believes that our organization must invest in our employees by providing personal and professional development opportunities to maximize the effectiveness of our school district (B. Hatfield, personal communication, 2018). It is important to match individuals to appropriate roles to maximize the efficiency of the organization (Bolman & Deal, 2013).

In an excerpt from *HBR's 10 Must Reads On Leadership*, Gittel, Douglass, Ancona, Backman, and Parrot (2011) state that “It’s time to end the myth of the complete leader: the flawless person at the top who’s got it all figured out...no one person could possibly stay on top of everything” (p. 179–180). I feel my ability to empower and invest in others has allowed me to be successful throughout my career in education. My strengths enable me to be in-tune with the needs of others, I have the discernment to respond accordingly, and I take a practical approach to decision-making. As a learner, leader, and change agent, I understand my values and beliefs and use my skills of collaboration and communication to set others up for success (Clifton et al., 2006). As servant leaders, our district leadership is committed to providing praise and appreciation to all employees in hopes of retaining employees as happy and engaged aspects of our organization (Northouse, 2016).

Organizational Analysis

Organizational analysis is the process of appraising the growth, personnel, operations, and work environment of an entity to identify problems and eliminate barriers to the success of the organization (Jansson, 2013). The structural frame assumes that organizations have a structure that fits the context, that roles are clearly defined, and that problem management occurs through problem-solving (Bolman & Deal, 2013). Such an arrangement creates clear roles and assigned responsibilities: “Roles are one of the basic building blocks of successful team performance” (Levi, 2017, p. 7). Thus, having a very structured department can aid in performance. Organizations can be defined as an entity that completes the goals of its design through outlined procedures, specific roles, and authority given to positions (Weick, 2012). Our district aligns well with these ideas of an

organization. Group characteristics can influence team success (Levi, 2017); having clear and direct goals with defined responsibilities for each group member sets a group up for success (Bolman & Deal, 2013).

One of our district goals is to improve the climate and culture of our organization (HVSD, 2018). Under the direction of our superintendent, the quality improvement director and I administered the panorama climate and culture survey to all 1500 of our employees. From the data obtained, we conducted focus groups in each of our 19 buildings. Focus groups are an avenue to collect data of interest by exploring perceptions and feelings of the people being studied (Krueger & Casey, 2015). A focus group is a small collection of participants who—when involved in a conversation—lead to the creation of qualitative data (Krueger & Casey, 2015). The views and opinions of the focus group participants can be considered qualitative data if captured by qualitative procedures (Creswell, 2014). Focus groups are particularly suited to the study of attitudes and experiences (Kitzinger, 1995). The focus group process allowed us to obtain qualitative data to identify the strengths and growth opportunities of our organization. We used inquiry methods to get information from our qualitative research, which provided us with usable data on the paradigms of stakeholders and ways to improve our district

We used numerous sources of data to effectively evaluate our programs for ongoing and systemic improvement (Cafferella & Daffron, 2012). Program evaluations were completed to engage in outcome-based decision-making. This evaluation process is designed to identify effectiveness measures of program operations and determine if the desired outcomes are met (Caffarella & Daffron, 2012; Newcomer, Hatry, & Wholey, 2015). The interactive model of program planning identifies the critical components of

obtaining and analyzing data (Cafferrella & Daffron, 2012). Stakeholders must be involved in the process of collecting and analyzing the data to effectively evaluate programs (Bryson, Patton, & Bowman, 2011; Newcomer et al., 2015). We used survey feedback to address the numerous needs of our employees, including the need for professional development opportunities, facility upgrades, instructional resource upgrades, and safety. All of these measures improved employee engagement and improved the learning environment for our students.

Policy Analysis

A 7-member school board is a governing body for public K–12 school districts in the state of Missouri (Missouri School Boards' Association, n.d.). This body of individuals is responsible for creating the policies that govern the district. Some of the areas include school administration, fiscal management, facilities development, personnel, students, and school-community relations (Missouri School Boards' Association, n.d.). The process of adopting policy is outlined in Missouri School Boards' Association board policy BF: "The Board of Education shall determine the policies to serve as a basis for the administration of the school district. The formulation, development, adoption, and revision of written policies is a Board function and adopted policies are among the Board's governing documents" (Missouri School Boards' Association, 2018). One of my primary roles as human resource director is to serve as the district's compliance officer. A compliance officer is primarily responsible for overseeing and managing compliance issues as they apply to the policies that govern our school district (Missouri School Boards' Association, n.d.). In this role, I am responsible for enforcing policies and ensuring that our staff has all been given adequate training for

understanding the policies. As outlined in Missouri School Boards' Association board policy BF: "The Board of Education may adopt, amend or rescind policies upon a majority vote of the members during a legally constituted meeting (Missouri School Boards' Association, n.d.).

An example of a recent policy analysis involved the hiring practices at our school district. Based on board policy GBEB, the superintendent or designee determines when an applicant can or cannot be employed by a school district (Missouri School Boards' Association, n.d.). This subjective process is scrutinized because some feel that individuals with any criminal background should not be hired, and others feel that not hiring individuals because of their past is discriminatory. We used Bardach & Patashnik's (2016) eightfold steps model as well as public policy and scholarly articles to develop and apply clearly defined criteria to board policy GBEB. These efforts assisted hiring managers in making informed decisions when hiring individuals with criminal backgrounds.

The number of applicants for certified and classified positions throughout our district has decreased. Our goal is to recruit, hire, and retain high-quality employees. The number of applicants for all positions who have criminal backgrounds has steadily increased in the last 3 years. We continually evaluate our hiring practices as we strive to recruit, hire, and retain high-quality employees. Missouri School Boards' Association board policy states to "exclude any applicant if the background check reveals behavior that would make him or her unsuitable for the position in the discretion of the superintendent or designee" (Missouri School Boards' Association, n.d.). This policy is subjective and left to the interpretation of those who receive the criminal background

check (A. Woods, personal communication, 2018). Based on this information, our practices could be considered discriminatory if other factors are not considered in the hiring process. Background checks are designed to prevent bad hires, but this cannot be the only method for screening applicants (HVSD, 2018).

Board policy GBEC outlines Missouri school districts' policy on criminal background checks (Missouri School Boards' Association, 2018). When comparing our district with other districts of comparable size, policies are consistent and the same subjective language is used: "individuals convicted of behavior that is violent or harmful to children or adults...or...if the background check reveals behavior that would make him or her unsuitable for the position in the discretion of the superintendent or designee" (Missouri School Boards' Association, 2018).

Clearly defined vocabulary are needed to enforce and execute this policy properly. These terms include violent and harmful. Violent crimes are incidents such as mass killings, sniper murders, and serial killings (Federal Bureau of Investigation, 2018). According to board policy, discretion is very loosely written without definitions. This complicates the decision-making process due to personal convictions and personal opinions on how these terms should be defined and enforced.

Bardach and Patashnik (2016) described the alternative in policy analysis as "alternative strategies of intervention to solve or mitigate the problem" (p. 18). Properly training hiring managers on the importance of prescriptive on-boarding and support for new employees is necessary for employee retention and increased employee engagement (Bolman & Deal, 2013). School leaders must focus on building relationships and understanding employees to increase employee retention and success (Bolman & Deal,

2013). This can be done through an on-site mentoring programs, job-specific training, and leadership growth opportunities (Society for Human Resource Management, 2019).

The Revised Missouri State Statute 171.011 allows for school districts to have local control of their policies and procedures (Justia U.S. Law, 2018). Most Missouri school districts use the Missouri School Boards' Association for guidance and recommendations on policy adoption while taking into consideration the laws that govern schools. The Equal Employment Opportunity Commission (2018) suggests that excluding job applicants who have criminal records may constitute employment discrimination under Title VII of the Civil Rights Act (U.S. Equal Employment Opportunity Commission, 2018). Employers should not ask about convictions on job applications; inquiries should be limited to convictions for which exclusions are based on job-specific requirements. Employers should avoid policies that automatically exclude people from employment based on only certain criteria (such as criminal status). These policies are referred to as blanket exclusion policies. Employers should avoid hiring practices that result in adverse impact for a protected group, such as race or national origin.

As a human resource director, I want to ensure that the organization does our part to recruit, hire, and retain new hires who have the necessary skills, talents, and character to positively contribute to the success of our school district. We recognize our application, screening tools, and background checks play a pivotal role in our overall hiring process. The school board is the governing body of a school district (Missouri School Boards' Association, 2018); therefore, I can only make recommendations to modify policies. My recommendations are vetted through the school board policy committee, studied by our school attorneys, and recommendations are made to the school

board for final approval. Practices and processes are put into place if my recommendations are adopted and all stakeholders are informed of the changes. We are committed to quality improvement; our practice continually evaluates our processes to ensure that we are putting the very best employees in positions where they can be successful personally and professionally.

Content and Context for Learning

I believe all individuals—regardless of age or ability—can learn, and my actions are reflective of that. As a teacher, I took great pride in finding ways to help all of my students learn. As a school administrator and now as a human resource director, I believe in the power of teaching others. I must be a great learner to be a great teacher. I must know and understand my learners and the content, and I am constantly reflective. Adults often learn through personal reflection (Gill, 2010; Chen, 2014). My significance strength indicates that personal reflection is a critical element of my learning (Clifton et al., 2006).

My restorative strength leads me to continually looking for solutions to problems (Clifton et al., 2006). Reflective practices and creating a learning community helps adults learn from experience (Merriam & Bierema, 2014). Through my reflections and due to my responsibility and discipline strengths, I must put things into action to expand my learning (Clifton et al., 2006). Being resourceful, asking many questions, and seeking input from others affords me many meaningful and essential learning opportunities. The members of our organization rely on me to provide learning opportunities for our employees. Employee success is reflective of my ability to lead; this idea is reiterated by Bolman and Deal (2013): “Under trained workers harm organizations in many ways: shoddy quality, poor service, higher costs, and costly mistakes” (p. 146). Providing

proper training and support to new employees is one of the most important tasks I have as a human resource director. The success of our organization is due in large part to ensuring individuals have the right skills and knowledge to complete the desired work (Levi, 2017). Establishing professional growth plans as part of our onboarding process identifies the strengths of employees as well as their growth opportunities. This allows managers and supervisors to provide individualized help and support for their employees. Leaders of learners must identify the needs of their employees, be able to communicate effectively, and empower others to lead and learn (Wren, 1995).

One avenue to achieving excellence in an organization is to focus on individual needs and learning styles (Gill, 2010). Four levels of learning exist in an organization: individual, team, organization, and society (Watkins & Marsick, 1993). These levels of learning are all interconnected (Gill, 2010). Individuals must be called upon to learn continuously in a learning organization (Watkins & Marsick, 1993). At our district, all individuals are expected to learn and grow for all roles they perform in the organization. For a team to learn, the team must collaborate with one another through listening, asking questions, and being open to others' perspectives. A learning organization features a learning culture, structures that are focused on relationships, strategies that are innovative and creative, and employees who feel empowered to tackle problems (Watkins & Marsick, 1993). Team-based learning is a critical component of a learning organization (Watkins & Marsick, 1993). For team-based learning to take place, teams must effectively set goals, partake in focused planning, have effective communication, and trust each other (Bolman & Deal, 2013; Lencioni, 1995; Levi, 2017). Learning

organizations should move towards a shared vision to enable individuals at all levels to lead and take action for the organization (Watkins & Marsick, 1993).

Diversity and Ethics

Johnson (2018) stated that being aware of potential bias is essential: “Awareness is something that we either maintain in the moment, or we don’t. And the only way to hang on to that awareness is to make it part of our lives” (p. 116). I want to surround myself with others who have differing views or varying experiences. I feel this helps me to expand my thinking. One may not know their personal biases until they are in situations that challenge their thinking (Johnson, 2018).

I have the huge responsibility of recruiting, hiring, and retaining high-quality staff. As the director of the human resources my goal is to create a fierce sense of urgency to combat our challenges in order to best meet the needs of our students. Like most school districts, having our staff population mirror our student population is a goal of our district. The district is not currently meeting this goal (Missouri Department of Elementary and Secondary Education, n.d.-a). Thankfully, we have partnered with other districts, the Department of Elementary and Secondary Education, as well as a local university to work collaboratively on the issue. We are using our data and resources to create a climate of shared responsibility. As we strive to diversify our staff, we continually look for ways to increase our recruitment practices. Our ultimate goals are to treat applicants fairly and in compliance with the law. Establishing standards of behavior for all of our employees is crucial in identifying, enforcing, and maintaining expectations to keep operational consistency. Two of our primary goals are to effectively communicate our policies and expectations and provide the necessary support when

employees fall short of expectations. We aim to increase our applicant pool to hire the very best people. The mission of our school district is to be the premier school district in Missouri. To carry out that mission, we must invest our time, energy, and effort into our most important job, which is hiring the best people to educate our students.

Successful organizations know and understand the impact of organizational diversity (McGrath, Berdahl, & Arrow, 1995). Data can be embraced through accountability measures (Datnow & Park, 2014), and our organization is attempting to implement these measures. Some of this data includes metrics to monitor our application and hiring process, measure the climate and culture of our district, and monitor the development of our people. We have created an Equity Council, which is a task force made up of community members and members of our school district. We have identified three areas of focus to help us provide equitable opportunities for our students and staff: access and success for all, community engagement, and education relationships. We have established goals and outcomes with a sense of urgency, and we analyze and discuss these goals and outcomes at our quarterly meetings. Ongoing data analysis is an essential component of accountability for our school district. As our motto suggests, we are “raising the bar” to give all of our students the most significant opportunity for success.

Conclusion

Covey (2013) stated that “Leadership is communicating others’ worth and potential so clearly that they are inspired to see it in themselves” (p. 98). Change will not happen when leaders are afraid to confront the uncomfortable (Datnow & Park, 2014); it takes diligent work and effort to use data to truly bring about change. Administrators and supervisors can meet individual needs through using the human resource frame and

understanding employee strengths and growth opportunities (Bolman & Deal, 2013). Employers must invest time and resources in their personal and professional development to have committed and talented employees (Bolman & Deal, 2013). Equitable practices, policies, and patterns allow an organization to truly focus on the wants and needs of their people.

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APPENDIX A**IRB Approval****MU eCompliance****IRB Determination Notice Project #2020748 Review #261160**

Project #2020748

Project Title: THE USE OF AN APPLICATION SCREENING ASSESSMENT AS A PREDICTOR OF TEACHER RETENTION AT A MIDWESTERN, K-12, PUBLIC SCHOOL DISTRICT

Principal Investigator: Shelby Scarbrough (MU-Student)

Primary Contact: Shelby Scarbrough (MU-Student)

Dear Investigator,

The MU Institutional Review Board reviewed your application and supportive documents. It has been determined that this project does not constitute human subjects research according to the Department of Health and Human Services regulatory definitions. As such, there are no further IRB requirements.

If you have questions, please feel free to contact the MU IRB office at 573-882-3181 or email at muresearchirb@missouri.edu.

Sincerely,

MU Institutional Review Board

APPENDIX B

TPA Sample Questions

<p style="text-align: center;">Teaching Skills</p>	<p>A student cannot solve problems on your tests that involve percent calculations. However, you know the student can calculate the correct price when there is a sale for 30% off. Which of the following statements about learning BEST explains your observations?</p> <ul style="list-style-type: none"> a. Learning requires mental effort. b. Learning is situated in the context. c. Learning is when a student constructs knowledge. d. Learning lasts longer if it takes place in two ways at once, visual and auditory.
<p style="text-align: center;">Attitudinal Factors</p>	<p>A good teacher should be able to meet the educational needs of all students.</p> <ul style="list-style-type: none"> a. Strongly agree b. Agree c. Neither agree or disagree d. Disagree e. Strongly disagree
<p style="text-align: center;">Cognitive Ability</p>	<p>Maria is very skilled in her _____, which was evident in her _____ notes.</p> <ul style="list-style-type: none"> a. Teaching; contentious b. Reproach; punctilious c. Delegation; casual d. Planning; meticulous

APPENDIX C

Findings, Discussions, and Recommendations

The findings, discussions, and recommendations from this study are provided in this section. The information provided will show how the researcher analyzed the results of the study and applied those results to recommendations for scholarship and practice.

Findings

This section includes the findings for each research question. For each question, the results are discussed and displayed through a table or figure. This section identifies if the null hypothesis was rejected or failed based on statistical significance.

HVSD Descriptive Statistics. The first research question was as follows; At HVSD, what are the descriptive statistics of the teachers hired in the study from the 2018–2019 AY and 2019–2020 AY when disaggregated by gender, race, years of experience, and certification route? The sample size was 212 employees. Figure 5 shows the TPA overall and subscale mean scores for employees based on their years of experience. The categories were no years of experience, 1–4 years of experience, 5–10 of experience, 11–15 years of experience, and 16+ years of experience.

Teachers with 11–15 years of experience performed at a higher rate than those with fewer years of experience. Newer teachers had the lowest scores in all TPA categories. Lower attitudinal scores were found among teachers with more experience. Teachers with 16+ years of experience had a lower mean on teaching skills than those with 5–10 years of experience and 11–15 years of experience.

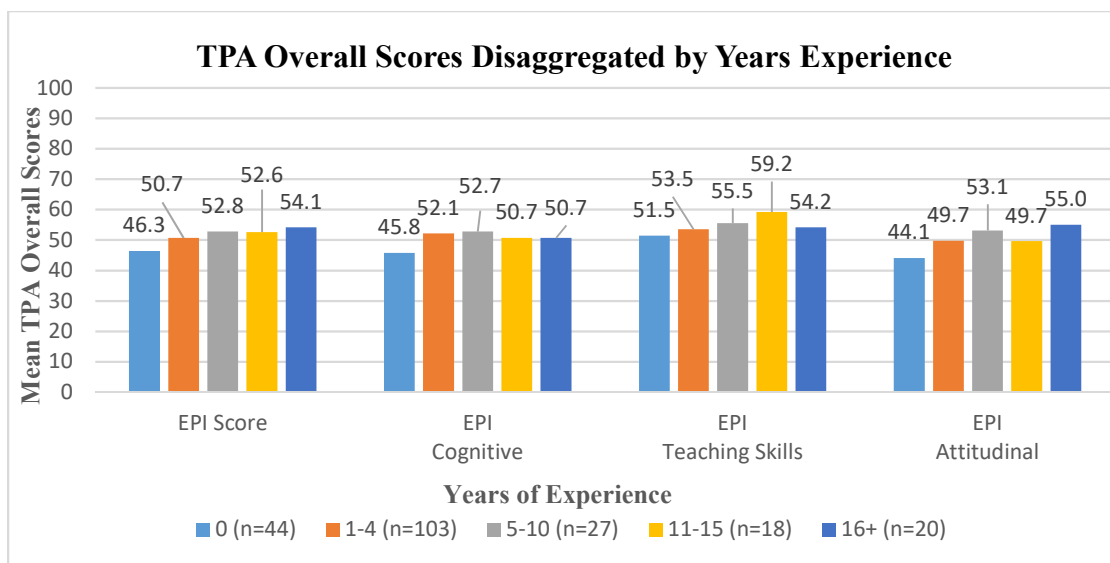


Figure 5. Mean TPA overall scores when comparing years of teaching experience of new teacher hires at HVSD ($N = 212$).

Figure 6 shows TPA overall and subscale mean scores for employees based on their certification routes. The certification categories include traditional route and alternative route. The sample size was 212. The teachers completing the traditional route to certification had a higher mean on the TPA overall score (50.65), attitudinal subscale scores (49.62), and teaching skills (54.07). Teachers completing an alternative certification route scored higher on cognitive ability (54.08).

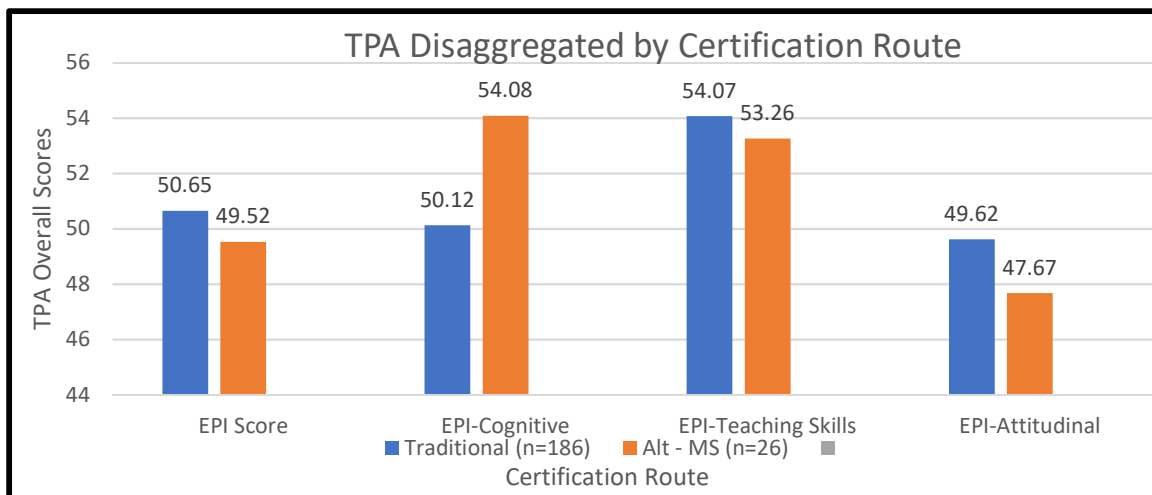


Figure 6. Mean TPA overall scores when comparing certification route of new teacher hires at HVSD ($N = 212$).

Figure 7 shows TPA overall and subscale mean scores for employees based on gender. The gender categories include male and female. The sample size was 209. This was a smaller sample size compared to the other disaggregated groups, as three individuals did not identify as male or female. Females had a significantly higher mean on the teaching skills subscale (54.48), while males had higher means on the overall score (50.77), cognitive subscale (50.83), and attitudinal subscale (50.83).

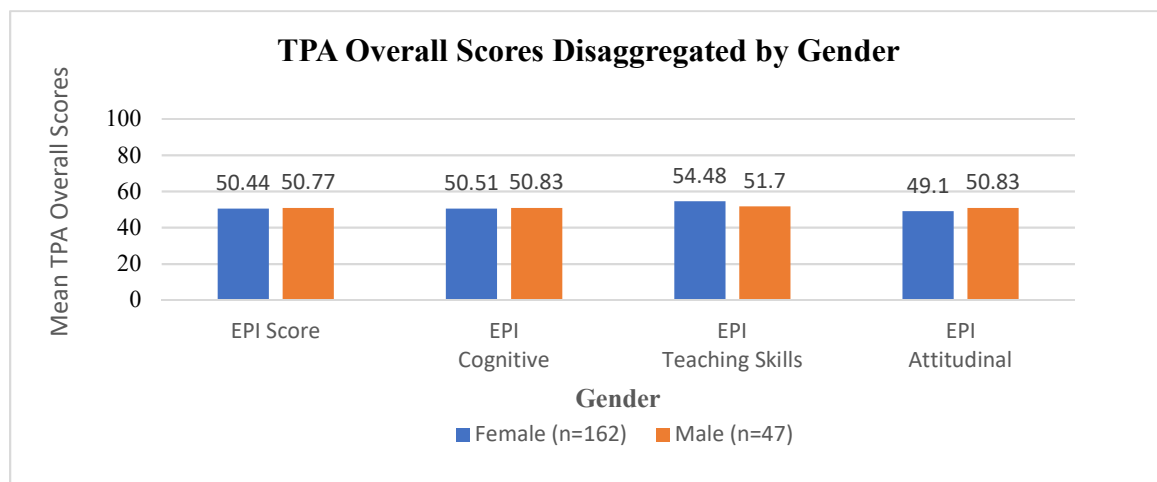


Figure 7. Mean TPA overall scores when comparing gender of new teacher hires at HVSD ($N=209$).

Figure 8 shows TPA overall and subscale mean scores for employees based on race. The race categories include White and non-White. The overall mean scores were similar for White (50.52) and non-White teachers (50.56). The mean score for the teaching skills subscale was higher among White teachers, while non-White teachers had higher mean scores for the cognitive subscale (52.5) and attitudinal subscale (52.17).

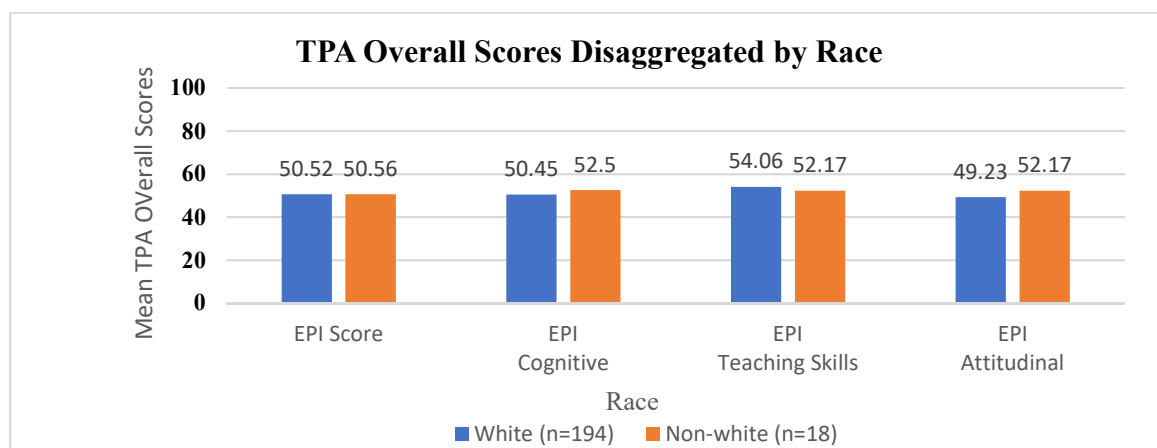


Figure 8. Mean TPA overall scores when comparing race of new teacher hires at HVSD ($N = 212$).

Overall TPA Scores. The second research question was as follows; At HVSD, is there a difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY?

The difference was significant $t(210) = 2.037, p = .043$ and had a small effect size $\eta^2 = .019$. The independent variable was teacher retention. The dependent variable was TPA overall score. Retention was identified as “yes” ($n = 165$) and not retained was identified as “no” ($n = 47$). The sample size was 212, which included all of the new hires at HVSD during the 2018 AY and 2019 AY. An independent samples t -test was performed to determine if a difference existed in TPA overall score based on retention of new hires. The t -test results indicated $t(210)$ and $p = .043$. The results were statistically

significant because $p < .05$ (Field, 2018; see Table 8; see Figure 9). The null hypothesis was rejected; a difference in TPA overall scores was evident between educators retained and those not retained.

Table 8
Independent T-Test For Retention Of New Teachers Based On Overall TPA Scores

Retention at HVSD	<i>N</i>	Mean TAP score	<i>Standard deviation</i>
Yes	165	50.97	6.09
No	47	48.96	5.55

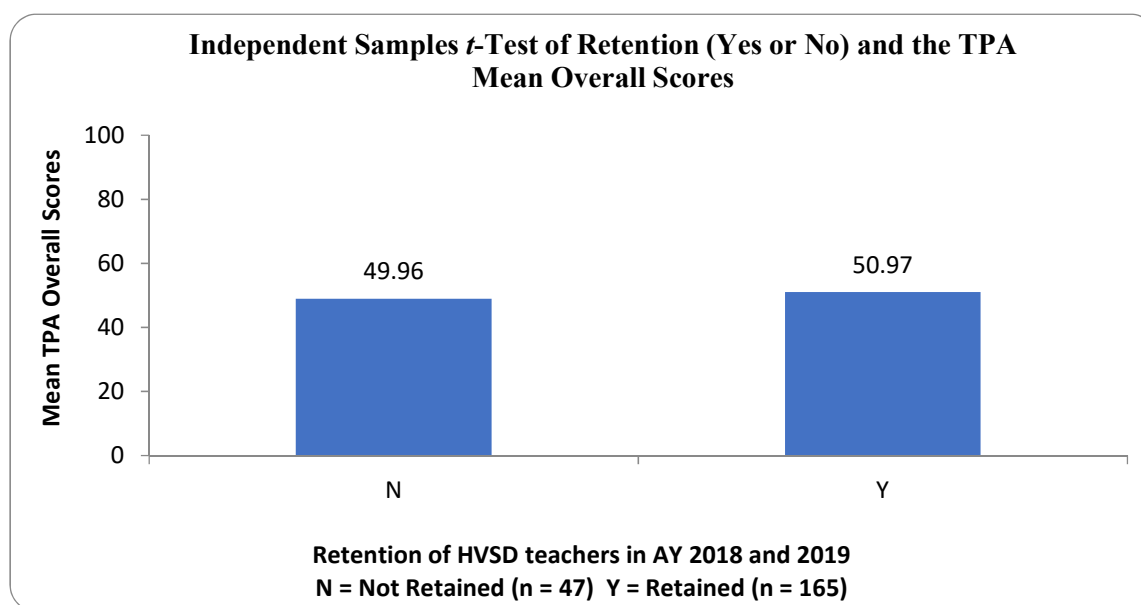


Figure 9. Retention comparisons based on the overall mean TPA scores of new hires at HVSD in the 2018 and 2019 AYs ($N = 212$).

Cognitive Ability Subscale Scores. The third research question was as follows; At HVSD, is there a difference between the TPA cognitive ability subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY?

The difference in cognitive ability subscale scores between retained and unretained new hires was not significant $t(210) = .052$, $p = .958$ and had a small effect size $\eta^2 = .00$.

The independent variable was teacher retention. The dependent variable was TPA overall score. The sample size was 212, which included all of the HVSD new teacher hires in the 2018 AY and 2019 AY. An independent samples t -test was performed to determine if a difference existed in retention of new hires based on the mean TPA cognitive ability subscale scores. Results indicated $t(210) = .052$ and $p = .958$. The results were not considered statistically significant, as p was more than $\alpha = .05$ (Field, 2018; see Table 9; see Figure 6). The null hypothesis was not rejected. The null hypothesis for this research question stated the following; At HVSD, there will be no significant difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in AY 2018 and AY 2019.

Table 9
Independent T-Test for Retention of New Teachers Based on TPA Cognitive Ability Subscale Scores

Retention at HVSD	<i>N</i>	Mean TAP score	<i>Standard deviation</i>
Yes	165	50.97	6.09
No	47	48.96	5.55

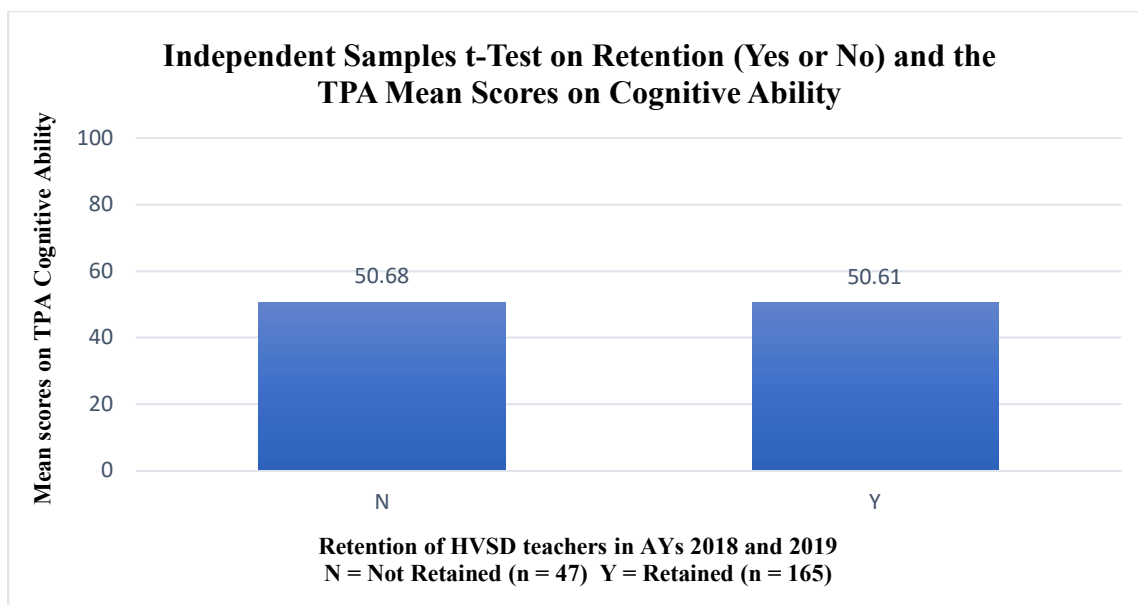


Figure 10. Retention comparisons based on the overall mean TPA cognitive ability subscale scores of new hires at HVSD in the 2018 and 2019 AYs ($N = 212$).

Teaching Skills Subscale Scores. The fourth research question was as follows; At HVSD, is there a difference between the TPA teaching skills subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY?

The difference was significant $t(210) = 3.082, p = .002$ and had a small effect size $\eta^2 = .043$. The independent variable was teacher retention. The dependent variable was TPA overall score. The sample size was 212, which included all of the HVSD new teacher hires in the 2018 AY and 2019 AY. An independent samples t -test was performed to determine if a difference existed in retention of new hires based on the mean TPA teaching skills subscale scores. Results indicated $t(210) = 3.082$ and $p = .002$. The results are statistically significant because $p < .05$ (Field, 2018; see Table 10; see Figure 7). The null hypothesis was rejected; a difference was evident in TPA teaching skills scores between educators retained and those not retained

Table 10
Independent T-Test for Retention of New Teachers Based on TPA Teaching Skills Subscale Scores

Retention at HVSD	<i>N</i>	Mean TAP Cognitive Ability score	<i>Standard deviation</i>
Yes	165	50.61	8.58
No	47	50.68	8.98

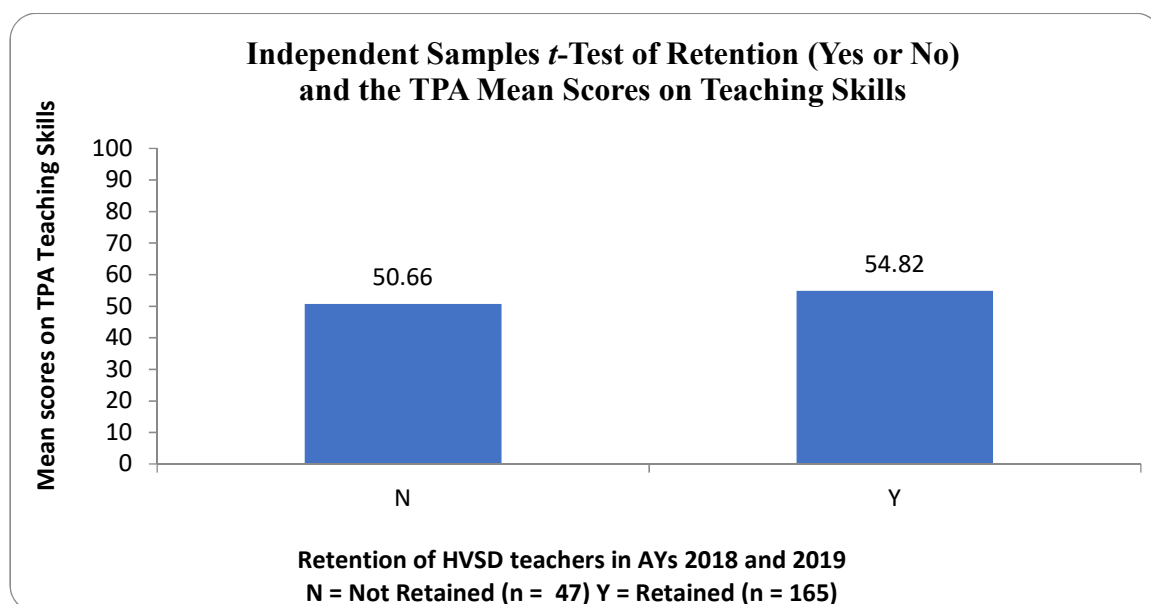


Figure 11. Retention comparisons based on the overall mean TPA teaching skills subscale scores of new hires at HVSD in the 2018 and 2019 AYs ($N = 212$).

Attitudinal Disposition Subscale Scores. The fifth research question was as follows; At HVSD, is there a difference between the TPA attitudinal disposition subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY?

The difference was not significant $t(210) = 1.580$, $p = .116$ and had a small effect size $\eta^2 = .012$. The independent variable was teacher retention. The dependent variable was TPA overall score. The sample size was 212, which included all of the HVSD new teacher hires in the 2018 AY and 2019 AY. An independent samples *t*-test was performed to determine if a difference existed in retention of new hires based on the mean TPA

teaching skills subscale scores. The results were not considered statistically significant, as $p = .116$ was more than $alpha = .05$ (Field, 2018; see Table 11; see Figure 8). The null hypothesis was not rejected. The null hypothesis for this research question was as follows; At HVSD, there will be no significant difference between the TPA attitudinal disposition sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY.

Table 11

Independent T-Test for Retention of New Teachers Based on TPA Attitudinal Disposition Subscale Scores

Retention at HVSD	<i>N</i>	Mean TAP Attitudinal score	Standard deviation
Yes	165	49.98	9.04
No	47	47.72	7.04

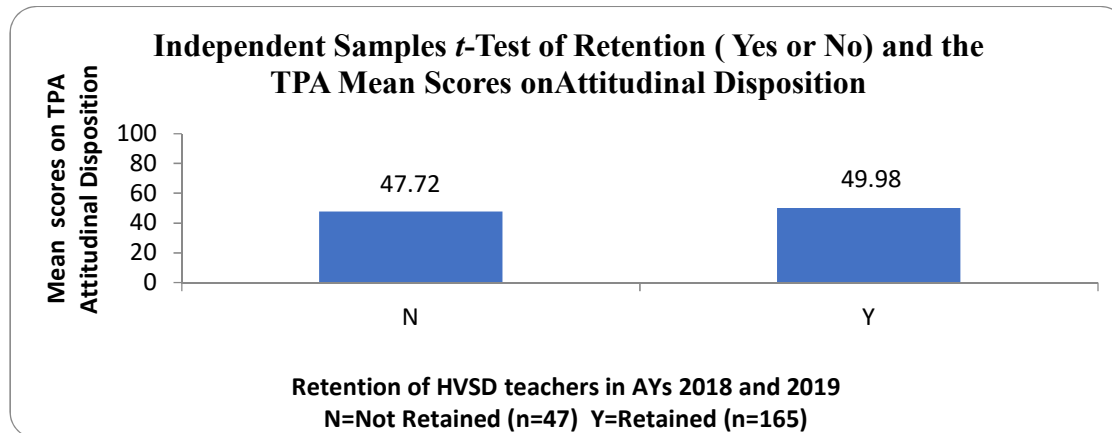


Figure 12. Retention comparisons based on the overall mean TPA attitudinal disposition subscale scores of new hires at HVSD in AYs 2018 and 2019 ($N = 212$).

Discussion

This study was meaningful because the findings were similar and different from previous findings. This section discusses the results for each question and compares the results to previous research.

HVSD Descriptive Statistics. The first research question was as follows; At HVSD, what are the descriptive statistics of the teachers hired in the study from 2018–2019 AY and 2019–2020 AY and what are their TPA scores when disaggregated by gender, race, years of experience, and certification route? When considering the disaggregated data, new teachers with no experience had the lowest mean scores on all four categories. Teachers with 16+ years of teaching experience had the highest overall and highest mean scores on teaching skills. These results support previous findings on teacher retention. Teachers new to the profession leave at alarming rates during the first 5 years of teaching (Kullar & Cunningham, 2020).

New teacher hires at HVSD who completed a traditional certification route had higher mean overall TPA scores, higher teaching skills scores, and higher attitudinal disposition scores than those who completed alternative routes. The new hires that obtained their certification through alternative methods, had higher cognitive disposition scores.

Male new teacher hires had higher mean scores in three of the four TPA categories, but their retention rates were lower than those of female new teacher hires. Females had higher mean scores on the TPA teaching skills subscale; this finding supports previous literature that asserted that TPA teaching skills subscale scores are higher for individuals who have been retained after 1 year of employment. Further research is needed to identify why male teachers are not retained at a higher rate than females at HVSD and to identify what teaching skill competencies male teachers are lacking.

When disaggregating data for the race of new hires at HVSD, White and non-White teachers' mean scores differed by .04. These results may be useful to studies highlighting equity in the educator workforce.

Overall TPA Scores. The second research question was as follows; At HVSD, is there a difference between the TPA overall scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean overall TPA scores of new teacher hires at HVSD to their retention after 1 year of employment. Results were statistically significant.

A correlation was conducted because both the TPA overall mean scores and the TPA teaching skills subscale mean scores were statistically significant. The overall mean scores and the teaching skills subscale mean scores had a strong relationship. These results indicated that the two assessments measured the same concepts; therefore, when using the TPA as a screening tool, it will be recommended that school administrators focus on the teaching skills scores for purposes of simplicity.

Cognitive Ability Subscale Scores. The third research question was as follows; At HVSD, is there a difference between the TPA cognitive ability sub-scale scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean overall TPA scores of new teacher hires at HVSD to their retention after 1 year of employment. Results were statistically insignificant.

It is not surprising that a significant difference was not present between the TPA cognitive ability subscale scores of teachers who were retained and those who were not. Only 11% of the total questions on the TPA address cognitive ability competencies. This

information will be useful to share with school leaders as they evaluate the TPA scores of their new hires when making hiring decisions.

Teaching Skills Subscale Scores. The fourth research question was as follows; At HVSD, is there a difference between the TPA teaching skills subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean teaching skills subscale scores to teacher retention. Results were statistically significant.

A correlation was conducted because both the TPA overall mean scores and the TPA teaching skills subscale mean scores were statistically significant. The overall mean scores and the teaching skills subscale mean scores had a strong relationship. These results indicated that the two assessments measured the same concepts; therefore, when using the TPA as a screening tool, it will be recommended that school administrators focus on the teaching skills scores for purposes of simplicity. A majority of the questions (56%) on the TPA assessed teaching skills competencies. Information on teaching skill competencies proves to be beneficial to school leaders as they are making hiring decisions. Having information on new hires' knowledge of teaching skills would be a valuable measurement in identifying teacher fit.

Attitudinal Disposition Subscale Scores. The fifth research question was as follows; At HVSD, is there a difference between the TPA attitudinal disposition subscale scores of retained and not retained new hires in the 2018 AY and 2019 AY? This research question compared the mean attitudinal disposition TPA scores of new teacher hires at HVSD to their retention after 1 year of employment. Results were statistically insignificant.

Attitudinal disposition has been identified as a measure to determine employee fit (Van Vianen, 2018). A statistical difference was not apparent between the TPA attitudinal disposition subscale scores of retained and not retained new hires; however, the scores can be used as a data measure to assist school leaders in identifying fit. Further studies could be conducted to determine if attitudinal disposition scores have an impact on teacher fit.

Conclusion

The TPA application screening is one tool that can be used in the hiring process. The study findings indicate that investing funds in an application screening assessment can assist school districts with identifying teachers with the right fit. Using a hiring tool with objective data can provide principals with information to support employees and ultimately increase retention and decrease the expense of bad hires. The educator workforce can be improved through increased retention. The study findings support further research on identifying teacher fit through the application screening assessment as a way to predict retention.

Recommendations

I was able to make recommendations through highlighting the impact of the TPA screening assessment on teacher retention at HVSD. These recommendations include the application of P-E fit and future research opportunities for HVSD. This section addresses these recommendations.

Application of P-E fit. P-E fit is the match between individuals and environmental characteristics (Holland 1985/1997; Caplan, 1987). The educator

workforce is decreasing; therefore, fit must be identified during the hiring process to increase retention. An increase in retention would prevent schools from needing to hire as many teachers from a declining educator pipeline.

HVSD should continue to use the TPA as part of the hiring process. Using this objective measurement allows school leaders to make informed hiring decisions, identify the fit of teachers, and put measures in place to support new teachers. The cost of the TPA is roughly \$20,000; however, \$20,000 is the cost of one bad hire (Fatemi, 2016). Bad hires have financial and cultural implications on schools and threaten student achievement (Ingersoll, 2001). Based on the data achieved through this study, the return on investment of the TPA could be justified.

Future Research at HVSD

Retention of high quality teachers is crucial to the student and school success (Carver-Thomas & Darling-Hammond, 2017). HVSD should implement follow-up meetings with new hires, develop professional development that matches individual teacher needs, and conduct focus groups with the categories of employees who seem to not be retained as readily to address teacher fit and retention.

This data should be used as preliminary data. This study would be best conducted as a longitudinal study. Longitudinal studies focus on measuring the same variables over an extended period of time (Field, 2018). This study should be replicated with other K–12 public school districts that use the TPA as part of their hiring process. It may be beneficial for further studies to compare public and private education hiring practices and compare urban and rural school districts. A longitudinal study would provide more credible results.

Conclusion

Recommendations must be made because the results for some research question results aligned with current research and some did not. Practitioners would be wise to analyze hiring practices through the lens of P-E fit theory. Practitioners should also continue to focus on objective hiring practices as a means to measure fit. Identifying fit and increasing retention could have a lasting impact on student learning and academic progress (Podolsky et al., 2016). A longitudinal study is recommended because not all of the TPA scores predicted retention or aligned with prior literature. A longitudinal study would consider the same data points (TPA scores and teacher retention) over an extended period of time (Field, 2018). This study should be conducted again using data from other K–12 public school districts that use the TPA as part of the hiring process.

Summary

This quantitative study used quasi-experimental design measured by a *t*-test. *T*-tests help determine if a significant difference exists in the TPA scores between educators retained and those not retained.

Teachers are hired readily in schools. With a decreasing pipeline, school districts are pressured to hire teachers with good fit in hopes to retain them. Many schools are rushed to make hiring decisions because of the competition to hire from a small pipeline of teacher candidates (Daresh & Daresh, 2013). These hurried practices can result in bad hires, which have financial and cultural implications on a school (Carver-Thomas & Darling-Hammond, 2017). Having objective measures—such as screening assessment—as part of the hiring process can help identify fit. This study illustrates that objective measures would help retain teachers, thus improving the educator workforce.

Information from this study will be used to assist K–12 human resource personnel with their hiring processes. These efforts aim to increase retention of new teachers by improving human capital through the recruiting, hiring, and retaining of effective teachers with high fit to the organization.

The scarcity of literature in forecasting teacher retention at a Midwestern, K–12 public school district provides the opportunity for expanded exploration of this topic. This study added to K–12 human resource personnel and hiring managers' knowledge base by determining the predictive relationship between TPA scores and retention of new teachers at HVSD. Increased retention of employees with good fit benefits the organization and supports student achievement through a consistent and engaged workforce.

VITA

Shelby B. Scarbrough was born and raised in Maryville, Missouri. She is a graduate of Northwest Missouri State University with a Bachelor's degree in Elementary and Middle School Math and Science Education. She began her career as an elementary teacher for two years before becoming a middle school science teacher. After being a classroom teacher for nine years, she made the transition to middle school administration in 2004. Shelby holds a Master's degree in Educational Administration and an Education Specialist degree from Northwest Missouri State University. She has been a Director of Human Resources since July of 2017. She is in the 25th year of her career in education, having worked as an elementary teacher, a middle school science teacher, a middle school assistant principal & activities director, and a middle school principal before joining the Jefferson City School District. She will assume the position of Chief of Learning on July 1st, 2020, ahead of the 2020-2021 school year.

Shelby's research interests are in the area of K-12 human capital management, the recruiting, hiring, and retaining of teachers, as well as employee engagement. Shelby has presented at the Missouri Association of School Personnel Administrators conference in the areas of human resources.

Shelby is married to Tom, also an educator. They are the proud parents to two children, Payton and Baylee, and their spouses, Dani and Caleb. Shelby enjoys cooking, reading, and traveling with her family.