

UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE IMPACT OF SCHOOL AND DISTRICT FISCAL DECISIONS AND DEMOGRAPHIC  
CHARACTERISTICS ON OKLAHOMA ELEMENTARY SCHOOL PRINCIPAL  
TURNOVER

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

DEGREE OF

DOCTOR OF EDUCATION

By

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Norman, Oklahoma  
2023

THE IMPACT OF SCHOOL AND DISTRICT FISCAL DECISIONS AND DEMOGRAPHIC  
CHARACTERISTICS ON OKLAHOMA ELEMENTARY SCHOOL PRINCIPAL  
TURNOVER

A DISSERTATION APPROVED FOR THE  
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

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## ABSTRACT

This study is a quantitative, causal comparative study exploring the effect that various school-level and district-level fiscal decisions and demographic characteristics have on elementary principal turnover within Oklahoma public schools. This study was distinguished by its methods and context in the form of a replication study of Maiden, Crowson, and Byerly (2020). The population in the study is 987 elementary schools, which are nested within 524 public school districts. The initial analysis used hierarchical linear modeling and binary logistical regression to measure the relationship between the study predictive variables and principal turnover. Due to an oversimplification of the dependent variable, a follow-up analysis was conducted using multinomial logistic regression with an increased precision of the dependent variable. This study was cross-sectional and conducted analysis from the 2021-2022 school/fiscal years. The results indicated a significant relationship with principal turnover and the district percentage of principal turnover. The study results also indicated increased rates of turnover within schools that employ multi-site and/or multi-principals and increased rates of turnover in rural schools, especially when the rural school employs a multi-site or multi-role principal. There were also conclusions of increased rates of lateral turnover in nonrural schools, increased rates of retention in schools with the highest and lowest concentration of students considered economically disadvantaged, and the follow-up analysis yielded a significant relationship between school-level administrative per-pupil expenditures and turnover among schools with principals who left for promotions.

## ACKNOWLEDGEMENTS

I am the sum of those who got me here.

I would like to acknowledge my outstanding committee: Dr. Jeffrey Maiden, Dr. Mike Crowson, Dr. Curt Adams, and Dr. Gregg Garn. Thank you for your dedication to this endeavor. I would like to specifically acknowledge Dr. Crowson's expertise, patience, time, and guidance on assisting me with the analysis portion. It is with the sincerest gratitude that I would like to acknowledge Dr. Jeffrey Maiden, who is an outstanding committee member and mentor. Thank you for your ridiculously fast, honest, and growth-oriented feedback: I couldn't have done this without you. I would also like to thank Channa Byerly for conducting a great study, which was the inspiration for my study: thank you for meeting with me so early in the process.

A tremendous amount of gratitude is held to the incredible teachers I had while attending Yukon Public Schools. There are too many amazing educators to name them all. You all are education giants.

I would like to acknowledge the staffs of Jarman, Oakridge, and Southgate. Thank you for trusting me to lead alongside you and grow with you. Thank you to the families who have entrusted me to care for your children. I hold this as one of the highest honors in my life. Thank you to the following mentors and friends: Rick Croslin, Dr. Robert Romines, Michelle McNear, Dr. Kristy Hernandez, Debra Hendrix, Shannon Woodson, Johnny Bailey, Dr. Rick Cobb, Chris Reynolds, Johnny Thompson, Gina Hill, Amanda Stansberry, Lynette Brown, Karen Cody, John Hancock, Rene Frolich, Tressa Wilson, and so many more. You are world-class leaders and I'm lucky to know you.

Special thanks to Charles Bradley, Rex Wall, Robye Kay Jackson and the 2017 OU Cohort. Extreme thanks to Anne Beck for always sending me an encouraging word and Dr. Catherine Miller for being a bucket-filler.

I am forever indebted to the amazing people I have served alongside on the Southgate office team. Susan, thank you for your hugs and speaking life. Cameron, thank you for always checking on me and be an outstanding listener: your friendship is incredibly important. Trenda, thank you for supporting me through this last semester: I am beyond grateful for you and for the laughs we have. Angela, thank you for doing hard things for the betterment of our community: you are an amazing friend, a great vastly older sister, and a tremendous colleague. Amanda, my RoD, thank you for making me feel like a world-class leader, always sending me encouraging texts, laughing with/at me, and for making me a better person. I love you all very much.

I could not have completed this accomplishment without my in-laws. Greg and Laura, thank you for the encouragement and for loving me. Thank you for the many times that you helped provide what was needed and wanted. Thank you for helping with the little and big things so that our lives could be more comfortable during this long process. Thank you to GG for always hugging me and telling me you're proud of me.

Thank you to my late grandmother, Grandma Rosie. You amaze me. Thank you for telling me that I'm special and for choosing to flee an abusive environment. You worked multiple jobs for your kids and changed our family tree forever. Your accomplishments are much more impressive than this degree.

I am incredibly grateful for my mom, Sandy. Thank you for having the greatest level of work ethic I have ever seen, despite hardship. Thank you for making us help you bag newspapers

before the sun came up. Thank you for making me believe I can do anything I put my mind to. I love you all the way around the world and back again.

I am incredibly grateful for my faith, my God, my Jesus. My faith is one that has been tested by fire, through simultaneous doubt and joy. You are Jehovah Jireh and I couldn't have done this without you.

## DEDICATION

This section has been the most nerve-racking of all, because I could not fathom doing life, let alone complete a terminal degree, without my family.

It is with the sincerest gratefulness and love that I dedicate this whole process to my family: our son- Coen, our daughter- Thea, my wife- Kristi, and any other person we may welcome into our family in the future. I am the luckiest person who has ever lived and you three are my dream come true. I can't believe that I get to be your daddy and husband.

To Coen: your name means "Thunder" and "Bold Leader" and my prayer is that you continue to live in humble confidence to create a fulfilling life that impacts this world and eternity for good. You came into this world as it was shutting down from a pandemic and you haven't stopped amazing us since. Never stop searching for that boundary, crossing it when it's needed, and standing up for yourself and others. Thank you for the countless, "Can I give you a hug?" moments, the amazing dance and singing parties, and for the countless nights and mornings that I slept on your floor while trying to complete this process. You are special and your laugh is the best sound in the world. Follow God's prompting, the passions that burn within your soul, and serve people with integrity. Live a life of discipline and don't ever stop being grateful for that incredible mama and sister of yours. Work hard to preserve your best-friendship with Thea, because that is more incredibly important than you can fathom. Thank you for who you are and who you are becoming. I will always be in your corner, my sweet, kind, hardworking, loving, and beautiful Coey.

To Thea: your name means "Gift of God" and my prayer is that you continue to grow and use your amazing gifts to positively impact this world and eternity. You came into this world fast and furious, but you stopped crying as soon as you held my finger. You lead with your heart and

you are confident in your convictions. I am so grateful for your empathetic soul and your countless moments of asking, “Are you okay, Daddy?”. Never stop leading with love, because our world needs people so confident in leading through service that other people want to follow. Thank you for all of the notes you have written me and my special drawings, especially when they are hidden in my research. My Theaster, thank you for writing things like “You are the best daddy in the world” or “I’m proud of you” on my writing desk. Keep chasing your unique passions and don’t take life too seriously. You are so funny, and I love your goofy side. Continue to live in thankfulness and work hard to live a healthy life: your discipline and ability to work through the hard is rare. Work hard to always be best friends with Coey: I love the love you have for him. You were here from the beginning of this process and every scoop of ice and sundaes in between. I will always be cheering you on my strong, capable, kind, loving, hardworking, and captivating Thea.

To Kristi: I dedicate this to you the most. As *The Office* says, “When you’re a kid, you assume that your parents are soulmates. My kids are gonna be right about that”. I can’t adequately express my love and gratitude for you. You are the most graceful, loving, dedicated, funny and sacrificial person I have known. You are the best classroom teacher and the most amazing mama-teacher that I have witnessed. When we started this, I committed to only writing when the kids were asleep, and I’m so proud to say that it was almost always followed, because of your support. Thank you for the countless notes, back rubs, binge-watching, and for showing the utmost level of love and grace when I spent a year typing in our room from 5:00-7:00am. My prayer is that you never doubt my love for you and the incredible individual you are. You are truly the best mama and there are no words to express the joy that seeing you with our babies brings me. However, I love you more as a true individual- you are smart, kind, talented,

discerning, and funny. You serve people in the most unique and humble way. I am so grateful to be your best friend and husband. Thank you for who you are. I love you a GOOGLE, KB!



## **CHAPTER ONE**

### **INTRODUCTION**

Principals play unique and important roles in public schools, while having a substantial impact on students, employees, families, and communities. The role of the principal is that of someone who can “grow” student learning, or someone who can “drag on” student learning (Rangel, 2018, p. 88). The responsibilities of principals are overarching and fluid, ranging from curriculum and instruction leader, behavior interventionist, culture crafter, human resources leader, financial steward, and operational leader. Subsequently, these responsibilities reinforce that principals play a paramount role in multiple facets of school and education improvement, with a substantial impact on teacher retention, student achievement, and graduation (Levin, Scott, Yang, Leung, & Bradley, 2020). The overall goal of a school district is to ensure that teaching, learning, and the growth of students and staff occurs, while maintaining fiscal stewardship. With this goal in mind, it can be argued that the principal has the most direct influence and impact on the success of the overall goal attainment (Seashore, Leithwood, Wahlstrom, & Anderson, 2010; Partlow & Ridenour, 2008; Fuller, Young, & Baker, 2007).

#### **Purpose Statement**

The purpose of this quantitative, causal comparative study is to explore the effect that various school and district-level fiscal decisions and demographic characteristics have on elementary principal turnover within Oklahoma public schools. This research may provide districts with valuable insight into how to best allocate resources in regard to principal recruitment, placement, development, and retention. Drawing from Belt’s (2009) and Beckett’s (2018) studies as a source of inspiration, this study will be distinguished by its methods and context in the form of a replication study of Maiden, Crowson, and Byerly (2020). This finance-focused study is aimed at determining the extent to which elementary school site and district-

level characteristics and fiscal decisions affect elementary school principal turnover in Oklahoma public schools. It is hoped that the results may provide districts with an effective strategy for investing in principal retention. While principal turnover is an issue that affects all states across the nation, this study focuses specifically on the state of Oklahoma due to its increasing rate of principal turnover and its subsequent financial implications for districts (Lazarte Alcalá, 2021; Palmer, 2017; Willert, 2015). By understanding how different financial variables influence elementary school principal turnover in the state of Oklahoma through a quantitative analysis, district leaders can potentially prepare themselves for future needs related to principal recruitment and retention.

### **Background of the Problem**

Principals are turning over their positions and leaving the profession at an alarming rate. A national follow-up study conducted in 2012-2013, found that out of 89,530 traditional public and public charter school principals, 11.5% left the principalship for another type of job, while an additional 4.1% left the principalship but had an unknown occupational status. Additionally, 7% of traditional public and public charter school principals moved from one school to another, which would be considered turnover in the present study (Goldring & Taie, 2014). A 2014 principal turnover report, *The High Cost of Principal Turnover*, found that annually approximately 25% of principals left their schools and 50% of new principals turned over their position during the third year (School Leaders Network, 2014).

A national survey of principal attrition and mobility conducted in 2016-17 indicated an alarming turnover rate of nearly 18 percent; with turnover rates of 21% in high-poverty schools, 18% in nonrural schools, 19% in rural schools, and 22% in public charter schools (Goldring and Taie, 2018). In 2019, the Learning Policy Institute (LPI) and the National Association of

Secondary School Principals (NASSP) collaborated to survey 424 secondary principals. The LPI/NASSP survey was conducted by Levin Scott, Yang, Leung, and Bradley (2020) and only sought responses from secondary principals. Although Levin et al. (2020) only sought information from secondary school principals, it reported influences impacting principal retention and turnover that were comparable to the Goldring and Taie (2018) national principal survey, which did elicit responses from elementary principals. When these two robust surveys are examined together, it can easily be assumed that there are some, if not many, turnover and retention factors that are universal across the principalship in general. Levin et al. (2020) found 42% of surveyed principals were planning to leave their schools, with the researchers categorizing the influences in principal retention and turnover as:

- Working conditions conducive to learning;
- Adequate and stable compensation;
- Productive, not punitive, accountability;
- Decision-making authority;
- High-quality professional learning opportunities

Throughout the past two decades, there has been much attention and research focused on the increasing number of teachers leaving the profession. These studies have examined issues that often suggest that a lack of adequate resources and supports with rising demands of the scope of the job are primary influences on teacher turnover (Maiden et al., 2020; Pogodzinski, 2014; Leachman, Albares, Masterson, & Wallace, 2016). However, with a teacher shortage continuing to grow, there has been less attention paid to the growing rate of principal turnover. Like the increase in teacher turnover, the potential cause of the principal supply shortage could be stemming from a profession that has increased in complexity and unattractiveness (Gilman &

Lanman, 2005; Tran, 2017). Principal turnover is associated with lower test scores, school proficiency rates, and teacher retention (Henry & Harbatkin, 2019). With the increase in principals turning over their position, it's important to attempt to understand how principal turnover can impact key functions of schooling, especially teacher satisfaction and student achievement. Conversely, principal retention can promote school stability, which could impact teacher retention and impact student success (Beckett, 2018). The lasting effect of the turnover can have negative impact on the subsequent principal's first two to three years of transition, while teacher turnover has shown to have an increase after principal turnover, with continued elevation of turnover into the third year of a new principal's succession (Henry & Harbatkin, 2019). Further studying principal retention and turnover could lend insight into teacher retention. If principal recruitment and retention can be increased, there is a case to be made that teachers could be provided with increased support and stability from a stable school environment, thus impacting the teacher shortage.

Principal retention and turnover can also influence student achievement. The effect of principal turnover and student achievement stresses the importance for stability in the position, because it can take 5 to 7 years for principals to create large scale change (Mascall & Leithwood, 2010). Consequently, higher principal turnover is related to higher teacher turnover, while also connecting higher teacher turnover with lower student achievement (Ronfeldt, Loeb, & Wyckoff, 2013; Béteille, Kalogrides, & Loeb, 2012). Stability in the principal position creates the potential for sustainable intervention and impact to occur on student achievement. This link between principal-to-teacher turnover and teacher turnover-to-student achievement presents a potential problem for sustainable teacher recruitment and student achievement outcomes. Because of the important role that the principal plays in the development of student learning and staff

motivation and retention, it is important to first understand school-level and district-level relationships with principal turnover, with subsequent studies exploring how districts can better support these professionals.

### **Statement of the Problem**

The impact of principal turnover on school districts around the nation is profound and far-reaching. The nation is currently experiencing a high rate of principal turnover (Levin, et al., 2020) which has been linked to decreased school climate and culture (Mascall and Leithwood, 2010; Burkhauser, Gates, Hamilton, & Ikemoto, 2012; Hanselman, Griff, Bruch, & Gamoran, 2016), teacher turnover (Béteille, Kalogrides, & Loeb, 2012), and student achievement (Branch et al., 2009; Béteille et al., 2012; Miller, 2013; Burkhasuser et al., 2012; Kearney, Valdez, and Garcia, 2012). To retain quality principals who can help grow student achievement levels and prepare them for postsecondary education or the workforce upon graduation, school districts must thoroughly evaluate what factors are driving such high turnover rates.

A nationwide survey found inadequate working conditions ranked among the most prominent influences of principal turnover. This includes items such as compensation levels, punitive accountability systems, a lack of professional growth opportunities, and a lack decision-making authority (Levin, et al., 2020). These factors could be influencing the continued trend of job unattractiveness and increased complexities associated with the job (Gilman & Lanman-Givens, 2005).

These issues create long-lasting negative consequences on school atmospheres and future results which can be seen in teacher shortages across Oklahoma and the nation (Henry & Harbatkin, 2019); Oklahoma State School Boards Association 2022). Research shows teachers prioritize administrative support over salary increases (Coggshall, Ott, Behrstock, & Lasagna,

2010) which makes providing principal development and support programs more important for schools. Addressing principal turnover is key when it comes to achieving greater services and supports for students, teachers, staff, and communities.

### **Problem in Context**

Oklahoma is struggling with a concerning rate of principal turnover, which has a direct impact on the state's schools. Tulsa Public Schools and Oklahoma City Public Schools have reported an average of 15 to 20 principal changes each year, due to transfers, resignations, and terminations (Palmer, 2017, p. 2). These frequent leadership changes can have several detrimental effects on the school community, such as an increase in teacher turnover, a decrease in student achievement, and a reduction in the sense of community. Unfortunately, disadvantaged students living in concentrated poverty are affected even more harshly by these turnovers. More than 10 percent of Oklahoma children are living in conditions considered to be concentrated poverty - defined as places where 30 percent or more of the population lives below the federal poverty line (Oklahoma Policy Institute, 2019). In addition to this already high percentage, African American children in Oklahoma are almost six times more likely to live in concentrated poverty than white children, and Latino children are four times more likely (Oklahoma Policy Institute, 2019). This study will explore if there are significant relationships between school and district economically disadvantaged statuses.

The Oklahoma State Department of Education's (OSDE) released its most recent Oklahoma Educator Supply and Demand Report, which scrutinizes workforce data spanning the fiscal years of 2016-17 to 2020-21. According to this report, as of 2021, Oklahoma's public school system was comprised of 1,853 principals with a mean experience of 21 years, including

1,038 at the elementary school level; 94% of these were FTE or full-time equivalent (Lazarte Alcalá, 2021).

The OSDE report underscores a worrying trend of principal turnover within the state over the last half-decade, with rates fluctuating between 16 percent and 22 percent – the national average being 16.7 percent (Lazarte Alcalá, 2021; U.S. Department of Education, National Center for Education Statistics, 2019). Within the OSDE report, Lazarte Alcalá (2021) delineated principal turnover into two primary categories: "movers" – principals who transfer within the education sector, encompassing intradistrict and interdistrict transfers – and "leavers" – those who relinquish their roles entirely. Of note is the "leaver" rate, which constituted 36 percent of all turnovers in the 2020-21 period (Lazarte Alcalá, 2021).

Lazarte Alcalá (2021) notes in this report, a majority (51%) of "movers" transitioned to different roles within the education sector – a development potentially traceable to promotions to district-level positions or principals electing to return to teaching roles or assuming positions such as school counselors. This trend of role transition, whether voluntary or otherwise, might suggest an increasing complexity and declining appeal of principalship (Gilman & Lanman, 2005; Tran, 2017). Furthermore, in the fiscal year 2020-21, around 37 percent of all "movers" continued in the role of the principal but relocated to different schools (Lazarte Alcalá, 2021). The turnover rate among "movers" is concerning and could have profound implications for aspects such as school climate and culture, teacher satisfaction, teacher retention and turnover, student achievement, and graduation rates (Lazarte Alcalá, 2021; Hanselman et al., 2016; Levin et al., 2020; Seashore et al., 2010; Partlow & Ridenour, 2008; Leithwood & Mascall, 2008; Fuller, Young, & Orr, 2007).

The United States Department of Education's data from 2016 indicates that 73 percent of Oklahoma's 1,900 principals had held their positions for five years or less at that point - with this rate increasing even further to 78 percent when looking specifically into "high-poverty" and "high-minority" schools (Palmer, 2017, p. 2). The national rates also demonstrate how principal turnover has been an issue across America: during the 2016-17 school year 35% of principals had been at their schools for two years or less (Levin & Bradley 2019). Moreover, after the 2015-16 school year overall principal attrition rates were 18%, with 15% for schools with low Free and Reduced Lunch Rates and 21% for those with high Free and Reduced Lunch Rates (Levin & Bradley, 2019).

Principal turnover is a national issue in the current education landscape, as it is associated with decreased test scores, lower school proficiency levels, and a decrease in teacher retention (Henry & Harbatkin, 2019). Oklahoma is amid a teacher-shortage crisis. Emergency teaching certificates approved during the 2011-2012 school year numbered 32 (Bitton, 2017); however, when it came to the 2022-2023 school year, the number of emergency certificates had skyrocketed to 2,969 – an increase of almost 300 compared to the same timeline in 2021-2022. An additional 1,019 teaching vacancies remain unfilled across districts according to the Oklahoma State School Boards Association staffing survey, which is far greater than the 680 vacancies reported during the previous year (Oklahoma State School Boards Association, 2022). Schools serving primarily low-income households are hit especially hard by principal turnover rates as this can lead to further instability within these school communities. Furthermore, changes in administration often mean decreased levels of institutional and pedagogical knowledge that could lend much-needed stability and leadership throughout operations and instructional duties.



### **Research Questions**

This study would answer the following research question: To what extent if any do varying district-level fiscal decisions and demographic characteristics affect principal turnover?

- 1) Are there relationships between principal turnover and school site related fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, head elementary principal salary, head elementary principal serving multiple sites, head elementary principal assuming multiple job-roles, site percent economically disadvantaged students, site enrollment, and site elementary assistant principal employment status)?
- 2) Are there relationships between principal turnover and district fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, percent economically disadvantaged students, district total enrollment, district average percent of principal turnover, and the district percentage of elementary schools with an assistant principal)?
- 3) Are there relationships between principal turnover and district classification and type (whether a district is rural or nonrural, and whether charter or noncharter)?

### **Significance of the Study**

Oklahoma led the nation in budget cuts to its education system for three consecutive years (Eger, 2021). These drastic reductions in spending have had a dramatic and detrimental effect on the state's school system, particularly exacerbating an already concerning teacher shortage. This has made the role of the principal even more challenging, particularly when attempting to intervene in teacher turnover and increase teacher retention levels in their schools. While research regarding principal turnover has increased, there is still a lack of scholarly

literature overall, especially literature that focuses on Oklahoma. Most of the current data regarding Oklahoma principal turnover is being provided through local investigative news outlets. As such, this study aims to fill that gap by delving deeper into principal turnover and retention rates in Oklahoma public schools.

This study allows Oklahoma district leaders and policy makers to understand the impact of certain decisions on principal turnover and retention. Moreover, this research focuses especially on Oklahoma elementary school principals, allowing for a more precise starting point from which further research can be undertaken at other educational levels. Furthermore, understanding how to effectively manage principal turnover could be used to improve teacher retention as well as student achievement within the state.

It is also worth noting that this study is significant in terms of its potential impact on recruitment and retention strategies with public school principals in Oklahoma. If implemented correctly, it could aid in stabilizing the position of such leaders across numerous districts while providing students with higher-quality learning experiences due to better teacher support. Ultimately, this would assist with aiding student achievement and experience overall throughout Oklahoma's educational institutions.

### **Assumptions**

This study assumes that the principal turnover data reported to the Oklahoma State Department of Education are accurate. It also assumes that the Oklahoma Cost Accounting System (OCAS) expenditure reports are accurate. Both reports are reported at the district level. The researcher will attempt to produce fair and unbiased results, while assuming that coding errors are randomly distributed in a way that does not affect the results of the study.

### **Limitations**

A significant limitation of this study is that it is based in Oklahoma, which could provide a limited scope on generalizing the findings to another state. Another limitation is the expenditure data and principal retention/attrition data were limited to school/fiscal year: 2021-2022. The coding of the expenditure data and the personnel retention/attrition data by individual districts are a limitation to this study. The OCAS data are submitted by educational leaders and the accuracy is dependent upon their knowledge and their ability to correctly code the expenditures. The personnel report, which contains numerous pieces of independent variable data, is also dependent on each district's ability to correctly code and input the associated data correctly. Another limitation of the study is that the principal turnover data does not distinguish between effective and ineffective principals, which could be direct causes for turnover.

The primary limitation of this investigation, which seeks to elucidate the connection between fiscal decisions and principal turnover, resides in its inability to shed light on the reasons underlying the turnover. In Oklahoma, there is no obligation to specify why a principal left a position on school personnel reports, thus the data procured for this study fails to differentiate between voluntary and involuntary turnovers. Furthermore, it does not provide clarity on whether the turnover was due to lateral movement within the same district, or an inter-district transfer. Moreover, the research does not capture instances where a principal may have left their position for a promotion to a district-level role. Each of these turnover types is of significant interest in the context of the unit of analysis - the school. Therefore, this fiscal study primarily focuses on exploring the relationships, with the anticipation that future research will delve deeper into understanding the motivations behind these relationships.

## **Delimitations**

This study will focus on Oklahoma elementary school head principal turnover at the end of the 2021-2022 school year. This year was chosen because it is the most recent year that personnel reports, expenditure reports, and school and district demographic reports have been completed. Another delimitation to this study is that it only explores Oklahoma elementary public schools, and those that were present during the one year of analysis. Only elementary schools were explored, because in practice, there are significant differences between duties, contracts, salaries, and scope of assignments between elementary and secondary principals. Furthermore, only schools indicated by the OSDE as elementary schools (which could include early childhood, elementary, intermediate, and upper elementary) were explored. A significant delimitation of this study is how principal turnover is defined. Due to the present research reinforcing that any head principal turnover can present negative consequences to the school climate and culture, teacher turnover, and student achievement, this study lumps any change in head principal as turnover: it does not delineate a difference between retirement, death, promotion, reassignment, internal/external change in school.

## **Definitions**

### **Administrator**

“Administrator” refers to a duly certified person who devotes a majority of time to service as a superintendent, elementary superintendent, principal, supervisor, vice principal or in any other administrative or supervisory capacity in the school district (Oklahoma Statutes Title 70. Schools § 70-6-101.3).

### **Administrative Per-Pupil Expenditures**

Administrative per-pupil expenditures include the sum of administrative salaries for the district superintendent, the building level principals, and the support staff for those offices. This amount is calculated by taking all administrative expenditures and dividing it by the district's student enrollment (Byerly, 2019).

### **Average Principal Compensation**

Average principal salary includes the total compensation package, which includes base salary, total fringe, and other fringe reported to the OSDE. The average district compensation will be derived from adding each principal's total compensation in a school district and dividing it by the number of the district's total head elementary principals.

### **Average Principal Turnover**

This is the total number of head elementary principals in a district, subtracted by the number of head elementary principals that left their school, and then divided by the total number of head elementary principals in the district. This number is then turned into a percentage.

### **Economically Disadvantaged**

The percentage of a district's economically disadvantaged students is calculated as the sum of the students coded as eligible for free or reduced-priced lunch or eligible for other public assistance, divided by the total number of students in that school district. This number is then turned into a percentage.

### **Instructional and Support Per-Pupil Expenditure**

District expenditures that include all instructional expenses and expenses that include support for a classroom. This amount is calculated by taking all instructional and support expenditures and dividing it by the district's student enrollment (Byerly, 2019).

**Elementary School**

A school indicated by the OSDE State Public School Directory as an elementary school.

**Non-Rural**

Nonrural school districts will be a combination of all other school districts that the National Education Center for Statistics (NCES) does not classify as rural.

**Per Pupil Expenditures**

Oklahoma Statutes Title 70. Schools § 1-124.A:

“Per-pupil expenditure” shall mean the aggregate current expenditures of school districts, from all funding sources including federal funds, state funds and local funds, plus the direct support aggregate current expenditures of the state for the day-to-day operations of schools and school districts from all funding sources including federal funds, divided by the aggregate student membership number for the same fiscal year for which the expenditures are determined. The aggregate student membership number shall be the count of students enrolled on October 1 or the school day closest to October 1 to whom school districts in the state provide a public education.”

**Principal**

“Principal” means any person other than a district superintendent of schools having supervisory or administrative authority over any school or school building having two or more teachers. (Oklahoma Statutes Title 70. Schools §70-1-116.3).

**Turnover**

When a principal exits their current school for any reason.

## **Rural**

Rural will combine the NCES classifications of Rural, Rural Fringe, Rural Distant, and Rural Remote (Maiden et al., 2020; NCES, 2018).

### **Summary**

Public school districts across the nation are experiencing an increased rate of principal turnover, which can lead to negative impacts on multiple areas of schools and districts. These districts are not only having a problem with combatting principal turnover, but also recruiting and retaining high quality and effective school leaders. Districts across the state are investigating cost-effective ways to combat principal turnover using strategic programs, incentive mechanisms, and retention programs. This study could be helpful in determining district fiscal decisions that are influencing the likelihood of principal turnover, which could lend insight to specific interventions to combat the problem.

In the subsequent chapter, literature and a theoretical framework will be introduced which discusses the unique and important role of the principal and the impact that frequent principal turnover has on school districts. The literature review will also address research related to student and district characteristics of principal salaries, school size/enrollment, teacher turnover, instructional and support services, administrative resources, rural schools, socio-economic demographics, and charter school districts, because these topics will contribute to the better understanding of the impact of these variables on principal turnover.

This study will utilize a single-year cross-sectional hierarchical linear model (HLM), which is “a complex form of ordinary least squares (OLS) regression that is used to analyze variance in the outcome variables when the predictor variables are at varying hierarchical levels (Woltman, Fedlstain, MacKay, & Rocchi, 2012, p. 52). HLM is conducive to this study because

data is observed while nested in repeated individuals. (Bryk & Raudenbush, 1988; Maiden et al., 2020). This study will analyze one year of cross-section data to determine the impact that each independent variable has on the dependent variable of principal turnover.

This study has the potential to assist districts in their recruiting, hiring, mentoring, and retention efforts of public school principals. If principal turnover is better understood and mitigated, Oklahoma public school districts have the potential to positively impact teacher retention and student achievement.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

The purpose of the following literature review is to explore relevant research and provide a theoretical framework for a study examining the impact of school-level and district-level fiscal decisions and demographic characteristics on principal turnover. The present study is a replication of Maiden, Crowson, and Byerly's (2020) study that examined the relationships between district-level fiscal decisions and teacher retention in Oklahoma public schools. Given this framework, the current study subsequently focuses on elementary principal turnover in Oklahoma public schools. Striving to reduce principal turnover, districts must focus their efforts on recruiting, developing, and retaining effective principals. Rangel (2018) has provided the most condensed knowledge base on principal turnover, thus far, with a detailed literature review of 36 empirical studies. The current body of research regarding principal turnover has validated the importance of the principal on many aspects of schooling, with particular emphasis on teacher retention, student achievement, and graduation (Leithwood and Mascall, 2008; Boyd, Grossman, Ing, Lankford, Loeb, and Wyckoff, 2011, Levin, Scott, Yang, Leung, & Bradley, 2020). Therefore, the efforts made by districts to recruit, develop, and retain quality principals, and the subsequent success of these efforts, are crucial because of the potential impact it has on student success.

The current literature review focuses primarily on factors related to the role of the principal and principal recruitment, development, and retention. The current study examines site and district-level characteristics that compare retention data at the conclusion of the 2021-2022 school year. This literature review includes a discussion about factors that might influence principal turnover, including instructional and support expenditures per pupil, administrative

expenditures per pupil, percent economically disadvantaged students, district enrollment, the district percentage of elementary schools with assistant principals, charter school districts, and rural school districts.

### **Motivation-Hygiene Theory**

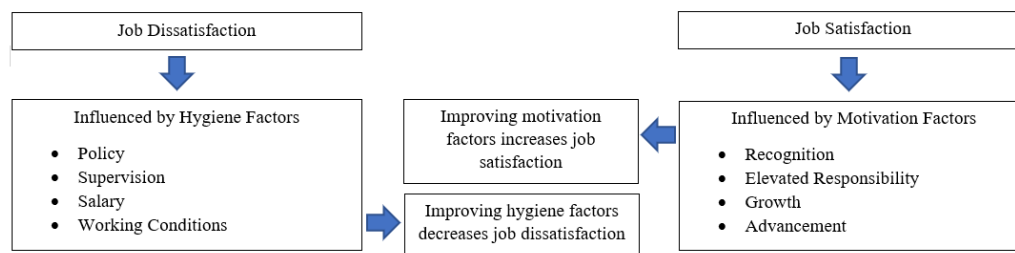
This study is grounded in Herzberg's motivation-hygiene theory, also known as the two-factor theory. Herzberg's theory is a seminal conceptual framework seeking to elucidate the determinants of occupational satisfaction and dissatisfaction (Herzberg, 1974, p. 18). Central to this theory is the proposition that job satisfaction is principally influenced by motivators or satisfaction factors, which primarily manifest as the content of work, encompassing elements such as personal achievements, inherent interest in the work, recognition, elevated responsibility, and opportunities for growth and advancement. Contrastingly, hygiene factors are generally a result of the conditions in which the work is performed, such as company policies, supervision, salary, and working conditions rather than the nature of the work itself (Herzberg, 1974, p. 18). Although motivation factors can directly lead to employee motivation, hygiene factors do not contribute to job satisfaction per se but can lead to job dissatisfaction if they're perceived as inadequate or unfair. Therefore, both factors must be addressed to maximize employee satisfaction and motivation (Herzberg, Mausner, and Snyderman, 1959).

To further explore Herzberg's theory, it's important to understand that the two factors operate on different planes (Kacel, Miller, & Norris, 2005). The motivators, or intrinsic factors, are closely tied to one's work itself. They stimulate an individual's internal drive to excel, innovate and align their personal goals with those of the organization. When these intrinsic factors are effectively addressed, they catalyze employee motivation leading to higher productivity and job satisfaction. On the contrary, hygiene factors, or extrinsic factors, are

external to the work itself and relate to the environment in which one performs the job. While these factors may not directly contribute towards job satisfaction, their absence or inadequacy can lead to significant job dissatisfaction. For example, unfair company policies or poor working conditions can demotivate employees, leading to decreased productivity and morale. Therefore, organizations must ensure that these hygiene factors are appropriately managed to prevent dissatisfaction and maintain a conducive working environment.

The terms "motivating factors" and "hygiene factors" are alternatively referred to as "satisfiers" and "dissatisfiers", respectively. The dynamic interplay between these elements generates motivation, which can fluctuate depending on variables intrinsic to the individual employee and the broader organizational context (Misener & Cox, 2001). It is noteworthy that, while motivational factors have a direct correlation with job satisfaction, the presence of hygiene factors does not necessarily guarantee it. However, the absence of such hygiene factors can invariably precipitate job dissatisfaction.

*Figure 2.1: Herzberg's Motivation-Hygiene Theory*



For school employees, such as principals and teachers, motivation-hygiene factors might manifest in several ways. Adequate compensation is a primary hygiene factor, ensuring staff feel their efforts are equitably rewarded. However, it extends beyond salary, encompassing benefits

like health insurance and retirement plans. Another crucial hygiene factor is the quality of supervision; school employees need supportive and competent leadership to thrive. This involves clear communication, constructive feedback, and a fair appraisal system. Working conditions, another hygiene factor, refer to the physical school environment, including classroom and administrative resources, safety measures, and cleanliness. Interpersonal relations, particularly with colleagues and supervisors, also significantly impact job satisfaction as a motivation factor. School policies that affect job security, work hours, and staff responsibilities also fall under hygiene factors. Although these elements might not motivate employees, their absence or poor management could lead to dissatisfaction, impacting staff morale and performance. Hence, schools must carefully curate and manage these factors to maintain a positive and productive work environment.

Herzberg's delineation of dissatisfiers, or hygiene factors, can be observed in the daily experiences of public school principals, suggesting an environment where hygiene factors may at times outweigh motivating factors. As posited by Sachau (2007), Herzberg drew an analogy between hygiene factors and preventative health measures, noting that although good hygiene does not guarantee health, it can prevent illness (p. 379). Likewise, in the current study, the independent variables being explored are considered hygiene factors, which may not guarantee principal retention because of the dynamic nature of other factors impacting the principal and their school. In the context of a principal's decision to leave a school, understanding the balance between hygiene and motivating factors can be crucial. Drawing from Herzberg et al. (1959), if hygiene factors outweigh motivating factors- or if hygiene factors are addressed but motivating factors are perceived as depreciated, this imbalance could be the tipping point prompting a principal's departure.

Herzberg's theory becomes particularly salient when seeking empirical evidence to address the looming shortage of principals. In a study replicating Herzberg's findings among teachers, Sergiovanni (1967) discovered that advancement was not a significant contributor to job satisfaction. Instead, factors such as achievement, recognition, responsibility, and the inherent interest in the work itself were pivotal (Dufour, 1986, p. 34). A parallel investigation among principals could yield fruitful insights into the potential for boosting their retention through the enhancement of motivating factors. Such insights could empower districts to design systems that effectively support their principals, thus enhancing motivating factors and mitigating hygiene factors. In doing so, principals may experience less stress and be able to focus on the fundamental aspects of their roles, such as fostering a conducive learning environment and shaping school culture. Therefore, the present study will investigate whether hygiene factors (independent variables) could reveal cost-effective strategies to decrease job dissatisfaction and retention among principals. The researcher hopes that future studies will investigate motivation factors, in Oklahoma schools and districts, which affect Oklahoma principals, to assist in determining how districts could better balance motivation and hygiene factors to provide intervention into the principal turnover crisis in Oklahoma.

### **The Importance of Principals**

Principals play a vital role in multiple areas of the ultimate success of the individual student, school, and district. Current research indicates that the principal has specific impact on the areas of teacher satisfaction, teacher retention/turnover, student achievement, and graduation (Levin et al., 2020; Seashore, Leithwood, Wahlstrom, & Anderson, 2010; Partlow & Ridenour, 2008; Leithwood & Mascal, 2008; Fuller, Young, & Orr, 2007). Although these impacts are often considered “indirect” on student learning (Supovitz, Sirindes, and May, 2010), principal

turnover does have a direct impact on teacher turnover, and teacher turnover is directly related to lower student achievement (Ronfeldt, Loeb, and Wyckoff, 2013).

The importance of the principal position has dramatically shifted since the "accountability era" began with No Child Left Behind. In the late 1970s and 1980s, successful schools relied heavily on their leaders to ensure the hiring and retention of high-quality teachers (Fuller et al., 2007; Papa, Lankford & Wyckoff, 2002), but now, the principal is no longer considered a middle manager with linear responsibilities but is expected to be an instructional leader who is actively cultivating teaching and learning practices (Fuller et al., 2007). This shift is a testament to the importance of these leaders in determining educational success not only for individual students but also for their entire school environment (Bacharach & Mundell, 1995; Hallinger & Heck, 1996). Principals are now expected to utilize every possible resource to improve student performance on a range of measures and create a fulfilling experience for each student (Hallinger & Heck, 1996). This change reflects an acknowledgment that effective principals can have a positive effect on schooling outcomes, thus highlighting the importance of their role.

The impact of the principal on a school's culture and climate has been the focus of much research in recent years, with the role of the principal found to extend far beyond managing personnel and day-to-day operations. Mascall and Leithwood (2010) found that principals are responsible for establishing shared values, norms, and contexts across their schools; when this is lacking due to frequent turnover, the researchers found that the entire culture of the school can suffer. As a result, schools must ensure they have strong levels of commitment from principals to ensure an effective and positive atmosphere is maintained over time. A study by Burkhauser,

Gates, Hamilton, and Ikemoto (2012) found that when a school experiences principal turnover, there can be school culture challenges as staff members struggle to adjust to new mandates put in place by the new administration. Unfortunately, many of these mandates may erase long-standing rules and practices that staff felt were successful and productive (Burkhauser et al., 2012). This highlights the importance of carefully considering how changes are implemented by successive principals; to ensure that transitions are as smooth as possible, and staff feel respected in their environments.

Hanselman, Griff, Bruch, and Gamoran (2016) examined two years of survey data regarding principal turnover, from 73 Los Angeles Unified School District schools to study the impact of principal turnover on school climate and culture. They found that principal turnover had an adverse effect of -0.776 on the principal leadership scale when comparing survey data over two-year increments. This illustrates the importance of having stable leadership in a school environment so that positive change can become part of the culture over time instead of continually resetting every few years due to changes in administration. Principal retention has a powerful effect on not just administrative performance but also the overall atmosphere of a school.

The effect of principal turnover on student achievement highlights the importance of stability in the position because research indicates that principals create large-scale change within 5 to 7 years (Fullan, 2001; Mascall & Leithwood, 2010). With the increase in job complexity and unattractiveness (Gilman & Lanman-Givens, 2005), it is important to understand that both effective and ineffective principals can impact student learning, whether it be an impact that “grows” or “drags on” student learning (Rangel, 2018). Principals assist in multiple areas of student success, which reach far beyond just achievement. Levin, Bradley, and Scott (2019)

stated, “Their actions help maintain a positive school climate, motivate school staff, and enhance teachers’ practice” (p. 3). Likewise, frequent principal turnover can disrupt a school’s culture and student achievement, which can show adverse effects for years to overcome, even impacting the succession of the next principal (Levin et al., 2019; Henry & Harbatkin, 2019). Principal instability creates chasms that exacerbate problems that are already plaguing schools. Frequent principal turnover also creates a short supply of institutional and pedagogical knowledge that could be used to provide stability to schools that need operational and instructional leadership.

The role of the school principal is critical in creating a positive school climate, recruiting and retaining quality teachers, increasing student achievement, and boosting graduation rates. It is undeniable that school districts must invest time and resources in recruiting, retaining, and developing strong principals. Principals are at the forefront of educational policy, leading both employees and students. They can effectively lead, advance strategic initiatives, and produce a tangible change for the better. Therefore, school districts must identify and cultivate these leaders to increase factors that directly lead to increases in professional growth and subsequent retention. With an intentional focus and investment on recruiting and supporting excellent principals in our schools, districts can increase the likelihood of positive impacts on teacher turnover, student achievement, and graduation rates.

### **Principal Turnover**

Principal turnover has become a growing concern across the United States, with the 2016-2017 national average tenure of principals in their schools being four years (Levin and Bradley, 2019). Not only does it cost school districts at least \$75,000 to find, hire, and onboard a single principal replacement (School Leaders Network, 2014), but it also contributes to difficulties in implementing policies, procedures, and initiatives (Holme & Rangel, 2012; Miller,



2013). With the emphasis on school improvement and student outcomes, and research suggesting it takes as long as five to seven years for systemic change and improvement to occur (Fullan, 2001), it's alarming that during 2016-2017, 35 percent of principals were at their school for two years or less and only 11 percent of principals being at their school for 10 years or more, with a national study finding that approximately 18 percent of principals turn over the position annually (Levin and Bradley, 2019). Furthermore, as the teacher shortage continues to negatively impact our educational landscape, principal turnover can lead to decreased staff commitment which can hinder any push toward meaningful growth or development within the school community (Holme & Rangel, 2012; Miller, 2013). Being that the principal position indirectly impacts many other areas of the educational process (Levin, Scott, Yang, Leung, & Bradley, 2020; Supovitz et al., 2010; Seashore et al., 2010; Partlow & Ridenour, 2008; Leithwood & Mascall, 2008; Fuller et al., 2007), principal retention is crucial for creating internal stability when attempting to effect lasting results.

### **Defining Principal Turnover**

Understanding principal turnover is not as straightforward as it may seem. With the research on principal turnover being young, the definition of principal turnover has been sporadic and not consistently used or defined. Depending on the context and the source, studies have defined principal turnover as retention or tenure in a school (Baker, Punswick, & Belt, 2010; Fuller & Young, 2009; Papa, 2007; Papa et al., 2002), a single principal's departure from the school (Li, 2015; Loeb, Kalogrides, & Horng, 2010), or even examining multiple pathways of career transitions, which have included retirement (Farley-Ripple, Raffel, & Welch, 2012; Li, 2015; Solano et al., 2010). Principal turnover has been increasingly seen as a key factor in school improvement (Fullan, 2001), which makes its definition more important.

Principal turnover is not just one specific event within a school that is generally discussed in academic literature; there are multiple concepts intertwined when trying to define principal turnover. Rangel (2018) describes one of the most difficult aspects of reviewing principal literature is that the studies will often group different subjects into one overarching group, such as studies grouping head principals and assistant principals together, and some even grouping district-level administrators with principals (Akiba & Reichardt, 2004; Gates, Ringle, Santibanez, Ross, & Chung, 2003; Lochmiller, Adachi, Chesnut, & Johnson, 2016). These inconsistent groupings of examined subjects are often comparing jobs, roles, and comparable functions, but function differently in the daily context of the role and make it nearly impossible to isolate the variable and relationships with the turnover, much less the potential cause of the turnover.

Investigating the literature on principal turnover is complicated by the fact that different studies are constructed with a variety of research questions. This divergence in focus inhibits the ability to draw reliable conclusions across a variety of contexts where principal turnover is being examined. For example, Burkhauser et al. (2012) explored factors related to turnover, Baker et al. (2010) probed into factors related to retention, and Tran (2017) examined principal mobility and turnover intentions. Several studies have investigated the intricate differences between various subgroups' turnover behavior, such as the comparison of turnover patterns between charter and traditional public schools (Sun & Ni, 2016). Rangel (2018) underscored that - due to a lack of consistency in answering similar research questions by using different measures for turnover - it has become increasingly difficult to define principal turnover.

Most principal turnover studies have examined two "types" of principal turnover: mobility and stability (Rangel, 2018). Principal turnover in the context of mobility examines the

movement of principals across groups, subgroups, and into "next move" statuses of (promotion, intradistrict transfer, or interdistrict transfer). Principal turnover in the context of stability examines the time or proportion of time spent at a school. For the present study, stability will be examined at the school level by determining if a principal leaves the school, but the stability and turnover data is also compiled into a district data point, which is then used to compare turnover characteristics amongst other schools and districts.

Rangel (2018) stated, "The most basic definition of principal turnover is that it occurs when a principal does not return to the same school from one year to the next" (p. 96) while noting that this definition of principal turnover does not fully capture the reason behind the departure, such as satisfied vs. dissatisfied leavers (Boyce & Bowers, 2016) and voluntary vs. involuntary turnover (Farley-Ripple et al., 2012). Although Rangel (2018) examines contextual reasons for principal turnover, the present study focuses on school-level and district-level characteristics and fiscal decisions on principal turnover. The present study defines principal turnover similarly to Rangel's (2018) definition: when a head elementary principal in a district does not return to the same school the following year. Due to the current body of research, which reinforces that any principal turnover can present negative consequences to the school, teacher turnover, and student achievement (Leithwood and Mascall, 2008; Boyd, Grossman, Ing, Lankford, Loeb, and Wyckoff, 2011; Levin et al., 2020), this study lumps any change in head principal as turnover: it does not delineate a difference between retirement, death, promotion, reassignment, internal/external changes in schools.

## Teacher Turnover

The teacher shortage in the United States continues to be a major issue. In 2017, more than 100,000 classrooms across the United States were staffed by teachers who did not meet the qualifications for their positions (Carver-Thomas & Darling-Hammond, 2017). Oklahoma has not been immune to the teacher shortage either, with 67% of Oklahoma public school superintendents believing that the teacher hiring process was more difficult than the previous year (Oklahoma State School Boards Association, 2022). According to the Oklahoma State School Boards Association's (OSSBA) 2022 annual staffing survey, Oklahoma was found to have started 2022-2023 school year with 1,019 teaching vacancies and 2,969 emergency teaching certificates issued.

According to research conducted by Hendricks (2016), over one-third of new teachers in Oklahoma leave their school after the first year, while an additional 29% leave their district and 17% completely exit the state's public school system. This contributes significantly to the nationwide churn of teachers, resulting in a higher demand for replacements than schools can meet. It's important to note that current research has key differences between the measurements of principal turnover and teacher turnover. While principal turnover is often defined as intradistrict turnover, interdistrict turnover, voluntary and involuntary turnover, resignation, and retirement, teacher turnover has been defined as teachers moving from one district to another and teacher attrition as teachers leaving the profession (Ingersoll, 2001), without regard to a teacher making an intradistrict transfer to another school in the same district.

Béteille, Kalogrides, and Loeb (2012) conducted a study to analyze the effects of principal turnover on teacher turnover. Utilizing value-added measures of teacher effectiveness, the researchers discovered that teachers with average value-added were 19% more likely to leave

their school in comparison to above-average teachers when a new principal was appointed. However, after the first year of a new principal taking over the school, teacher turnover increased by 32% for every one standard deviation increase in the value-added score. The results suggest that principal turnover is associated with an increased level of turnover among the most effective teachers.

Principal turnover and teacher turnover are intertwined, with each having an impact on the other. When a school experiences principal turnover, it is likely to lead to increased teacher turnover, which then leads to lower student achievement (Ronfeldt et al., 2013). This issue must be taken seriously, and effective intervention strategies should be put in place to reduce both principal and teacher turnover to ensure that students have the best chance for success. District leaders must work hard at reducing personnel churn to maintain a stable environment that allows students, teachers, and principals to thrive.

### **Student Achievement and Graduation Rates**

Current research indicates that principal turnover can negatively affect student achievement. Intuitively, as with most professions, as a principal's time in the profession and role increases, their knowledge and expertise can grow as well. Therefore, it is logical to assume that as a principal's knowledge and expertise grow, then their effectiveness in the role may grow as well. Principal turnover can have a significant impact on student achievement. Research has shown that when there is frequent turnover, student performance often decreases. School districts need to understand how principal turnover affects student achievement and reduce the frequency of changes while providing support systems for new administrators that encourage retention within the system. By understanding this connection, district leaders can work together to ensure greater continuity and success for all students.

Branch et al. (2009) examined Texas principal turnover from 1995-2001 and found that when a school had a new principal, there was a slight but meaningful drop in student performance. Similarly, Béteille et al. (2012) examined five years of turnover data, at 400 Miami public schools, and found that schools with newly appointed principals led to smaller achievement gains in math compared with similar schools not experiencing this change. Béteille et al. (2012) also found that the relationship between principal turnover and math achievement gains was stronger when the students were receiving instruction from an inexperienced teacher within a school that had an inexperienced principal. These studies suggest that there is potential interconnectedness of the relationship between the principal and teacher roles, especially when considering instructional effectiveness on student achievement.

Arguably, a principal's intention to turnover their position can lead to detrimental effects on the school, especially regarding student achievement. Miller's (2013) research on a sample of North Carolina elementary schools held some intriguing results when examining the potential lifecycle of a principal contemplating their turnover, the turnover being initiated, and the subsequent principal's initial years of leadership. Specifically, the study found a temporary negative relationship between turnover and student achievement in which scores on average fell 0.21 standard deviations below the baseline level during the four years preceding a principal departure and continued to decline another 0.025 standard deviations during the first two years of the new principal's tenure, before reaching the baseline again. It is important to note that this decline was reversed over time, indicating the importance of stability in schools regarding student achievement. Although factors initiating the turnover (retirement, voluntary, involuntary) were not examined in this study, it could be useful to district leaders when determining if involuntary turnover through termination or lateral school adjustment is being considered.

District leaders would need to determine whether intervention, support, and training could be provided to assist a struggling principal, or whether the district is willing for the school to undergo a continued decrease in student achievement while the new principal and school adjust to the turnover.

Burkhasuser et al.'s (2012) mixed-methods study of the New Leaders for Schools program in six urban school districts illustrates a concerning trend between principal turnover and student achievement. Descriptive analysis showed that of the schools that experienced principal turnover, 50% also experienced a decline in student achievement in the first year of having a new principal. Like Miller's (2013) findings, district leaders must understand that when principal turnover occurs, there is a strong possibility that student achievement will drop in the short term. The data suggests that it may take time for new principals to adjust to their role and develop strategies for success, indicating the value of quality training programs to set up all new principals with the tools necessary for increasing student achievement.

District leaders must be cautious and thoughtful when making decisions regarding involuntary principal turnover, whether it be through termination or lateral reassignment to another school. According to Kearney, Valdez, and Garcia (2012), principal stability has a measurable impact on student achievement. Their sampling of a small amount Texas schools indicated that each additional year of principal longevity at the same elementary school was related to an 0.227 standard deviation increase in student achievement. The effect was even larger at secondary schools, with an estimated increase with a standard deviation increase of 0.357 in school achievement.

With the knowledge that there is an alarming growth in the rate of principal turnover across the country, increased investment and support must be provided for principals. These

findings suggest that district leaders must discern whether the involuntary principal turnover is worth a potential negative impact on student achievement, or could the principal be provided with additional support, development, and time to adequately allow student achievement to grow.

There have been a select few studies to investigate how multiple instances of principal turnover can impact student achievement. Weinstein, Schwartz, Jacobowitz, Ely, & Landon (2009) conducted a study to investigate the correlation between student performance and principal turnover in newly created New York City high schools, from 1993-2007. Interestingly, they found no influence of the first principal change on graduation rates but revealed that the second principal change caused a noticeable decrease in graduation occurrence. Further, principal turnover was not shown to be an indicator of student achievement, enrollment numbers, or dropout rates. This study is interesting because the first instance of principal turnover contradicts many previous studies that found there to be a negative relationship between principal turnover and student achievement. Ultimately, this research indicates that further study should be conducted on the effects of multiple instances of principal turnover on student achievement.

Studies have shown that principal turnover does not just negatively impact student achievement, but also the overall school culture and the quality of instruction occurring in the classrooms. Mascall and Leithwood (2010) determined that higher levels of turnover were correlated negatively with school culture (-0.37), and classroom instruction (-0.06). As district leaders implement measures to increase quality principal retention, it is also imperative for these leaders to improve their screening, hiring, onboarding, and development processes when selecting new principals. It is important to understand that individuals with strong culture-



crafting abilities and instructional and pedagogical knowledge must be hired, due to the potential negative effects that the school could sustain.

In conclusion, principal turnover is an important issue that must be addressed by district leaders. It has been shown to have a negative impact on student achievement and school culture, so districts need to provide adequate support and training programs to increase the longevity of principals. Furthermore, there should also be more research done into the effects of multiple instances of principal turnover on student achievement as well as improved screening processes when selecting new principals who have strong culture-crafting abilities and instructional knowledge. Districts need to consider these factors if they want to ensure their schools are successful environments for students' learning experiences.

### **School and District Characteristics**

#### **Principal Salaries**

The subject of principal salary is the most researched issue within the review of principal retention and turnover literature (Rangel, 2018). Rangel (2018) discusses this topic significantly in a comprehensive literature review on the topic of principal turnover, with literature reviewed from 1990-2017, stating, "The relationship depended on the way turnover was measured" (p. 109), with most research controlling for salary when comparing principals turning over their positions for a principal position at another school (Ni, Sun, & Rorrer, 2015; Baker, Punswick, & Belt, 2010; Cullen & Mazzeo, 2007), as opposed to turning over positions for district-level promotions or positions outside of the education industry. Levin et al. (2020) analyzed the NASSP-LPI 2019 Principal Survey and found that 32% of all principals believed their salaries and benefits were not fair compensation, with 42% of principals planning to turn over the principalship sharing this belief, and 46% of principals in high-poverty schools also believe their

compensation is inadequate (p. 18). For the present study, the main areas of principal turnover research regarding principal salary exists in three categories: salary and turnover, salary and stability of the position, and salary and job satisfaction (intention to turnover), with all three of these categories being intermingled by each study's definition turnover and the method of measuring each study's definition of turnover.

Cullen and Mazzeo (2007) examined personnel data from all Texas public schools from 1989 through 2006, with over 6,000 school campuses analyzed. Preliminary findings for the study found that if a principal remained in their same district and same school, their wages increased by 1.4 percent per year. If the principal made a lateral move within the same district, they experienced a wage increase of 3.8 percent. Finally, if a principal made a lateral move to another principal position, but within a different district, they experienced a wage increase of 5.9 percent. Although the study is contextualized to Texas, this study is important because conclusions can be made that principals can leverage the labor market, both internally and externally from their districts, to increase their salary.

Baker et al. (2010) focused on two data sets of Missouri public school principals: 1) one data set consisting of approximately 2,700 principals across multiple grade levels from 1999 to 2006, and 2) one data set consisting of three cohorts of principals who were new to their schools in 1999, 2000, and 2001. The study conclusion was similar to Cullen and Mazzeo (2007) by finding that Missouri principals were able to leverage lateral principal turnover to improve their labor market average from about 91 percent to about 96 percent, which is approximately a 5 percent increase in relative principal salary (Baker et al., 2010). When reviewing the Baker et al. (2010) and Cullen and Mazzeo (2007) research, it's important to note that these studies do not engage in whether the salary is creating a dissatisfaction in the current working condition of the

role, or whether the principal is solely utilizing turnover as a leveraging tool for an increase in salary. Put plainly, just because a principal moves to another principal role, and receives an increase in salary, does not mean that they were moved because of dissatisfaction with the original salary.

Baker et al. (2010) also presented findings about the impact of principal salary and the stability of the position within the two datasets of Missouri principals: “In our truncated regression model of stability ratio, principal’s stability ratios are higher where relative salary, compared to peers on the same labor market, is higher” (p. 541). Similarly, Papa (2007) found that for every \$1,000 of increase in salary, principals in New York state were 8% more likely to move to a principalship in another New York state district and 12% more likely to move to another principalship within their current district.

Solano et al. (2010) examined the relationship between principal and assistant principal salary and stability and turnover in Delaware schools and found that for every \$1,000 increase in principal salary there was decrease in likelihood of the principal turning over the position. Specifically, the study found that for every \$1,000 increase in salary, the principal was 96% likely to stay in the position, 44% likely to stay in the position when compared with an intradistrict move, 82% likely to stay in the position when compared to an interdistrict move, and 68% likely to stay in the position when compared to a promotional move to a district office position.

Tran and Buckman (2017) examined a sample of Wisconsin elementary school principal turnover patterns and reported that an interdistrict move to another principal position leveraged a \$3,187.42 increase in salary, while an intradistrict move did not leverage a higher salary. In

essence, principals could be completely satisfied with the scope of their job but utilize a turnover in position to influence higher pay, while not necessarily increasing the scope of their work.

With the increasing rate of principal turnover, many studies are beginning to examine ways to provide intervention to this crisis, by first examining the intentions of principals who are considering leaving the principalship. These studies are few, but the hope is that principals' intentions regarding potential turnover can indicate areas of satisfaction and dissatisfaction within the principalship, with intervention providing less turnover and an increase in stability. Tekleselassie and Villarreal (2011) studied the relationships between salary and job satisfaction, which impacts a principal's intent to turnover their position, by using national survey data from the School and Staffing Survey. Tekleselassie and Villarreal (2011) found a strong relationship between salary and principal intention to turnover, stating:

....a one-unit (\$10,000) increase in principals' salary reduces their intentions of career mobility by a factor of 0.87 times and departure intentions by a factor of 0.88 times while accounting for all school, district-context, and state characteristics. It is important to note that compared to one-predictor regression models, the fully specified random-intercepts logistic regression models indicate only modest declines in salary's effect on both mobility and departure, suggesting that salary maintains its level of influence even after accounting for all other characteristics (p. 275).

Tekleselassie and Villarreal's (2011) findings suggest that a \$10,000 salary increase can decrease the intention for a principal to leave their school by 13%, while also decreasing their intention to leave the education profession by 12%. Although Tekleselassie and Villarreal (2011)'s examined intention and not actual turnover, the findings are significant because they are similar to the Baker et al.(2010) and Cullen and Mazzeo (2007) studies, which did examine salary after the

turnover already occurred. Using these studies as foundation literature for future research, it be concluded that salary can be catalyst for a principal's intent to turnover their position.

Tran (2017) surveyed 156 California high school principals, regarding the relationship between the principal's intention to leave their school and pay satisfaction. Tran notes, "By focusing on principals' feelings about their pay and turnover intentions, instead of solely on principal salaries and turnover, more information can be gained to help address the morale concerns of principals before they leave the institution" (p. 622). The study found that pay satisfaction and intention to turnover were related to the relative salary of other principals in a close proximity labor market, which would be their current district and neighboring districts. Tran (2007) concluded that principals that were more satisfied with their pay were less likely to resign from their position. These findings are important, because it emphasizes that salary is not a solitary issue but working conditions that impact job satisfaction can also have an impact on principal turnover.

Although there is substantive literature suggesting a relationship between principal salary and turnover, there must be context involved when practitioners are using this data to make personnel decisions. Literature suggests that principal salary is a much more intricate relationship than a simple cause-and-effect relationship. Boyce and Bowers (2016) examined survey data from principals who left the position and categorized them as "satisfied leavers" or "dissatisfied leaver," while also comparing the "dispositions" of several characteristics of the leaver and stayer principals. In relation to salary, the analysis determined that satisfied leavers were not likely to relate their salary as a reason that they left their position. Furthermore, the average exiting principal had a lower salary disposition compared to the average salary of staying principal (Boyce & Bowers, 2016, p. 14), which could lead one to assume that increasing

principal salary would decrease principal turnover. Boyce and Bowers (2016) argue that this line of questioning is flawed, because it only categorizes exiting principals into a singular group; by those that left their current position, which is why the further examination of disposition is extremely important. Boyce and Bowers (2016) argue:

While it may be true on average that exiting principals as a single group have lower salary dispositions than staying principals, we now know that the majority of exiting principals (the 68% of exiting principals who are satisfied) have roughly equivalent (if not higher) salary dispositions to staying principals (p. 14).

These findings are valuable to local boards of education, district leaders, and practitioners, because raising principal salaries might actually increase the longevity of the 32% of exiting principals who are dissatisfied, regardless of the lower disposition is related to salary. This finding ultimately leads Boyce and Bowers (2016) to pose the question: “are these the principals that we would want to stay?” (p. 14).

District leaders must heed a holistic approach when examining the factors associated with principal salary and turnover. Supporting Gilman and Lanman’s (2001) claim, district leaders must address the principal supply shortage by understanding the increasing complexity and unattractiveness of the position, which can be done by ensuring that principal labor markets have competitive salaries, especially when discussing the recruitment of quality candidates. It’s important to explore the relationship between pay and principal turnover, because of the stability and longevity of 5 to 7 years needed for school improvement (Fullan, 2001). As districts look to invest in their principal salaries and pay tables, it is noteworthy to understand that a healthy principal salary investment can be viewed similarly to an investment into an effective instructional curriculum or tool, because Rangel (2018) notes, “an effective principal can help

“grow” a student’s learning, while in ineffective principal can act as a drag on a student’s learning” (p. 88). Much like bonding is associated with capital improvements, which in turn can impact the learning environment, investing in principal salary can increase stability in the principal position, which can then can positively impact multiple other facets of the school environments.

### **District Socioeconomic Student Status**

The current study being conducted focuses on the relationship between the percentage of economically disadvantaged students at the school and district levels and principal turnover. However, the current body of literature regarding the socioeconomic status of students and principal turnover focuses on student poverty concentration solely at the school level. The findings from both levels of data could be used to generalize practical application into the knowledge base of principal turnover research.

The current body of literature regarding socioeconomic status of students and principal turnover suggests that schools with higher percentages of low-income students are more likely to experience principal turnover (Rangel, 2018). Clotfelter, Ladd, Vigdor, and Wheeler (2006) examined principal turnover in North Carolina high poverty schools from 1996 to 2004 and found, “...we conclude that the inequities with respect to the distribution of teacher and principal qualifications are large in North Carolina and that they clearly work to the disadvantage of the students in high poverty schools” (p. 31). The study found that high poverty schools exhibit the highest principal turnover in all years, with the exception of 2004 (p. 28). Clotfelter et al. (2006) also found that less experienced principals were more likely to lead schools with higher levels of economically disadvantaged students. Similarly, the study concluded that when principals from schools with higher levels student poverty made their first turnover move, it usually moved into

schools with less poverty. With national principal turnover reports finding that annually approximately 18-25% of principals leave their schools and 50% of new principals turn over their position within three years (Goldring and Taie, 2018; School Leaders Network, 2014), and the knowledge that systemic school change takes 5 to 7 years (Fullan, 2001), it is alarming that the schools that need the most expertise, experience, and support, face higher levels of inexperience and turnover.

DeAngelis and White (2011) studied Illinois principal turnover from 2001-2008, and surprisingly, found that age played a role in the relationship between school poverty and principal turnover: younger principals who served in the highest poverty and lowest performing schools had greater retention than similar aged principals at higher income and higher performing schools. DeAngelis and White (2011) also found that the higher percentage of low-income students only had a small positive impact (1%) on principal turnover to another school in the state. However, these principals were 1% less likely to leave the state school systems altogether. This study is interesting, because it leads to the need to further investigate why Illinois does not show as significant impact of turnover at schools with higher levels of student poverty.

Fuller et al. (2007) studied a decade of Texas principal career path data by focusing on multiple types of retention and turnover of data. The study found that principals in schools with 50% or greater economically disadvantaged students were approximately 16% less likely principals in schools with less than 50% economically disadvantaged students to remain in the same school (Fuller et al., 2007, Table 45). Like national survey data, Fuller et al. (2007) also found that 3-year retention rates for principals staying at the same school were extremely low,



with only about 50% remaining. This level of turnover was found to be even higher for at the high school level, with a 70% same school 3-year turnover rate being 70%.

Fuller et al. (2007) didn't just explore same-school principal turnover, but also explored turnover of the principalship (leaving the role altogether) for a 10-year period. Unlike same school turnover, there was only a slightly greater percentage of principals who left the position altogether when comparing percentage of economically disadvantaged students, with a slightly greater percentage leaving the principalship at schools of 75% or more economically disadvantaged students. Interestingly, these same principals (75% or greater economically disadvantaged schools) also showed a lower likelihood of being promoted into superintendent roles, when compared to principals at schools serving less students of poverty. Fuller et al. (2007) also examined principal three-year retention rates, by cohorts (1995-1998, 1998-2001, 2001-2004) and found that there was not a consistent pattern across the three cohorts. However, the 2001 cohort did show that schools with less than 25% economically disadvantaged students had significantly better retention rates than those with greater than 25% economically disadvantaged students. Furthermore, elementary schools showed significantly greater principal retention with schools that had less than 25% economically disadvantaged students, while middle and high schools did not produce consistent patterns. Fuller et al.'s (2007) robust review of Texas principal pathways and the impact on retention and turnover is interesting, because it shows that many principals of schools with higher levels of poverty are changing from school-to-school and not simply leaving the principalship, so with this in mind, future research could explore interventions and supports that could possibly retain principals at these schools, as opposed to "school-hopping" until they exit the principalship altogether.

Loeb et al. (2010) made conclusions similar to Clotfelter et al. (2006): lower-achieving and higher-poverty schools are often led by principals who are less qualified. Loeb et al. (2010) examined longitudinal data of Miami-Dade County Public Schools (MDCPS) and found that 20% of the poorest schools employed first-year principals, compared to only 11% of the most affluent schools. Alarming, Loeb et al. (2010) also found that schools with higher levels of student poverty had 17% of the school years with temporary/interim principals taking the reins in the middle of the year, because of principal departure, while schools of lower levels of student poverty had 5% temporary/interim principal. This temporary/interim principal placement is cause for concern, because these temporary principals often transition to another school at the end of the year.

There have been a small number of studies that have discovered different results when comparing principal turnover to schools with higher levels of economically disadvantaged students. Branch, Hanushek, and Rivkin (2009) used a different approach than other studies by studying principal turnover using a value-added model to disaggregate principals into groups of relative effectiveness. Branch et al. (2009) then reviewed the principal transitions and turnover according to the principal's relative effectiveness. They found that the high-quality principals were more likely than lower-quality principals to be in their same school after four years, except for those high-quality principals who were in low-poverty schools. The analysis found that after four years, 76.55% of high-quality principals were still at the same high-poverty schools, while 62.67% and 71.57% of high-quality principals remained at their lower poverty schools. The study also showed that the least effective principals of the high-poverty schools category were less likely to be at their same school than the least effective principals at schools with comparatively lower poverty (Rangel, 2018; Branch et al., 2009). Branch et al.'s (2009) findings

are interesting because the results show information contradictory to other studies, but it does not point to a reason that these findings may have occurred since the study did not control for other factors. Although the study found that high-quality principals of high-quality schools have less turnover than those same high-quality principals at lower poverty schools, it could be that the perception of these lower-poverty principals are higher, due to student achievement, decreased teacher turnover, and higher graduation rates, thus resulting in these principals turning over their position for promotion. This study shows valuable information when comparing like-circumstances, but it should be used in the appropriate context for the specific context of principal turnover that is being explored.

Beckett (2018) examined predictors of principal turnover in urban Colorado schools, over a 5-year period. Beckett's (2018) study was unique, because principals were categorized into three subsets: those that stayed, changed, or left. The findings were similar to past research, which found that schools with principals that stayed all 5 years had lower percentages of students with free and reduced lunch. However, Beckett (2018) found that the principals who changed schools during the 5-year period moved from schools with lower percentages of students on free and reduced lunch, to schools with higher percentages of free and reduced lunch. These findings are interesting because the principals who changed schools may have been changed involuntarily, without the principal's desire to seek leave their current school. The changers moving from the lower-poverty schools to higher-poverty schools may have been leading schools with higher student achievement, which could have led to the thought that the principal could "turnaround" the higher poverty school. With the research clearly linking lower levels of poverty to higher levels of student achievement (Wyner, Bridgeland, & Dulio, 2007), these principals being changed to higher poverty, whether voluntarily or involuntarily, may simply

have the illusion of the capability to improve their new school, without taking into other factors that could be influencing the current school's success.

Most current studies have found that the higher the poverty in the school, the greater the chance of turnover. This area of research needs additional exploration with a common definition of principal turnover. The current study will explore principal turnover as any time that a principal leaves their current position, whether it be through intradistrict change, interdistrict change, promotion, and death: all principal turnover possesses negative consequence, even if the positive consequences of the turnover outweigh the negative consequences.

### **Enrollment**

The current study being conducted focuses on the relationship between individual school enrollment and total district enrollment and principal turnover. The present literature on the relationship between principal turnover and school enrollment size has presented mixed findings (Beckett, 2018). Most studies indicated that the relationship between school enrollment size and principal turnover is that principals of schools with larger enrollment size turnover the position less often than principals of schools with smaller enrollment sizes (Baker et al., 2010; Gates et al., 2006; Berry, 2014). Berry's (2014) analysis of the 2007-2008 School and Staffing Survey, as well as the 2008-2009 Principal Follow-up Survey from the National Center for Educational Statistics, found that nearly 32% of principal turnover occurred at schools with smaller enrollment sizes.

Gates et al. (2006) found that as Illinois school size increased, the likelihood for principal turnover decreased by 1% for principals changing to another school, 6% for principals changing positions, and 3% for principals leaving the education systems altogether. Likewise, Gates et al. (2006) also found that school size had only a slight impact on principal stability in North

Carolina, with the predicted probability of turnover being 19 percent at the smallest school and the predicted probability of turnover being 14 percent at the largest school (p. 300).

Baker et al.'s (2010) 8-year multiple pathway study found similar results to most other studies, which is that Missouri principals of larger schools were 47% less likely to make a second transition to another school and 34% less likely to leave the entire system. Although Papa (2007) used a dichotomous measurement for turnover, the study found similar results that as student enrollment increased, the likelihood for the principal turning over the position decreased by 9.2%.

Podgursky, Ehlert, Lindsay, and Wan (2016) also found that smaller schools were more likely to turnover principals, but this data was in relation to Iowa principals leaving larger schools after five years, when compared to those leaving smaller schools after five years. It's important to note that Podgursky et al.'s (2016) findings may not fully align with the present study, because they mixed assistant principal and head principal data, but the present study solely utilizes head principal data.

Blazer (2010) made an interesting conclusion, citing that principal turnover is higher in rural and small-town areas *and* schools with larger enrollment size (p. 3). These findings are interesting, because it poses additional areas for research about the context of these rural areas and "small towns" and their relative proximity to districts that may be considered large. For example, the small-town and rural districts may have suburban and urban school districts nearby which may be able to offer better working conditions, enhanced facilities, and better salary and benefits.

Although most of the current principal turnover literature suggests a relationship between smaller school size and increased principal turnover, there are a few studies that did not find a

significant relationship between school enrollment size and principal turnover (Partlow, 2007; Tekleselassie and Villareal 2011; Beckett, 2018). Like most principal turnover studies, the impact of intention of turnover, predictability, and actual turnover may be observed, surveyed, or measured with different methods and may not include geographic and satisfaction data to provide context to the findings. Due to the incredible number of variables impacting all sizes of schools, it is difficult to pinpoint the reason why most studies suggest that smaller schools experience greater principal turnover. For example, many districts scale principal salary by school enrollment numbers, which could lead to many principals seeking a transition from their smaller school to larger school to maximize their pay. Furthermore, some principals of smaller schools may exhibit a greater perception of principal effectiveness, because their smaller schools may have greater levels of teacher retention and student achievement. The illusion of effectiveness, when compared to the principal of a much larger school, may cause the principal to be provided a promotion. As the body of principal turnover research grows, it's important to use school enrollment as a variable that compares principal turnover with like-schools/districts, rather than a broadly stroked comparison of districts that may not be similar.

### **Instructional and Support Resources**

Principals are continually being asked to accomplish more, with fewer resources. With the role of the principal increasing in complexity and unattractiveness, many direct and indirect factors are influencing principal job dissatisfaction, which is leading to greater levels of principal turnover (Gilman & Lanman, 2005; Tran, 2017). It is widely accepted that the availability of adequate instructional and support resources in a school setting can have a significant impact on the teaching environment. Research has found that inadequate resources can lead to job stress, which in turn influences the decisions teachers make when they are contemplating leaving the

profession (Pogodzinski, 2014). The present study examines both direct and indirect instructional and resource supports, which could in turn impact the likelihood of principal turnover. Direct instructional resources and supports include the salaries of teachers, teacher aides, teacher assistants, paraprofessionals. Textbooks, technology, and instructional materials are also considered direct instructional and support resources. Indirect classroom supports are also examined, which includes: professional development, school counselors, instructional coaches, diagnosticians testing coordinators, nurses, and librarians. Logically, principals who feel that their teachers and support staff are adequately being provided the instructional materials and resources for their classrooms and responsibilities are more likely to feel as if they can succeed in the profession (Byerly, 2019). Principals need to be able to lead schools that are provided with adequate supplies and resources to be able to provide teachers with the ability to provide effective instruction for the students.

The present study examines principal turnover in Oklahoma school districts during a year that after schools had been undergoing budget cuts for nearly a decade. Oklahoma school districts' textbook allocations and professional development funding were either reduced or not funded at all (Oklahoma State Department of Education, 2017). According to the Center on Budget and Policy Priorities, Oklahoma had the highest per-pupil funding cuts from 2008 to 2018, with an inflation-adjusted reduction of 28.2% (Leachman, Masterson, and Figueroa, 2017). Furthermore, Leachman et al. (2017) noted that from the seven years prior to the current study's examination, the state experienced a 16.6% reduction in public school investment when adjusted for inflation. These large decreases in funding have undoubtedly impacted educational outcomes and further contributed to principal turnover throughout Oklahoma's schools.

The examination of the NASSP-LPI principal survey by Levin et al.'s (2020) is concerning, with the perceived support from the allocation of instructional and support resources by school districts being cited as one of the top-five areas that the researchers found to impact principal retention. The allocation of supportive resources can greatly influence the quality of instruction and job satisfaction for teachers (Hill, 2015), which can greatly impact the likelihood of principals retaining their position or conversely, turning over their position when they feel unsupported. When principals are leaving their positions due to a lack of support, there is an urgent need for districts to reevaluate their methods of resource distribution.

The survey conducted by the NASSP-LPI and examined Levin et al. (2020) found that 43% of principals planning to turn over their position felt that their district was deficient in providing adequate student services personnel such as nurses and counselors. This implies that without enough nurses or counselors, students may not have access to the necessary support they need to help them manage physical or mental health issues. Overall, 39% of surveyed principals felt that their district did not provide adequate student support services. Furthermore, 19% of all principals surveyed, and 24% of principals planning to leave their position, felt that there was a lack of support towards advancing student learning. Likewise, 21% of principals planning to leave their position claimed there was inadequate teaching and instructional support material available for students and teachers (Levin et al., 2020). Finally, 28% of all surveyed principals and 37% of principals planning to leave their positions reported they were unhappy with the amount of general support they were receiving from their district (Levin et al., 2020). This suggests that school districts may not be aware of exactly what resources are needed for schools to fulfill their educational mission or that these needs are simply being overlooked when allocations are made. In either case, districts should strive to better understand what is needed for



schools to succeed academically which includes providing the appropriate level of financial and personnel resources required by each school's unique needs. These results highlight how important it is for districts to ensure that principals are being provided with enough instructional and support resources so that teachers can provide effective instruction and students have access to quality learning experiences.

Inadequate financial and personnel resources have a significant impact on principal turnover. The survey conducted by the NASSP-LPI highlighted how important it is for districts to ensure they are providing enough instructional and support resources so that teachers can provide effective instruction, students have access to quality learning experiences, and principals feel supported in their positions. Districts should strive to better understand what is needed for schools to succeed academically, which includes providing the appropriate level of financial and personnel resources required by each school's unique needs. By consulting principals regarding the needs of their schools, and providing adequate and equitable funding for these needs, it can be assumed that a district has a greater potential to retain its principals.

### **Administrative Support Resources**

Investing in administrative per-pupil expenditures and principal development may have a positive impact on teacher retention and student achievement but should be further investigated. Research has shown that teachers' perceptions of their principals are the most important indicator of whether they will stay in the school or look elsewhere (Ladd, 2009). By providing greater administrative expenditures and training for principals, districts can create an environment where teachers feel supported and valued, which could help to combat the teacher turnover crisis. Ultimately, this kind of investment in education leaders is likely to lead to increased student performance.

The quality of education in schools is heavily dependent on the recruitment, development, and retention of teachers (Harris, Rutledge, Ingle, & Thompson, 2010). Studies have shown that when school administrators provide support and guidance to teachers, they are more likely to choose to remain in their positions (Loeb, Kalogrides, & Béteille, 2012). Conversely, lack of administrative support has been identified as one of the main reasons why teachers leave a school or even quit their profession altogether (Boyd et al., 2011; Cancio, Albrecht, Johns, 2013; Marshall, 2015; Ingersoll, 2001). Therefore, principals and administrators need to ensure that they are providing adequate support to their teaching staff if they want them to stay in their roles for an extended period.

The principal stability of a school is directly linked to student achievement, and can also impact teacher retention (Kearney et al., 2012; Ronfeldt et al., 2013). Research shows that teachers are more likely to stay in the profession if they have strong administrative support rather than higher salaries, with Coggshall, Ott, Behrstock, and Lasagna (2010) finding that seventy-seven percent of surveyed teachers indicating they would take greater administrative support than higher salaries. With the knowledge that principal longevity (Kearney et al. 2012) and teacher turnover (Ronfeldt et al., 2013) impacts student achievement, it's important for districts to adequately invest in administrative per-pupil expenditures.

There have been few studies that examine the impact of district expenditures on principal turnover rates. Solano et al. (2010) conducted a study exploring how per-pupil spending at the district level affects Delaware principals' tenure and career moves. Their results indicated that when district per-pupil spending increases, average principal stability slightly increases as well, and they are expected to remain in their positions approximately one-fifth of a year longer with each additional \$1,000 increase in per-pupil spending. Furthermore, principals of districts with

higher per-pupil spending were more likely to move into a central office position within their district. Additionally, this same study found that increased spending at the district level was associated with a decreased likelihood of principals leaving or retiring from their positions.

Nevertheless, additional research is needed to gain a more comprehensive understanding of these effects and better inform decision-makers regarding administrative per-pupil expenditure investment. More specifically, further analysis of the relationship between district expenditures and principal turnover should be conducted to assess if some other variables or circumstances could affect this association. By doing this, school districts can make informed decisions regarding administrative funding levels that will help ensure greater retention rates among principals while also maximizing positive educational outcomes for students.

Administrative per-pupil expenditure investment can have a positive effect on principal stability and teacher retention, which in turn leads to improved student achievement. Therefore, districts need to invest adequately in their administrators if they want to ensure greater retention rates among principals while also maximizing positive educational outcomes for students. Further research should be conducted into the relationship between district expenditures and principal turnover to better inform decision-makers regarding this type of funding. With a more comprehensive understanding of these effects, school districts will be able to make informed decisions about how best to allocate resources towards helping combat the principal and teacher turnover crises.

### **District Location: Rural vs. Nonrural**

Nationally, fifty-three percent of public school districts are considered rural (Byerly, 2019; American Association of School Administrators, 2017), twenty percent of students attend rural schools (Byerly, 2019), and nearly half of the students attending these schools live in

poverty (Wange, 2014). Oklahoma is home to a high percentage of rural school districts, with the Oklahoma State Department of Education reporting that fifty-two percent of Oklahoma school districts are considered rural (Oklahoma State Department of Education, 2020). Research has found that teacher shortages in rural Oklahoma school districts are caused by higher levels of poverty and a lack of available resources (Gallo & Beckman, 2016).

With budget cuts resulting in reduced funding for schools, it is essential to understand principal attrition and how it affects rural and nonrural school districts. The present study seeks to investigate principal turnover rates in Oklahoma's rural and nonrural school districts during a period that followed a decade of the greatest percentage of per-pupil funding cuts in the nation (Leachman et al., 2017). By examining this data, we can gain valuable insight into how principals are affected by budgetary constraints and other factors influencing their decisions to stay or leave their positions.

Gates et al. (2006) conducted a study on Chicago Public Schools (CPS) principals and found that they were significantly less likely to leave the Illinois state school system as compared to rural principals, with 30% of CPS principals leaving compared to 54% of rural principals. Furthermore, CPS principals were found to be 44% less likely to change positions within the same district than principals in rural Illinois districts. This trend was also seen when looking at changes within the same district, as CPS principals were 25% more likely to make moves within their district than principals in suburban and rural Illinois districts.

Building on this research, DeAngelis and White (2011) studied CPS principal turnover from a multiple paths approach and identified similar results as Gates et al. (2006). Specifically, CPS principals were 41% less likely to make moves within the district and 98% less likely to make a transition outside of their district, when compared with suburban Illinois principals. The

study additionally found that CPS principals were 46% less likely to leave the entire state public school system than their counterparts in suburban districts.

Rangel (2018) suggested an interesting interpretation regarding the results of DeAngelis and White (2011)'s study of urbanicity and CPS principal turnover. Rangel suggests that due to its large size and urban nature, CPS acts as its own labor market which allows for more internal movement among its own schools rather than leaving the district entirely like suburban or rural Illinois schools would typically do. This hypothesis further highlights how the unique characteristics of large urban districts such as Chicago can lead them towards different trends than what is seen in smaller or suburban districts throughout the state.

In North Carolina, Gates et al. (2006) found that urban school principals were more mobile than their rural counterparts; they were 32% more likely to leave the education profession and 31% more likely to transition to another school. Similarly, DeAngelis and White (2011) observed that rural Illinois principals were 24% more likely than suburban principals to complete interdistrict transfers. A study conducted by Ni et al. (2015) on Utah principals noted a stark difference between those in suburban districts and those in urban ones; with suburban principals being 37% less likely to turn over their position, while suburban principals were 59% more likely to change positions.

The findings from previous studies conducted in other states suggest that urban school principals are more mobile than those in rural districts and suburban ones. This reveals an interesting trend which could also be true for Oklahoma's rural and nonrural school districts, however, this requires further investigation to confirm it. Therefore, conducting a study on principal turnover rates in Oklahoma is essential as it will provide valuable insight into how budget constraints could affect the decisions of these individuals to stay or leave their positions.

Furthermore, understanding the relationship between district location and principal attrition can help us better understand why certain areas have higher levels of principal and teacher turnover. With this knowledge, there is potential to identify solutions that would benefit both educators and students alike across all types of Oklahoma school districts.

### **District Type: Charter vs. Noncharter**

The principal turnover rate between charter schools and traditional public school systems is a variable that must be explored within more depth. There are few studies that have been conducted comparing principal turnover between these two types of schools and districts, with even less research being done to compare why this difference may exist. Charter schools generally report higher principal turnover rates, which could be due to a different set of expectations from their governing board (Sun and Ni, 2016). These expectations could be considered more demanding and require regular scrutiny, with principal selection often being through non-traditional selection routes of non-governmental organizations, organizations such as Teach for America, and nonstandard principal development and certification programs. Conversely, those leading a traditional public school may have more accredited and standardized pathways through the principalship, while working their way through a hierarchical district-level or career pathway pattern.

Ni et al. (2015) conducted research examining principal turnover in Utah, comparing traditional public school principals with charter school principals. The study found that charter school principals were not more likely to move to a new school compared to their public school counterparts, but instead were more likely to change positions within the same district or leave the profession altogether. Specifically, principal turnover at charter schools was 2.3 times more likely than at traditional public schools for changing positions and 2.94 times higher for leaving

the profession entirely. These findings suggest that principal mobility is far from uniform across educational settings, opening scholarship avenues for better understanding principal turnover behavior beyond just comparison between types of schools.

Sun and Ni (2016) compared principal turnover rates between traditional public school and charter school across the United States. The research indicated that principal turnover rates are higher in charter schools than traditional public schools, with principal turnover at 28.7% in charter schools compared to 20.6% in traditional public schools—a statistically significant difference. Further exploration of potential predictors behind the difference in turnover rates of school type resulted in the discovery that being a female principal decreased the difference between principal turnover rate of charter schools and traditional public schools by almost 4%. Sun and Ni (2016) also highlighted that as the percentage of new teachers increased at charter schools, the differential gap of principal turnover between these two school types increased by nearly 25%.

Although the current body of research discusses the differences in charter school and traditional public school principal turnover, the research suggests that principal turnover in charter schools is significantly higher than principal turnover in traditional public schools. Further research should examine the differences and similarities between this turnover differential to determine if other factors of teacher retention, student achievement, and graduation rates comparable between these different school types. If there aren't statistically significant differences in these outcomes, it suggests that principal stability and tenure are more important to traditional public schools than it is for charter schools, or vice-versa. Since principal instability can be a disruption to any learning environment, it may be wise for charter school

districts to consider principal longevity as an important factor when selecting a principal to lead their campus.

### **School Level**

The current body of research shows an inconsistent pattern of principal turnover between school categories (Rangel, 2018). Although the present study will focus on principal turnover in Oklahoma elementary schools, it is important to understand the current body of research regarding principal turnover at all levels because this foundational turnover knowledge allows for a starting place of comparison. As district leaders examine principal turnover in their own districts, it's important for them to be able to decipher job characteristics that are similar and dissimilar between all school category types and grade-spans. As the district understands turnover patterns at each category, district leaders could potentially provide targeted interventions to decrease principal turnover.

Fuller et al. (2007) examined Texas principal cohort data over a 10-year period to determine principal career paths and found that a larger percentage of high school principals did leave the principalship, when compared to their elementary and middle school principal cohort counterparts, but that a greater percentage also moved into a superintendent role too (p. 26). Furthermore, only 16% of high school principals remained in the principal role, but 16% had also transitioned to superintendent roles, which is considerably greater than the almost 6% of elementary principals who transitioned in superintendent roles (p. 26). The study also found that Texas secondary principals were 32% less likely to leave the principal role altogether. When grouping the 10-year period into three three-year principal cohorts (1995-1988, 1998-2001, and 2001-2004), the retention rates were significantly greater among elementary principals, when compared to the retention rates for middle and high school principals. All three elementary



principal cohorts exhibited three-year retention rates of 50% or more, while middle and high school principal cohorts exhibited significantly less than 50% retention rates (Fuller et al., 2007). Overall, elementary school principals were almost 52% more likely than secondary principals to remain at the school for 3 years or more (Fuller et al., 2007).

In contrast to Fuller et al.'s (2007) comparison of middle and school principals, Baker et al. (2010) studied principal stability ratios in Missouri middle and high schools and found that middle school principalships presented lower stability ratios, when compared with high schools. Baker et al. (2010) assumed that middle schools present less stability, because principals in these roles may be using this position as a "steppingstone" to obtain a high school principalship (p. 539). Baker et al. (2010) also concluded that 65% of Missouri elementary principals stayed at their school for the entire 8-year observation period, which was less than high school principals and more than middle school principals. Similarly, Ni, Sun, and Rorrer (2015) found that Utah high school principals were 1.66 times more likely to turn over the principalship than elementary principals but were 51% less likely to turn the position over for another principal position.

Tekleselassie and Choi (2019) found a significant relationship in turnover with principals who were leading a "merged" school (combined elementary and middle school), with the likelihood of turnover being three-times more likely than a principal who leads a traditional elementary school. It can be assumed that there are unique barriers to the principalship at a merged school, due to the wide span of grades, student ages, and traditionally differing approaches to instructional delivery. These stressors and unique indicators of merged schools could push these principals to schools with more traditional categories of grade-spans.

The current body of research seeks to compare the different school categories between competing levels: elementary, middle, and high school or elementary and secondary schools.

Although this research is important to establish baseline knowledge regarding principal turnover, the present study will only investigate principal turnover in Oklahoma elementary schools. Elementary and secondary principalships are like comparing apples to oranges, with elementary principals being able to better establish instructional leadership capabilities and communal aspects of collaboration (Newton, Giesen, Freeman, Bishop, & Zeitoun, 2003), while the secondary principalship can often present as a compliance role, due to the facets of accountability and assessment embedded with the role (Molly & Mallory, 2006). Narrowing the scope of school category presents district leaders with the ability to focus on one level of the principalship in their district. By comparing the elementary principal turnover body of literature with the present study's findings, district leaders could then use this information as a beginning point for intervention. Further studies could use the present study's information to develop potential intervention for principal turnover and could also compare similar methods to the secondary principalship to determine similarities and differences.

### **Summary**

In Chapter Two, the importance of recruiting, developing, and retaining quality principals was discussed in depth. Research has shown that there can be difficulty in recruiting qualified principals in both suburban and rural areas across the United States. While there is limited research regarding Oklahoma principal turnover and retention, especially following a decade of substantial funding cuts, the present study could provide significant information when policymakers and district leaders are allocating funding and constructing budgets. Understanding how to recruit, develop, and retain effective principals is critical to combat the Oklahoma teacher turnover crisis and to impact student success.

## **CHAPTER THREE**

### **DESIGN OF THE STUDY**

This finance-focused study is an attempt to provide a better understanding of the effects that school-level and district-level financial decisions and demographic characteristics might have on principal turnover and retention in school districts. According to the Center on Budget and Policy Priorities, Oklahoma had the highest per-pupil funding cuts from 2008 to 2016, with an inflation-adjusted reduction of 24.2% (Leachman et al., 2016). Within this timeframe, Oklahoma public schools have seen a significant amount of principal turnover, with the turnover rate hitting a record high of 22 percent during the 2018-19 school year (Lazarte Alcalá, 2021). However, during the 2017-18 and 2018-19 school years, Oklahoma public school-certified personnel received two consecutive pay raises which may be associated with a slight decrease in principal turnover (Lazarte Alcalá, 2021). After nearly a decade of some of the most drastic cuts in educating funding in the country, it would be wise to see if two subsequent public school employee pay raises and relative funding increases could curtail the continued rates of principal turnover in Oklahoma. It is for these reasons that school districts in Oklahoma were selected as the data source for this quantitative study, and the 2022 fiscal year was chosen.

This study determines if any of the sixteen variables identified impacts a district's or site's principal turnover rate. If any of the variables appears to impact principal turnover, this study could provide districts with information to better assist in financial decisions, which could subsequently increase principal retention. A quantitative methodology is best for this study because it allows for the exploration of relationships and associations between variables (Williams, 2007; Johnson & Christensen, 2012). This kind of methodology helps to determine relationships between factors, allowing for an understanding of how they interact together to

reach a certain outcome. Such research is useful in making predictions and empirically evaluating research hypotheses. Quantitative methods also allow researchers to make valid generalizations about their results.

As with Maiden, Crowson, and Byerly's (2020) study regarding Oklahoma teacher turnover, hierarchical linear modeling (HLM) was chosen because it is a technique in the field of social sciences that has a unique ability to account for cross-sectional data, where multiple observations are taken over time with individuals, and where characteristics of individuals are measured at a single point in time. For the present study, a single-year cross-sectional HLM was utilized. The development of (HLM) represents a significant evolution in the field of educational research. It transcends the traditional dichotomous view of variable data. For example, the previous viewing of student achievement evaluations relied primarily on pre-test and post-test models. Rather, HLM offers a more sophisticated approach, engaging with nested data and accommodating the influence of multiple variables and levels. This includes the consideration of school characteristics, providing a more comprehensive and nuanced understanding of student performance (Bryk & Raudenbush, 1992; Anderson, 2012). This approach can account for variations across two or more levels of analysis and allows the researcher to specify relations between individuals and their environment (Anderson, 2012).

Hierarchical linear modeling enables researchers to examine changes over time and identify underlying patterns or trends that may be present in the data. It also allows researchers to assess the impact of various variables on outcomes at different levels of analysis simultaneously. It also provides additional information regarding the structure of relationships among variables while still maintaining sufficient degrees of freedom within models due to its flexibility in

specifying multiple levels of nesting. For example, HLM can be used to develop predictive models at the individual level based on historical characteristics that may have affected outcomes at a higher level (Anderson, 2012). Moreover, HLM has proven to be especially useful in longitudinal research since it allows for modeling when the measurement of time is defined at level 1 and subjects are defined at level 2 (Bryk & Raudenbush, 1987; Raudenbush & Bryk, 2002). Although the present study will utilize a single-year cross-sectional HLM method, future research could benefit from utilizing longitudinal studies to potentially understand principal turnover before, and after, the COVID-19 pandemic.

The present study also utilized binary logistic regression to assist in predicting the likelihood that any of the sixteen variables may impact principal retention. In the pursuit of a deepened understanding concerning the intricate associations between the variables under scrutiny, the study employed the utilization of comprehensive descriptive analyses, coupled with binary logistic regression (Ballard & Maiden, 2018). The relationships depicted within the predictive model, although highly informative, are not indicative of causality. The rationale for opting for the logistic regression model was its appropriateness for the outcome variable, which is categorically dichotomous in nature. Binary logistic regression yields predictions of the likelihood of an event's occurrence. In the context of this research, the event in question pertains to the classification of a school exhibiting principal turnover or retention.

The objective of HLM is to determine relationships between several factors, instead of attempting to infer causation (Byerly, 2019). This approach could shed light on the relationships between multiple variables and Oklahoma elementary school principal turnover. This type of research could be immensely beneficial for Oklahoma school district administrators. The findings of the current study might assist these administrators and policy makers in predicting

principal turnover more accurately, consequently allowing them to assign resources and funding more effectively so they can better recruit, retain, and develop principals. This quantitative study examines turnover data as the dependent variable in school districts across Oklahoma.

### **Research Questions**

This study would answer the following overarching question: To what extent if any do varying district-level fiscal decisions and demographic characteristics affect principal turnover? Specifically, three research questions guided the study:

- 1) Are there relationships between principal turnover and school site related fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, head elementary principal salary, head elementary principal serving multiple sites, head elementary principal assuming multiple job-roles, site percent economically disadvantaged students, site enrollment, and site elementary assistant principal employment status)?
- 2) Are there relationships between principal turnover and district fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, percent economically disadvantaged students, district total enrollment, district average percent of principal turnover, and the district percentage of elementary schools with an assistant principal)?
- 3) Are there relationships between principal turnover and district classification and type (whether a district is rural or nonrural, and whether charter or noncharter)?

This single year cross-section HLM has two levels of analysis. Level 1 consists of school level characteristics that are nested within level 2 district level characteristics. Research

questions one and two include random variables, while research question three includes fixed variables.

### **Contextual Overview of Oklahoma Principal Turnover and Funding**

The present study will focus on elementary principal turnover at the conclusion of the 2021-2022 school year (FY22) to gain a better understanding of principal turnover in Oklahoma. This year was selected because the impact of the COVID-19 pandemic caused inconsistencies with some district, state, and federal reporting requirements, which could affect the validity and reliability of the variable data that has existed during fiscal years 2020 and 2021. Most notably, the United States Department of Agriculture (USDA) provided a waiver that allowed districts to provide free meals for all students, which caused most districts to see a drastic decrease in the number of documents that would typically impact a district's economically disadvantaged status. With the Oklahoma State Department of Education: Oklahoma Educator Supply & Demand Report Analyzing data from the 2020-2021 school year, this study will provide an additional and subsequent year of turnover data, which could shed insight into the principal market following COVID-19. Analyzing FY22 allows for the best chance to better understand how principal turnover is distributed across districts within the state and the subsequent relationships between principal turnover and the study's variables for current district leaders and policymakers to provide intervention and implementation to assist the principal turnover crisis.

The Oklahoma State Department of Education (OSDE) recently released the Oklahoma Educator Supply and Demand Report, which details workforce data during the fiscal years of 2016-17 to 2020-21. The report notes that in 2021, there were a total of 1,853 public school principals in Oklahoma with an average experience of 21 years, including 1,038 elementary school principals, and 94% of these elementary principals considered "FTE" or full-time

equivalent (Lazarte Alcalá, 2021). Out of the 1,853 principals, 91 percent had 10 or more years of experience and less than one percent had less than three years of experience (Lazarte Alcalá, 2021), likely due to the minimum experience requirements for the certification status needed to become a principal.

The Oklahoma State Department of Education report has highlighted the alarming rate of principal turnover in the state over the past five years. These rates have ranged from 16 percent to 22 percent, with a national average of 16.7 percent (Lazarte Alcalá, 2021; U.S. Department of Education, National Center for Education Statistics, 2019). This issue has been further categorized into two primary forms: "movers" and "leavers." Movers refer to those principals who have left their current positions but stayed in the field of education, which includes intradistrict and interdistrict transfers to other principalships. Leavers are those who have left the profession entirely. The rate of leavers was found to be particularly concerning at 36 percent of all turnovers in 2020-21 (Lazarte Alcalá, 2021).

During 2020-21 over half (51%) of "movers" stayed in education but held a different role or position. This could be attributed to promotion to a district-level position or a principal opting to go back into the classroom as a teacher or in another capacity such as a school counselor. This type of turnover, whether voluntary or involuntary, could indicate that the role of the principal has become increasingly complex and unappealing (Gilman & Lanman, 2005; Tran, 2017). Furthermore, in 2020-21, about 37 percent of all principal turnover "movers" remained in the principalship but moved to another school (Lazarte Alcalá, 2021). The rate of principal turnover within the "movers" category is disconcerting and could have far-reaching consequences for a school's climate and culture, teacher satisfaction, teacher retention and turnover, student achievement, and graduation (Lazarte Alcalá, 2021; Hanselman et al., 2016; Levin et al., 2020;



Seashore et al., 2010; Partlow & Ridenour, 2008; Leithwood & Mascall, 2008; Fuller, Young, & Orr, 2007).

Student enrollment in Oklahoma has seen a considerable increase over the past several years, rising by an average of 4,500 students annually between 2012-13 and 2019-20. Last year alone, there were 703,650 students enrolled in Oklahoma's schools (Lazarte Alcalá, 2021). For the 2021-2022 school year, there are 698,696 as of October 1, 2021. The state school system is composed of 509 traditional school districts containing 1,805 traditional schools, 37 charter school districts and 7 virtual charter schools. Of the total student population, 56% of them were categorized as economically disadvantaged. The state consists of 965 elementary schools, 312 middle/junior high schools, and 445 high schools. There are also 94 districts considered “Elementary Districts” (Oklahoma State Department of Education, 2021).

Oklahoma is home to a wide variety of public schools, ranging from the smallest traditional school district with just 27 students (Davidson) to the largest with an enrollment of 33,211 (Tulsa Public Schools). Furthermore, charter schools in the state vary widely in size. Epic Charter Schools, which contains the Epic One-on-One and Epic Blended Learning Charter models, have respective enrollments of 15,178 and 23,156 for a total enrollment of 38,334. The smallest charter school district has an enrollment of 55 students.

Despite its growing student population, Oklahoma has lagged other states in terms of per-pupil funding. From the 2011-12 to 2017-18 school years, funding for education remained nearly flat while the total student population grew by almost 30,000 (Leachman et al., 2017). However, following the teacher walkout of 2018, there was an increase in educational spending, beginning with 2018-19 school year. This resulted in per-pupil expenditures of \$9,399 for the 2019-20 school year. Although there was an increase in funding, this amount falls nearly \$3,500 below

the national average (Oklahoma State Department of Education, 2020). Oklahoma's per-pupil expenditures for the 2021-22 school year was \$10,720.96 (OCAS, 2022).

Oklahoma does not utilize a minimum salary scale for principals, as with teachers. Instead, the responsibility for determining principal salary scales is given to district-level leaders with subsequent approval from the district's board of education. Although current principals' salaries can be found through public record searches, most school districts do not publicly display the compensation schedules for principals. This lack of public salary advertisement can make it difficult to determine how competitive a school district is in terms of its principal pay. This can lead to challenges when attempting to attract and retain talented educators.

Often, market comparisons can assist in this process, allowing districts to evaluate their own compensation practices against those found across the state and nation. Salary scales are not only important for attracting high-caliber applicants but also retaining them over time. If a district falls short in terms of its salaries compared to other nearby schools, it may find itself struggling to retain good educators who may seek more lucrative opportunities elsewhere. For districts to ensure successful recruitment and retention strategies, understanding current market conditions is crucial for setting appropriate salaries that will remain attractive regardless of potential changes in the job market over time.

Alarmingly, as Oklahoma student enrollment continues to climb, there has been an increase in the number of principals serving multiple school sites. According to Lazarte Alcalá (2021), more than 22 percent of school principals are now spread across two or more school sites, with over 64 percent of these multi-site administrators also taking on additional roles beyond the principalship. This speaks to the increasingly multifaceted nature of the principalship, requiring a wide range of knowledge and experience from instructional leadership to compliance

and finance management, human resources management and much more (Levin et al., 2020; Mascall and Leithwood, 2010). Given this reality, it is essential that school districts prioritize providing competitive wages and resources to ensure not only that they attract qualified candidates but also retain effective current principals. In addition to competitive compensation packages, districts should also provide additional professional development opportunities designed to equip principals with the necessary skills for successful school leadership.

### **Target Population and Sample**

The population for the current study consisted of all public-school districts and elementary school sites that existed during the 2021-2022 school year. According to the Oklahoma State Department of Education (2021), there were 509 traditional school districts and 37 charter school districts in the state, for a total of 546 school districts. Districts and school sites categorized by the OSDE as “Virtual Charter Schools,” which totaled 7, were not utilized for this study because of the inexistence of district locale data. Districts that did not possess a school indicated by the OSDE as “elementary,” such as PK-12 or K-12 districts without this designation, were not utilized for this study. Districts that were designated as “elementary districts” by the OSDE were included in this study, regardless of the grades served. A total of 546 school districts were observed during the 2021-22 school year. Of these 536 school districts, there are 510 noncharter districts (94 elementary only districts) and 26 charter districts. Within these districts, there are a total of 992 total elementary schools (963 noncharter schools and 29 charter schools). A total of 394 school districts are located in rural areas of Oklahoma, while a total of 142 school districts are located in nonrural areas of Oklahoma. Of the total population observed, the final sample population used for this study was narrowed to 524 school districts, with 20 of these districts being considered charter school districts. The final sample population

observed 987 elementary schools, with 967 being traditional and 20 being charter schools. Virtual charter school districts were eliminated from this study, due to the lack of variable data that are observed for this study. Due to the differences in job responsibilities and contract lengths between elementary and secondary principals, Oklahoma elementary school head principals will be observed for this study.

### **Description of Variables**

**Principal Turnover.** The site-level dependent variable used to address the research question is whether there was principal turnover at the school site during the 2021-2022 school year. This information was found through the OSDE end-of-year School Personnel Report (SPR). The OSDE school directory was cross-referenced with the OSDE-SPR report to determine the employee listed with the job description of "Principal, Headmaster/Headmistress, Head of School" at schools that were designated by the OSDE as "elementary". The data included a spreadsheet that listed each principal that left their school in the given year. The researcher did not give individual principal information to protect confidentiality. The data is from the 2021-2022 school year. The site-level principal turnover variable was a dichotomous categorical variable of "yes" or "no," depending on whether a principal exited their position.

Additionally, there were sixteen independent variables used in this model. The level 1 unit of analysis is the school site, with level 1 predictors being characteristics of the school, and the level 1 outcome being whether there was principal turnover. The level 2 unit of analysis is the district, which the schools (level 1) are nested within. The level 2 predictors are district level characteristics.

**Principal Compensation.** The principal compensation independent variable was the individual school site's principal salary, measured on a continuous scale. This variable was based on each

head elementary principal's total compensation listed in the OSDE end-of-year SPR report, for the year observed. Due to some districts paying additional fringe benefits, a total compensation package datapoint will be observed to create a more encompassing picture of compensation.

Total compensation includes the columns on the SPR reported labeled: base salary, total fringe, and other fringe. The data collected were in excel spreadsheets listing every head elementary principal in a school district's total compensation. The principal compensation will be derived from adding each principal's total compensation. This is a level 1 variable because each principal's salary is a characteristic of the school, which could predict turnover.

**Multi-Site Principal.** The multi-site principal independent variable was whether a school site employed a head elementary principal that served multiple school or district sites. This variable is a dichotomous categorical variable of "yes" or "no." It is based on whether the OSDE end-of-year SPR report lists the principal at multiple school sites. This is a level 1 variable because the multi-site principal status is a characteristic of the school.

**Multi-Role Principal.** The multi-role principal independent variable was whether a school site employed a head elementary principal who held more than one job-code on the OSDE end-of-year SPR report, for the year observed. This variable is a dichotomous categorical variable of "yes" or "no." This is a level 1 variable because the multi-role principal status is a characteristic of the school.

**Site Economically Disadvantaged.** The site economically disadvantaged independent variable is the school site's percentage of students identified as "economically disadvantaged," which is continuously scaled from 0 to 100. This percentage is based on each school's number of students who qualify for free and reduced lunches. The number of qualifying students is then divided by

the school's overall enrollment and then multiplied by 100. The percentage of economically disadvantaged students is a level 1 variable because it is a characteristic of the school.

**Site Enrollment.** The site enrollment independent variable is the number of students enrolled in a school on the OSDE October 1 Child Count report. This is continuously scaled. This is a level 1 variable because site enrollment is a characteristic of the school.

**Site Employment of Assistant Principals.** The site employment of assistant principal independent variable is whether a school site employed at least one assistant principal for the observed year. This information was found through the OSDE end-of-year School Personnel Report (SPR). Any employee listed with the job description of "Asst/Vice Principal," or job code "105," at the observed elementary schools was included. This variable is a dichotomous categorical variable of "yes" or "no." This is a level 1 variable because the employment status of an assistant principal is a school level characteristic.

**District Principal Turnover Percent.** The district principal turnover independent variable is the percentage of elementary principal turnover for each district. This information was found through the OSDE end-of-year School Personnel Report (SPR). Any employee listed with the job description of "Principal, Headmaster/Headmistress, Head of School" at schools with the following designations: elementary, early childhood, or intermediate schools. The data included a spreadsheet that listed each principal that left their school in the given year. The researcher did not give individual principal information to protect confidentiality. The data is from the 2021-2022 school year. The district-level principal turnover variable was coded as a continuous percentage. Each district's average turnover rate will be calculated by taking the total number of head elementary principals, subtracting the number of head elementary principals that left their school, and then dividing by the total number of head elementary principals in the district to

obtain an average for each district. The district principal turnover percentages are a level 2 variable because the percentage is a district level characteristic.

**Instructional Per-Pupil Expenditures (School and District).** The instructional per-pupil expenditures independent variable is instructional per-pupil expenditures, continuously scaled. These expenditures include teacher salaries, teacher assistant salaries, and paraprofessional salaries, but also the activities dealing directly with the interaction between teacher and student (OCAS, 2021; Byerly, 2019). The Oklahoma Cost Accounting System (OCAS) codes series 1000 (Instruction), 2100 (Support Services- Students), and 2200 (Support Services- Instructional) are associated with the instructional per-pupil expenditures variable for this study. All needed code series for a site and district's total instructional expenditures are coded to function 1000. Therefore, instructional per-pupil expenditures are calculated by taking the district's expenditures to function 1000 and dividing it by the district's average daily membership (ADM), defined as the average days of membership divided by instructional days (Byerly, 2019). The school-level instructional per-pupil expenditures are a level 1 variable, because it is a characteristic of the school. The district-level instructional per-pupil expenditures are a level 2 variable because the fiscal decision is a district level characteristic.

**Administrative Per-Pupil Expenditures (School and District).** The administrative per-pupil expenditures independent variable is administrative per-pupil expenditures, which is a continuously scaled variable. Administrative expenditures include both district and school administration, using the OCAS series functions 2300 (Support Services- General Administration) and 2400 (Support Services- School Administration), which are activities involving the operations of the entire district and schools as an individual site (OCAS, 2021). Administrative expenditures are based on each district's total dollar amount expended on the

salaries and support of the positions of superintendent, assistant superintendent, directors, principals, and assistant principals (OCAS, 2021; Byerly, 2019). Administrative per-pupil expenditures are based on the total administrative expenditures and then divided by the district's ADM. The school level administrative per-pupil expenditure is a level 1 variable because it is a school level characteristic. The district level administrative per-pupil expenditure is a level 2 variable because it is a district level characteristic.

**District Economically Disadvantaged.** The district economically disadvantaged independent variable is the percentage of students who qualify as "economically disadvantaged," which is continuously scaled from 0 to 100. This percentage is based on each district's number of students who qualify for free and reduced lunches. The number of qualifying students is then divided by the district's overall enrollment and then multiplied by 100. The district percentage of economically disadvantaged students is a level 2 variable because the district enrollment and/or number of students qualifying for free and reduced lunch is a characteristic of the district.

**District Enrollment.** The enrollment independent variable is the number of students enrolled in a district on the OSDE October 1 Child Count report. This is continuously scaled. This is a level 2 variable because it is a district characteristic.

**District Employment of Assistant Principals.** The district employment of assistant principal independent variable is the average number of elementary schools that employ an assistant principal at a given district, which is continuously scaled. This information was found through the OSDE end-of-year School Personnel Report (SPR). Any employee listed with the job description of "Asst/Vice Principal," or job code "105," at the observed elementary schools. Each district's number of elementary schools with an assistant principal was added, divided by the total number of elementary schools in the district, and then multiplied by 100. This is a level 2



characteristic because the average number of employed assistant principals is a characteristic of the district.

**District Locale.** The district locale independent variable is the location of each school district, which is a dichotomous categorical variable of rural or nonrural. This information is obtained from the National Center for Education Statistics (NCES). Although the NCES lists district locale under 10 different categories, the current study will utilize rural or nonrural. The dichotomous levels for the variables are: {0= Rural; 1= Nonrural}. District locale is a level 2 variable because it is a characteristic of the district.

**District Type.** The district type independent variable is the type of school district, which is a dichotomous categorical variable of charter or noncharter. This information is obtained from the OSDE district directory. The dichotomous levels for the variables are: {0=Charter; 1= Noncharter}. District type is a level 2 variable because it is a characteristic of the district.

### **Data Collection**

Data for the present study were collected from the Oklahoma State Department of Education (OSDE). This study will utilize 524 school districts and 987 elementary schools in Oklahoma for the 2021-22 school year, which is also designated as SY22 or fiscal year 2022 (FY22). Each school site's and district's principal turnover, principal compensation, and assistant principal employment data were retrieved from the OSDE School Personnel Report. Each school site's and district's instructional per-pupil expenditures and administrative per-pupil expenditures are retrieved from the OSDE Financial Services Division, with specific reporting through the OCAS School District Financial Information reporting website. District and school types were retrieved from the OSDE district and school directory information. District enrollment, site enrollment, and economically disadvantaged statistics were obtained through the OSDE website,

with specific reporting through the Child Nutrition department’s “Low Income Report.” District locale was obtained from the National Center for Education Statistics.

*Table 3.1: Variable Data Sources*

<b>Variables</b>	<b>Location of Data</b>	<b>Level of Data</b>
Principal Turnover (DV)	OSDE- SPR Report	Dependent Variable
Instructional and Support Per-Pupil Expenditures (IV)	OSDE-OCAS	1
Site Administrative Per-Pupil Expenditures (IV)	OSDE-OCAS	1
Principal Compensation (IV)	OSDE- SPR Report	1
Site Enrollment (IV)	OSDE	1
Multi-Site Principal (IV)	OSDE- SPR Report	1
Multi-Role Principal (IV)	OSDE- SPR Report	1
Site Economically Disadvantaged (IV)	OSDE-Low Income Report	1
Site Employment of Assistant Principals (IV)	OSDE – SPR Report	1
District Instructional and Support Per-Pupil Expenditures (IV)	OSDE-OCAS	2
District Administrative Per-Pupil Expenditures (IV)	OSDE-OCAS	2
District Enrollment (IV)	OSDE	2
District Turnover Percent (IV)	OSDE- SPR Report	2
District Economically Disadvantaged (IV)	OSDE- Low Income Report	2
District Percent Employment of Assistant Principals (IV)	OSDE- SPR Report	2
District Locale (IV)	National Center for Education Statistics	2
District Type (IV)	OSDE- District Directory	2

### **Data Analysis**

The purpose of this quantitative, causal comparative study was to determine to what extent, if any, do varying school-level and district-level fiscal decisions and demographic

characteristics affect Oklahoma public school elementary principal turnover. There are sixteen independent variables, with nine independent variables related to school or district fiscal decisions: principal compensation, site and district-level instructional per-pupil expenditures, site and district-level administrative per-pupil expenditures, multi-site principal, multi-role principal, site employment of an assistant principal, and district employment percent of assistant principals. There are also seven independent variables related to school or district demographic characteristics: site and district percent of economically disadvantaged students, site and district enrollment, district percent of principal turnover, district locale (rural and nonrural), and district type (charter or noncharter). A hierarchical linear model will be conducted with level 1 variables varying each year and level 2 variables fixed each year.

## **Hypotheses**

Hypothesis 1: There is a statistically significant relationship between principal turnover and district fiscal decisions and school characteristics.

- Hypothesis 1a: There is a statistically significant inverse relationship between principal turnover and principal compensation.
- Hypothesis 1b: There is a statistically significant inverse relationship between principal turnover and instructional and support per-pupil expenditures at the school level.
- Hypothesis 1c: There is a statistically significant inverse relationship between administrative per-pupil expenditures at the school level.
- Hypothesis 1d: There is a statistically significant inverse relationship between principal turnover and the principal serving multiple school sites.

- Hypothesis 1e: There is a statistically significant inverse relationship between principal turnover and the principal serving multiple roles.
- Hypothesis 1f: There is a statistically significant relationship between principal turnover and the percent of economically disadvantaged students.
- Hypothesis 1g: There is a statistically significant relationship between principal turnover and student enrollment.
- Hypothesis 1h: There is a statistically significant inverse relationship between principal turnover and the employment of an assistant principal.

Hypothesis 2: There is a statistically significant relationship between principal turnover and district fiscal decisions and district characteristics.

- Hypothesis 2a: There is a statistically significant inverse relationship between principal turnover and instructional and support per-pupil expenditures.
- Hypothesis 2b: There is a statistically significant inverse relationship between principal turnover and administrative per-pupil expenditures.
- Hypothesis 2c: There is a statistically significant relationship between principal turnover and the district percentage of economically disadvantaged students.
- Hypothesis 2d: There is a statistically significant relationship between principal turnover and district student enrollment.
- Hypothesis 2e: There is a statistically significant relationship between principal turnover and the district percentage of elementary principal turnover.
- Hypothesis 2f: There is a statistically significant inverse relationship between principal turnover and district employment status of assistant principals.

Hypothesis 3: There is a statistically significant relationship between principal turnover and district classification and type.

- Hypothesis 3a: There is a statistically significant relationship between principal turnover and district classification of rural or nonrural.
- Hypothesis 3b: There is a statistically significant relationship between principal turnover and district type of charter or noncharter.

### **Summary**

Chapter three of this study provided an in-depth overview of the methodology used, which included analyzing principal turnover statistics for Oklahoma public schools and districts. The rationale behind choosing Oklahoma as the context of the study was also discussed. Single-year cross-sectional hierarchical linear modeling (HLM) was utilized to examine the relationships between school-level and district-level financial decisions, such as principal salary, instructional and support per-pupil expenditures, administrative per-pupil expenditures, multi-site and multi-role principals, and employment of assistant principals. School-level and district-level demographic characteristics were also examined, such as enrollment, percent of economically disadvantaged students, district locale, and charter school status. In addition to these variables, this study assessed how they can affect principal turnover. The primary goal is to determine whether it is possible to predict principal turnover with each independent variable. Hopefully, this study's findings will help district leaders across the country when implementing initiatives geared toward recruiting, retaining, and developing elementary school principals. This study provides valuable information that could positively intervene in the current principal

turnover crisis, with the hope that further studies will use this information to implement mitigating interventions.

## CHAPTER FOUR

### RESULTS

Chapter Three provided an overview of the design of the study, which had the goal of investigating the relationships between sixteen independent variables on principal turnover within public elementary schools in Oklahoma. Chapter Four commences with a recapitulation of the research methodology employed, followed by a comprehensive discourse on the results derived from the analysis of the data.

The concept of principal turnover is subject to various interpretations, contingent upon the objective of individual studies. The current study's research resonates more closely with the definitions proposed by Li (2015), and Loeb, Kalogrides, and Horng (2010), wherein principal turnover is characterized as the voluntary or involuntary turnover of position by school principals, leading to their exit from a particular school. Just as Rangel (2018) discussed in the published literature review of principal turnover, the current study found similar difficulties and limitations in capturing the "why" behind the principal turnover.

This study focuses on the entire state of Oklahoma, including data from 524 school districts and 987 elementary schools, collected across one fiscal year (2021-2022). The purpose of this exploratory study was to investigate the effect that various district-level fiscal decisions and demographic characteristics, such as principal total compensation, instructional per-pupil expenditures, administrative per-pupil expenditures, enrollment, economically disadvantaged concentration, assistant principal investment, and characteristics of whether the principal serves in multiples roles and/or at multiple sites, and the impact these variables have on elementary principal turnover in Oklahoma public schools. Additionally, the study examined whether the district was a charter or noncharter and a rural or nonrural district. Most of the variables were

examined at the school site and district levels. Although principal turnover is a problem across the nation, this study focused on Oklahoma, due to the state consistently displaying a pattern of principal turnover being above the national average (Lazarte Alcalá, 2021; U.S. Department of Education, National Center for Education Statistics, 2019). Considering all of these variables, this study seeks to answer the following overarching guiding question: To what extent, if any, do varying district-level fiscal decisions and demographic characteristics affect principal turnover?

The study's initial research method, Hierarchical Linear Modeling (HLM), did not yield insightful results regarding principal turnover in Oklahoma's elementary schools due to potential oversimplification of the dependent variable. This binary definition may not have adequately captured the diverse facets of principal turnover. Therefore, the research approach was reevaluated, leading to the adoption of multinomial logistic regression, which allowed for a more nuanced categorization of principal turnover. This new approach was not aimed at merely achieving statistical significance; rather, its purpose was to better understand the complex nature of principal turnover. The aim is to provide valuable insights that could aid district leaders and policymakers in addressing the problem of principal turnover effectively.

### **Research Question 1:**

1. Are there relationships between principal turnover and school site related fiscal decisions and characteristics (including head elementary principal salary, instructional and support expenditures per pupil, administrative expenditures per pupil, head elementary principal serving multiple sites, head elementary principals assuming multiple job-roles, site percent economically disadvantaged students, site enrollment, and site elementary assistant principal employment status)?



Hypothesis 1: There is a statistically significant relationship between principal turnover and district fiscal decisions and school characteristics.

- Hypothesis 1a: There is a statistically significant inverse relationship between principal turnover and principal compensation.
- Hypothesis 1b: There is a statistically significant inverse relationship between principal turnover and instructional and support expenditures per pupil at the school level.
- Hypothesis 1c: There is a statistically significant inverse relationship between administrative expenditures per pupil at the school level.
- Hypothesis 1d: There is a statistically significant inverse relationship between principal turnover and the principal serving multiple school sites.
- Hypothesis 1e: There is a statistically significant inverse relationship between principal turnover and the principal serving multiple roles.
- Hypothesis 1f: There is a statistically significant relationship between principal turnover and the percent of economically disadvantaged students.
- Hypothesis 1g: There is a statistically significant relationship between principal turnover and student enrollment.
- Hypothesis 1h: There is a statistically significant inverse relationship between principal turnover and the employment of an assistant principal.

**Research Question 2:**

2. Are there relationships between principal turnover and district fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative

expenditures per pupil, percent economically disadvantaged students, district enrollment, the district percentage of elementary principal turnover, and the district percentage of elementary schools with an assistant principal)?

Hypothesis 2: There is a statistically significant relationship between principal turnover and district fiscal decisions and district characteristics.

- Hypothesis 2a: There is a statistically significant inverse relationship between principal turnover and instructional and support expenditures.
- Hypothesis 2b: There is a statistically significant inverse relationship between principal turnover and administrative expenditures.
- Hypothesis 2c: There is a statistically significant relationship between principal turnover and the district percentage of economically disadvantaged students.
- Hypothesis 2d: There is a statistically significant relationship between principal turnover and district student enrollment.
- Hypothesis 2e: There is a statistically significant relationship between principal turnover and the district percentage of elementary principal turnover.
- Hypothesis 2f: There is a statistically significant inverse relationship between principal turnover and district employment status of assistant principals.

**Research Question 3:**

3. Are there relationships between principal turnover and district classification and type (whether a district is rural or nonrural, and whether charter or noncharter)?

Hypothesis 3: There is a statistically significant relationship between principal turnover and district classification and type.

- Hypothesis 3a: There is a statistically significant relationship between principal turnover and district classification of rural or nonrural.
- Hypothesis 3b: There is a statistically significant relationship between principal turnover and district type of charter or noncharter.

The following data were used for this study:

- School principal turnover. These data were collected from examining district School Personnel Reports (SPR), which are reported to the Oklahoma State Department of Education (OSDE). The end-of-year FY22 SPR report was cross-referenced with OSDE school directories for reliability purposes. This created a directory of principals which was then cross-referenced with the beginning of the year FY23 SPR report to determine whether a principal turned over their position.
- Instructional and support resources (site and district levels). These data were collected from districts reporting Oklahoma Cost Accounting System (OCAS) function total 1000, 2100, and 2200 and retrieved from the OSDE website.
- Administrative per-pupil expenditures (site and district levels). These data were collected from districts reporting OCAS function total 2300 and 2400 and retrieved from the OSDE website.
- Head elementary principal salary. These data were collected from district School Personnel Reports from district reporting to the Oklahoma State Department of Education and published on the OSDE website. The head elementary school principal's base salary and total fringe benefits are added together to create a total compensation salary.

- Multi-site principal. These data were collected from district School Personnel Reports from district reporting to the Oklahoma State Department of Education and published on the OSDE website. If a head elementary principal was reported with a job code listed under multiple school or district sites, they were coded as a multi-site principal.
- Multi-role principal. These data were collected from district School Personnel Reports from district reporting to the Oklahoma State Department of Education and published on the OSDE website. If a head elementary principal was reported with multiple job codes, other than “principal”, they were coded as a multi-role principal.
- Percent economically disadvantaged students (site and district levels). These data were collected from the Oklahoma State Department of Education website.
- Site elementary assistant principal employment status. These data were collected from district School Personnel Reports from district reporting to the Oklahoma State Department of Education and published on the OSDE website. If an elementary school site had an individual with an “assistant principal” job code, the school was coded to reflect the employment.
- Enrollment (site and district levels). These data were collected from the Oklahoma State Department of Education website.
- District percentage of elementary school principal turnover. These data were collected from examining district School Personnel Reports (SPR), which are reported to the Oklahoma State Department of Education (OSDE). The end-of-year FY22 SPR report was cross-referenced with OSDE school directories for reliability purposes. This created a directory of principals which was then cross-referenced with the beginning of the year FY23 SPR report to determine whether a principal turned over their position. The number

of elementary schools that exhibited principal turnover was then divided by the total number of elementary schools.

- District percentage of elementary schools with an assistant principal. These data were collected from district School Personnel Reports from district reporting to the Oklahoma State Department of Education and published on the OSDE website. If an elementary school site had an individual with an “assistant principal” job code, the school was coded to reflect the employment. The number of elementary schools that employed an assistant principal was then divided by the total number of elementary schools.
- District locale. These data were collected from the National Center for Educational Statistics and compiled into two categories: rural or nonrural.
- Charter. These data were collected from the Oklahoma State Department of Education website.

### **Descriptive Statistics**

The data set utilized for the present study encompassed a total of 524 distinct school districts and an aggregate of 987 elementary schools during the academic year of 2021-2022. Given the hierarchical nature of the research model, all level 1 variables, referring to individual school attributes, were allocated unique identification numbers, nested within their respective district affiliations at level 2. Considering this, identification numbers ranging from 1 to 524 were systematically assigned to each school, founded on their specific district affiliations, within the broad spectrum of 987 elementary schools. This methodical undertaking facilitated the establishment of accurate linkages between the level 1 samples (schools) and their corresponding level 2 samples (districts), thereby ensuring a comprehensive, multi-level examination of the

research variables under consideration. Table 4.1 displays the overall descriptive statistics of the dependent variable and the sixteen total Level 1 and Level 2 independent variables.

*Table 4.1: Overall Descriptive Statistics*

<b><u>Descriptive Statistics</u></b>	<b><u>N</u></b>	<b><u>Mean</u></b>	<b><u>Med</u></b>	<b><u>SD</u></b>	<b><u>Min</u></b>	<b><u>Max</u></b>
<b><u>DV Turnover</u></b>	<u>987</u>				<u>0</u>	<u>1</u>
<b><u>InstructPPE (L1)</u></b>	<u>987</u>	<u>6,722.43</u>	<u>6,406.02</u>	<u>1,709.76</u>	<u>746.00</u>	<u>17,350.00</u>
<b><u>AdminPPE (L1)</u></b>	<u>987</u>	<u>955.90</u>	<u>541.59</u>	<u>6,740.68</u>	<u>0.00</u>	<u>172,126.00</u>
<b><u>Comp (L1)</u></b>	<u>987</u>	<u>88,087.88</u>	<u>88,438.00</u>	<u>15866.74</u>	<u>18,960.00</u>	<u>245,021.00</u>
<b><u>Enrollment (L1)</u></b>	<u>987</u>	<u>360.87</u>	<u>340</u>	<u>197.68</u>	<u>27</u>	<u>2000</u>
<b><u>MultiSite (L1)</u></b>	<u>987</u>				<u>0</u>	<u>1</u>
<b><u>MultiRole (L1)</u></b>	<u>987</u>				<u>0</u>	<u>1</u>
<b><u>Site EcoDis (L1)</u></b>	<u>987</u>	<u>0.6549</u>	<u>0.681</u>	<u>0.209</u>	<u>0</u>	<u>0.95</u>
<b><u>Site AP (L1)</u></b>	<u>987</u>				<u>0</u>	<u>1</u>
<b><u>InstructPPE (L2)</u></b>	<u>987</u>	<u>7,162.62</u>	<u>6,772.90</u>	<u>1,591.54</u>	<u>3,938.28</u>	<u>20,943.48</u>
<b><u>AdminPPE (L2)</u></b>	<u>987</u>	<u>1,154.95</u>	<u>888.58</u>	<u>2,867.43</u>	<u>253.46</u>	<u>89,308.00</u>
<b><u>Enrollment (L2)</u></b>	<u>987</u>	<u>6832.05</u>	<u>1572</u>	<u>10029.4</u>	<u>27</u>	<u>33211</u>
<b><u>Turnover % (L2)</u></b>	<u>987</u>	<u>0.2106</u>	<u>0.0556</u>	<u>0.311</u>	<u>0</u>	<u>1</u>
<b><u>District EcoDis (L2)</u></b>	<u>987</u>	<u>0.6189</u>	<u>0.6322</u>	<u>0.178</u>	<u>0</u>	<u>0.95</u>
<b><u>District AP% (L2)</u></b>	<u>987</u>	<u>0.2867</u>	<u>0.00</u>	<u>0.371</u>	<u>0</u>	<u>1</u>
<b><u>Locale (L2)</u></b>	<u>987</u>				<u>0</u>	<u>1</u>
<b><u>Charter (L2)</u></b>	<u>987</u>				<u>0</u>	<u>1</u>

### **Dependent Variable: Principal Turnover**

In the examination of site-level principal turnover, the dependent variable was operationalized as a dichotomous categorical variable. This was labeled by two distinct outcomes: a 0 denoting the absence of principal turnover and a 1 signifying the occurrence of principal turnover. Upon analysis of the data collected, it was observed that there was a total of 206 instances where principal turnover occurred. Conversely, there were 781 instances where the principal position was retained, indicating the absence of turnover during the observed period.

As indicated in Table 4.2, overall Oklahoma elementary head principal turnover rate during the 2021-2022 school year was approximately 21%.

*Table 4.2: Dependent Variable Frequency*

<b>Turnover</b>		<b>N</b>	<b>Frequency</b>
<b>Valid</b>	0= No Turnover	781	79.1%
	1= Turnover	206	20.9%
	<b>Total</b>	987	100%

### **Instructional and Support Per-Pupil Expenditures and Resources**

In the examination of the correlation between per-pupil instructional and support resources and the frequency of principal turnover, a continuous scale was utilized for the independent variable, derived from FY22 district OCAS reports. Table 4.3 indicates that among the 987 schools examined at Level 1, the district that allocated the least resources per pupil spent \$746 at the school, while the district allocating the most resources spent \$17,350 at the school. The mean value for the Level 1 Instructional PPE amounted to \$6722.43.

*Table 4.3: Instructional PPE Descriptive Statistics*

		<b>(L1) Instructional PPE</b>	<b>(L2) Instructional PPE</b>
<b>N</b>	<b>Valid</b>	987	987
	<b>Missing</b>	0	0
<b>Mean</b>		\$6722.43	\$7162.40
<b>Median</b>		\$6406.02	\$6772.90
<b>Standard Dev.</b>		\$1709.76	\$1591.45
<b>Range</b>		\$16604	\$17005.20
<b>Minimum</b>		\$746	\$3938.28
<b>Maximum</b>		\$17350	\$20943.48

Within the Level 2 district variables, a substantial degree of variance in investment levels was observed. Table 4.3 exhibits the financial commitment to instructional and support resources

fluctuated significantly, with a minimum figure of \$3,938.28 and a maximum of \$20,943.48, constituting a range of \$17,005.20. The mean investment level of \$7,162.62 was indicative of the average financial dedication towards these resources across the district.

### **Administrative Per-Pupil Expenditures**

The variable of Level 1 Administrative Per-Pupil Expenditures was derived from the district OCAS reports for FY22. This is a continuous variable, with data gathered from a sample of 987 schools. Distinctly, three schools reported zero expenditures under the relevant OCAS code functions. It can be presumed that these schools are utilizing multi-site principals, multi-site principals, and/or district-level leaders to perform the OCAS functions, which would allow discretion on which site(s) the codes are associated with, or the codes could be associated at the district-level. Tables 4.4 displays that the maximum Level 1 school Administrative PPE reported was an amount of \$172,126. The average, or mean, expenditure of this Level 1 predictor was found to be \$955.90, with a standard deviation (SD) of \$6740.68.

*Table 4.4: Administrative PPE Descriptive Statistics*

		<b>(L1) Admin PPE</b>	<b>(L2) Admin PPE</b>
<b>N</b>	<b>Valid</b>	987	987
	<b>Missing</b>	0	0
<b>Mean</b>		\$955.90	\$1154.95
<b>Median</b>		\$541.59	\$888.59
<b>Standard Dev.</b>		\$6740.68	\$2867.43
<b>Range</b>		\$17216	\$89054.54
<b>Minimum</b>		\$0	\$253.46
<b>Maximum</b>		\$172126	\$89308

Considering Level 2, Table 4.4 displays the district Administrative Per-Pupil Expenditure range of per-pupil spending, from a minimum of \$253.46 to a maximum of \$89,308. The mean



value for this investment stood at \$1,154.95, accompanied by a standard deviation (SD) of \$2867.43.

### **Principal Salary**

Head elementary principal salary was a Level 1 predictor, which was continuously scaled utilizing data from the Oklahoma State Department of Education (OSDE) School Personnel Report job codes. The calculation of total compensation involved the sum of the base salary and fringe benefits for each principal. The data in Table 4.5 demonstrates a substantial discrepancy in principal compensation, with the lowest reported compensation at \$18,960 and the highest reaching \$245,021. The mean value of total compensation for principals was approximately \$88,088, exhibiting a standard deviation of 1866.74, with a median value of \$88,438. It can be presumed that such discrepancies exist from contextual information from the school and associated district. For example, a district may be employing a retired principal who is accepting a below-market salary, while other principals may be a multi-site and/or multi-role principal, such as serving as the elementary principal and the district superintendent.

*Table 4.5: Principal Compensation Descriptive Statistics*

		<b>(L1) Compensation</b>
<b>N</b>	<b>Valid</b>	987
	<b>Missing</b>	0
<b>Mean</b>		\$88,087.88
<b>Median</b>		\$88,438
<b>Standard Dev.</b>		15866.74
<b>Range</b>		\$22,6061
<b>Minimum</b>		\$18,960
<b>Maximum</b>		\$245,021

### Multi-Site and Multi-Role Principals

The predictor variable for schools with multi-site principals was assessed at Level 1 and coded as a dichotomous variable; 0 signifies a school with a principal overseeing a single school site and 1 representing a school with a principal overseeing multiple schools or district locations. Table 4.6 indicates that out of the total sample population, 146 elementary schools had principals that served multiple sites, which was nearly 15% of the total sample population. Conversely, 841 schools had principals who were dedicated to a single site, which is nearly 81% of the total sample population. Intriguingly, the turnover rate among these multi-site principals was approximately 27% (40 principals), a figure that surpasses the national average turnover rate of 16% and the study rate of 21%.

*Table 4.6: Descriptive Statistics for Turnover of Multi-Site Principals*

<b>Turnover Multi-Site Principal</b>	<b>% Turnover</b>	<b>N</b>	<b>% Total Sample</b>
<b>0</b>	20%	841	85.20%
<b>1</b>	27%	146	14.80%
<b>Total</b>	21%	987	100.00%

The Level 1 multi-role principal predictor was also dichotomous, with 0 indicating schools with a principal dedicated solely to principal duties, and 1 representing school with principals with multiple job-role codes on the OSDE School Personnel Report. Of the total 987 schools studied, 210 had principals fulfilling multiple roles, amounting to 21% of the sample. Notably, the turnover rate among these schools with multi-role principals was approximately 24%, which like multi-site principal turnover rates, is greater than the national and study averages.

*Table 4.7: Descriptive Statistics for Turnover of Multi-Role Principals*

<b>Turnover Multi-Role Principal</b>	<b>% Turnover</b>	<b>N</b>	<b>% Total Sample</b>
<b>0</b>	20%	777	78.70%
<b>1</b>	24%	210	21.30%
<b>Total</b>	21%	987	100.00%

Table 4.7 displays the schools-level (Level 1) statistics of when multi-site and multi-role principals are compared. There are 741 total schools that have single-site and single-role principals, which is approximately 75% of the total sample population, with a turnover rate of 19%. There are 146 schools with multi-site principals, with 27% of these schools exhibiting turnover. Alarming, as Table 4.8 reports, of these 146 multi-site principal schools, there are only 36 that exist without the school having a principal that is multi-site and multi-role: and of these 36 schools that are “solely multi-site principal schools”, 39% experienced principal turnover. Interestingly, of the 210 total schools with multiple-role principals, 110 of these schools had principals that were “solely multiple-role principal schools”, without serving multiple sites. Of these 110 schools, 24% experienced principal turnover. It could be presumed that “solely multi-site principal schools” had such a greater turnover rate (39%) than “solely multi-role principal schools” because being physically split between multiple sites may cause less of a communal bond and focus on improvement from the principals, whereas a solely multiple-role principal can focus greater efforts and communal bonds on one school community.

*Table 4.8: Comparison of Means of Multi-Site and Multi-Role Principals*

<b>Turnover Multi-Site Principal</b>	<b>Multi-Role Principal</b>	<b>% Turnover</b>	<b>N</b>	<b>% Total Sample</b>
<b>0</b>	<b>0</b>	19%	741	75.10%
	<b>1</b>	24%	100	10.10%
	<b>Total</b>	20%	841	85.20%
<b>1</b>	<b>0</b>	39%	36	3.60%
	<b>1</b>	24%	110	11.10%
	<b>Total</b>	27%	146	14.80%
<b>Total</b>	<b>0</b>	20%	777	78.70%
	<b>1</b>	24%	210	21.30%
	<b>Total</b>	21%	987	100.00%

Overall, there are 110 schools with principals who are serving concurrently as multi-site and multi-role principals. When analyzed together, the multi-site and multi-role schools exhibited a 27% principal turnover rate. The independent variables of multi-site and multi-role principals appear to be closely related and often intertwined. Regardless of the coexistence of these variables, it appears that these variables have a great impact on principal turnover in Oklahoma elementary schools. Both multi-site and multi-role factors demonstrate turnover rates exceeding both the national and state averages, suggesting a correlation between increased job complexity and a higher turnover rate (Gilman & Lanman, 2005; Tran, 2017). This evidence provides a compelling argument for the role of job complexity in principal turnover.

### **Percent Economically Disadvantaged Students**

The variable denoting economic disadvantage was identified as a Level 1 predictor and was measured on a continuous scale, ranging from 0 to 100. This was subsequently recalibrated from 0 to 0.95 in the compiled data table. The measure collected by the OSDE for economically disadvantaged percentages is capped at "95% or greater," which necessitated the recalibration of

the scale. Table 4.9 indicates that the average economically disadvantaged rate for Oklahoma elementary schools is about 65%. Upon analysis of 987 schools, Table 4.9 displays the findings that approximately 3% (28 schools) reported an economically disadvantaged student rate of 0-20%, with 18% (5 schools) of this group undergoing principal turnover. Of the 95 schools with an economically disadvantaged rate of 21-40%, representing close to 10% of the total sample, 25% (24 schools) experienced principal turnover. Among the 228 schools that fell within the 41-60% economically disadvantaged range (comprising 23% of the total sample size), almost 20% (45 schools) witnessed principal turnover. Principal turnover was observed in 22% (85 schools) of the 381 schools with economically disadvantaged rates of 61-80%, which account for 39% of the total sample. In the group of 255 schools demonstrating economically disadvantaged percentages of 81-100% (approximately 26% of the total sample), 18% (47 schools) experienced principal turnover. The HLM findings reflected similar results, and no definitive pattern linking principals' turnover rates with economically disadvantaged percentages could be identified. Interestingly, schools with the highest levels of affluence and those with the highest concentration of poverty both demonstrated turnover rates lower than the statewide average. This intriguing observation warrants further, more detailed investigation.

*Table 4.9: Descriptive Statistics of Economically Disadvantaged Variables*

		<b>Site EcoDis (L1)</b>	<b>District EcoDis (L2)</b>
<b>N</b>	<b>Valid</b>	987	987
	<b>Missing</b>	0	0
<b>Mean</b>		0.6549	0.6189
<b>Median</b>		0.6810	0.6322
<b>Standard Dev.</b>		0.20927	0.17759
<b>Range</b>		0.95	0.95
<b>Minimum</b>		0	0
<b>Maximum</b>		0.95	0.95

*Table 4.10: School-Level Economically Disadvantaged Turnover*

<b>Level 1 EcoDis by Groups</b>	<b>% of Total N</b>	<b>(L1) EcoDis % TO</b>
<b>0-20%</b>	3.0%	18.0%
<b>21-40%</b>	10.0%	25.0%
<b>41-60%</b>	23.0%	20.0%
<b>61-80%</b>	39.0%	22.0%
<b>81-100%</b>	26.0%	18.0%

*Table 4.11: District-Level Economically Disadvantaged Turnover*

<b>Level 2 EcoDis by Groups</b>	<b>% of Total N</b>	<b>(L1) EcoDis % TO</b>
<b>0-20%</b>	1.5%	14.0%
<b>21-40%</b>	9.5%	28.0%
<b>41-60%</b>	31.0%	17.0%
<b>61-80%</b>	41.0%	24.5%
<b>81-100%</b>	17.0%	16.0%

The economically disadvantaged district is classified as a Level 2 independent variable, represented by the percentage of students qualifying for free or reduced lunches. This percentage is scaled continuously, from 0 to 100. However, due to the measure utilized by the Oklahoma

State Department of Education (OSDE), which caps the economically disadvantaged percentage at "95% or more," a recalibration of the scale was necessary, adjusting it from 0 to 0.95. Table 4.10 displays the analysis of the sample of 987 schools revealed an average economically disadvantaged rate of 62%, with a standard deviation of 0.18. Table 4.11 displays data regarding Level 2 district-level economic disadvantaged students and the statistics of schools with principal turnover. A mere 1.5% (14 schools) of the total sample resided in districts with economically disadvantaged rates ranging from 0-20%. Of these, 14% (2 schools) experienced principal turnover. Schools located in districts with 21-40% economically disadvantaged rates, approximately 9.5% of the sample size, saw principal turnover in nearly 28% (26 schools). The districts reporting 41-60% economically disadvantaged rates contained over 31% of the sample, producing a 17% (53 schools) principal turnover rate. The trend continued with districts reporting 61-80% economically disadvantaged rates, which represented 41% of the total sample population, which experienced 24.5% turnover rate (99 schools). Districts with economically disadvantaged rates of 81-100% exhibited principal turnover in roughly 16% (26 schools) of their 166 schools. Intriguingly, the data suggests that the districts with the highest and lowest economic disadvantage rates experienced the least principal turnover, mirroring the findings from the Level 1 predictor of site economically disadvantaged status.

### **Elementary Assistant Principal Employment Status**

The employment status of assistant principals in elementary schools is classified as a Level 1 variable, according to the data obtained from the OSDE School Personnel Reports. This variable is reported as a dichotomous independent variable, with '0' denoting the absence of an assistant principal in the school, and '1' representing the presence of one or more assistant principals. Table 4.12 displays that out of the sample size of 987 schools, 292, or approximately

30%, employed an assistant principal. Of this subset of schools, 21% experienced principal turnover, aligning with the overall findings of principal turnover within the study.

*Table 4.12: Descriptive Statistics of Level 1 Employment of Assistant Principals and Turnover*

<b>DV Turnover (L1) Asst. Princ.</b>	<b>% Turnover</b>	<b>N</b>	<b>% Total Sample</b>
<b>0</b>	21%	695	70.40%
<b>1</b>	21%	292	29.60%
<b>Total</b>	21%	987	100.00%

*Table 4.13: Descriptive Statistics of Level 2 Employment of Assistant Principals and Turnover*

		<b>(L2) Dist % w/ Asst. Principal</b>
<b>N</b>	<b>Valid</b>	987
	<b>Missing</b>	0
<b>Mean</b>		0.29
<b>Median</b>		0
<b>Standard Dev.</b>		0.37115
<b>Range</b>		1.00
<b>Minimum</b>		0
<b>Maximum</b>		1.00

The percentage of district-nested schools that exhibit the employment of assistant principals is classified as a Level 2 variable. The data were obtained from the OSDE School Personnel Reports. This variable was measured on a continuous scale, ranging from 0 to 100. This was subsequently recalibrated from 0 to 1.0 in the compiled data table. Out of the sample size of 987 schools within these districts, 554 of schools within the districts possessed an assistant principal employment status of 0%, with a principal turnover rate of 20%. Table 4.13



indicates that the district assistant principal employment mean was 29%, which means that 29% of Oklahoma elementary schools employed an assistant principal. The remaining 433 schools within this subset possessed a 22% principal turnover rate.

## **Enrollment**

### **School-Level Enrollment**

The school-level enrollment dataset provides comprehensive details on the enrollment numbers of 987 elementary schools in Oklahoma on October 1, derived from the OSDE Child Count report, with a range of 27 to 2000 students. Table 4.14 reports the mean enrollment across these schools was 361 students, with a standard deviation of 198, and a median enrollment of 340 students. Table 4.15 exhibits a percentile distribution analysis of the enrollment numbers, which reveals that the first quartile (Q1) is 215 students, the median (50th percentile) is 340 students, and the third quartile (Q3) is 472 students. An interesting trend appeared when the relationship between school enrollment and principal turnover was investigated. There was a 24% principal turnover rate in the bottom quarter of enrollment. Among the least populated schools, there were 248 schools examined with 59 of these schools experiencing turnover. In the next quartile of school enrollment, schools that exhibited 216-340 students were examined, and approximately 19% of the quartile (245 schools) experienced principal turnover. The third quartile, which consisted of schools with enrollments of 341-472 students saw a turnover rate of about 20%. The most populous schools exhibited an enrollment of 473-2000 students, with a turnover rate close to 21%. These findings suggest a relatively steady rate of principal turnover across the board, indicating that the enrollment of the school does not appear to affect the rate of principal turnover.

*Table 4.14: Descriptive Statistics of Enrollment*

		<b>School Enrollment (L1)</b>	<b>District Enrollment (L2)</b>
<b>N</b>	<b>Valid</b>	987	987
	<b>Missing</b>	0	0
<b>Mean</b>		360.87	6832.05
<b>Median</b>		340	1572.00
<b>Standard Dev.</b>		197.682	10029.4
<b>Range</b>		1973	33184.00
<b>Minimum</b>		27	27
<b>Maximum</b>		2000	33211

*Table 4.15: School-Level Enrollment Quartiles and Turnover*

<b>(L1) School Enrollment Quartiles and Turnover</b>	<b>Percentiles</b>	<b>Enrollment</b>	<b>Turnover</b>
	<b>25</b>	215.00	24.00%
	<b>50</b>	340.00	19.00%
	<b>75</b>	472.00	20.00%

### **District-Level Enrollment**

The dataset, derived from the OSDE's October 1 Child Count report, provides the enrollment for Level 2 predictors across various districts in Oklahoma districts. It is noteworthy that the district size varies considerably, with Table 4.14 reporting the minimum and maximum enrollments reported at 27 and 33,211, respectively. With a mean of 6,832 Oklahoma district enrollment and a median of 1,572, the data exhibits significant variability.

*Table 4.16: District-Level Enrollment Quartiles and Turnover*

<b>(L2) District Enrollment Quartiles and Turnover</b>	<b>Percentiles</b>	<b>Enrollment</b>	<b>Turnover</b>
	<b>25</b>	383.00	24.00%
	<b>50</b>	1572.00	19.00%
	<b>75</b>	9656.00	20.00%

Table 4.16 displays the quartiles derived from the district enrollment data, it is observed that 25% of the districts exhibited at, or below an enrollment of 383, denoting the 25th percentile. The median or the 50th percentile, is positioned at 1,572 students, indicating that half of the districts in Oklahoma experienced enrollments less than or equal to this number. The upper quartile, or the 75th percentile, corresponds to a district enrollment number at or below 9,656 students, which accounts for 75% of the schools. The most populous districts possessed student enrollments from 9,656 to 33,211 students. The district enrollment data reported a positively skewed distribution, with the majority of districts experiencing enrollments below 9,656.

The analysis of district-level enrollment presents findings like that of the school-level data. The rate of principal turnover was consistent, irrespective of the size of the districts. With the school-level and district-level enrollment data displaying similar results, it can be inferred that the district-level enrollment does not impact principal turnover. These findings are dissimilar from previous studies from other regions of the United States, which would make it beneficial to further investigate why enrollment does not appear to impact principal turnover in Oklahoma.

### District Percentage of Principal Turnover

The district percentage of principal turnover is a Level 2 variable, which is continuously scaled from 0 to 100, and then recalibrated to 0 to 1.0 in the data table. Table 4.17 indicates that there were 483 schools within the nested districts (49%) that contained a 0% for district principal turnover data, with a mean of 21% of district principal turnover. With 987 valid responses and no missing values, the data set is complete, allowing for comprehensive analysis. The percentiles, particularly the 25th, 50th (median), and 75th, give insights into the data's distribution. The 25th percentile is at 0.0000, indicating that a quarter of the district did not experience turnover. The median is at 0.0556, suggesting that half of the districts experienced a turnover percentage lower than 5.56%. The 75th percentile is at 0.2900, which means that 75% of the districts experienced a turnover percentage less than or equal to 29%. The large jump from the 50th to the 75th percentile could suggest some skewness in the data distribution with a possible presence of outliers.

*Table 4.17: District-Level Turnover Quartiles and Descriptive Statistics*

(L2) District % of Turnover Stats and Quartiles	Percentiles		Turnover Percent
		25	0.0000
		50	0.0556
		75	0.2900
Desc. Stats	Mean	0.2106	
	Median	0.0556	
	Std. Dev.	0.31097	
	Variance	0.097	

## District Locale

The Level 2 predictor of district locale was gathered from the National Center for Education Statistics (NCES) database and was dichotomous, with a 0 denoting nonrural schools and a 1 denoting rural schools. Table 4.18 displays the sample set comprised 540 nonrural schools constituting 55% of the total dataset, with approximately 21% of schools having experienced principal turnover. The remaining 45% of the sample, embodying 447 rural schools, also encountered a principal turnover rate of 21%. The implications of these findings are noteworthy, suggesting that the geographical positioning of educational institutions bears no correlation with the rate of principal turnover in Oklahoma.

*Table 4.18: Descriptive Statistics of District Locale and Turnover*

<b>Turnover Locale</b>	<b>% Turnover</b>	<b>N</b>	<b>% Total Sample</b>
<b>0= Nonrural</b>	21%	541	54.80%
<b>1= Rural</b>	21%	446	45.20%
<b>Total</b>	21%	987	100.00%

## District Type

The district type is a dichotomous categorical variable of noncharter or charter, coded as 0 and 1 respectively. These data were gathered from the OSDE district directory. Table 4.19 indicates that the vast majority (967) of Oklahoma elementary schools were labeled as noncharter, which is 98% of the total sample. Within the noncharter schools, 201 experienced principal turnover, which is a 21% turnover rate. There are 20 Oklahoma elementary schools labeled as charter, which is about 2% of the total sample. Within charter schools, there was a turnover rate of 25%. This disparity in turnover rates warrants further investigation to understand

the underlying factors influencing such discrepancies, but with a limited sample size of charter schools, this data may not be reliably projected without different methods employed.

*Table 4.19: Descriptive Statistics of District Type and Turnover*

<b>Turnover District Type</b>	<b>% Turnover</b>	<b>N</b>	<b>% Total Sample</b>
<b>0= Noncharter</b>	21%	967	98.0%
<b>1= Charter</b>	25%	20	2.0%
<b>Total</b>	21%	987	100.00

### **Procedures and Modeling**

Study procedures included the use of hierarchical linear modeling (HLM) to address all study research questions. To determine what factors, impact principal turnover, a two-step hierarchical model was utilized. Like Maiden, Crowson, and Byerly (2020) hierarchical linear modeling is the correct analytic choice in this exploratory study because the examined variables are nested in levels. The present study includes two distinct phases of data analysis, utilizing hierarchical linear modeling to delineate the relationship between the proposed predictive variables and the outcome of principal turnover. The initial phase examined level 1 predictive variables, which were present at the school-level. The second phase of analysis examined the level 2 predictors, which were district-level variables that were nested within the level 1 school predictors. Using SPSS, the data were analyzed using multilevel binary logistic regression. This type of multilevel regression was chosen as the model because it is designed to predict the probability of a case falling in a target group on a binary outcome variable with multiple observations being nested within higher-level units (Crowson, 2020). In this case, the model examined the predictors of given variables on principal turnover. The application of multilevel modeling is beneficial in evaluating the impact of each variable on principal turnover, because it

formulates a structured system of regression equations that effectively exploit the clustered data structure and affords an enhanced degree of accuracy when scrutinizing data gathered across multiple levels of analysis (Heck & Thomas, 2009).

The sample that was used in these analyses consisted of 987 Oklahoma elementary schools, which were nested within 524 districts, during the 2021-2022 school year. The initial model in HLM analysis is referred to as the null model. This model is a random intercept model devoid of any predictors at both level 1 and level 2. Frequently, it is referred to as an unconditional model or a one-way analysis of variance (ANOVA) with random effects. The purpose of examining this model is to determine if there is a significant variation present at the district-level intercepts (Byerly, 2019). The model delineates the variance of principal turnover rates at the school level across the respective districts in which the schools are nested. The purpose is to determine the extent of variability that exists both within and between the elements of principal turnover and schools (Raudenbush & Bryk, 2002). This model serves to answer the research question, "Is there a significant variation in principal turnover rates among different schools within the same district? "Do schools, that are nested within districts, vary significantly in principal turnover rates?". Table 4.20 displays results from the Unconditional Model, Model 1, and Model 2.

Table 4.20: Variance Components and Model Fit Summaries for HLM Models

	Unconditional Model	Model 1	Model 2
<b>L1 (school) Predictors</b>			
Instructional & Support PPE		-4.558E-5 (p=.374)	-9.749E-5 (p=.307)
Admin PPE		7.982E-6 (p=.425)	-1.496E-7 (p=.995)
Compensation		5.850E-6 (p=.260)	-2.865E-6 (p=.737)
Enrollment		-.001 (p=.183)	.000 (p=.556)
Multi-Site		.328 (p=.216)	.277 (p=.589)
Multi-Role		-.021 (p=.932)	-.330 (p=.522)
EcoDis		-.364 (p=.381)	.472 (p=.566)
Site AP		.172 (p=.420)	-.250 (p=.493)
<b>L2 (district) Predictors</b>			
Instructional & Support PPE			3.282E-5 (p=.811)
Admin PPE			1.992E-7 (p=.998)
Enrollment			1.802E-5 (p=.167)
District Turnover Percent			6.575 (p=.000)
EcoDis			-.466 (p=.692)
District AP Percent			.377 (p=.451)
Locale			-.194 (p=.580)
Charter			-.159 (p=.858)
<b>Variance <math>\sigma^2</math></b>	$\sigma^2 = .158$ (p=.308)	$\sigma^2 = .175$ (p=.270)	$\sigma^2 = 3.471E-12^a$ (p=redundant)



The results in Table 4.21 display the outcome from the ANOVA analysis. The findings indicate that the variance estimate ( $\sigma^2 = .158$ ) for the intercept was not statistically significant ( $p=.308$ ). This indicated that between school districts there were not significant differences in the rate at which principals turned over, regardless of the schools within the districts. Although the unconditional model was not significant, it was chosen to proceed with entering variables at Level 1 and Level 2 to determine any useful information for future studies or policy and practice.

*Table 4.21: Unconditional ANOVA Model Dimensions*

<b>Parameters</b>		<b>Estimate</b>	<b>Std. Error</b>	<b>Wald Z</b>	<b>Sig</b>	<b>Lower Bound</b>	<b>Upper Bound</b>
<b>Intercept</b>	Variance	.158	.155	1.019	.308	.023	1.084

The Level 1 outcome was based on using a dichotomous categorical variable of school-level principal turnover, coded (0=no, 1= yes). There were eight Level 1 predictors of principal turnover. These predictors included (1) instructional and support per-pupil expenditures, (2) administrative per-pupil expenditures, (3) principal compensation, (4) school enrollment, (5) whether a principal served multiple school sites, (6) whether a principal served multiple roles, (7) school percentage of economically disadvantaged students, (8) whether a school employed an assistant principal.

In Model 1, school financial and demographic characteristics were added to determine if there was an improvement in the variance. Table 4.22 exhibits the results of Model 1 and provides the variance estimates ( $\sigma^2 = .175$ ) for the intercept and significance value ( $p=.270$ ), which still indicated that there was not significant variance of school-level principal turnover between districts.

Table 4.22: Estimates of Covariance Parameters

Parameters		Estimate	Std. Error	Wald Z	Sig	Lower Bound	Upper Bound
<b>Intercept</b>	Variance	.175	.159	1.104	.270	.030	1.034

Table 4.23 indicates the results that none of the covariates were statistically significant in Model 1. There was no variation across districts in the relationship between school Level 1 predictors and principal turnover.

Table 4.23: Estimates of Fixed Effects, Level 1

Model 1 Fixed Coefficients	Coefficient	Std. Error	Sig	95% Conf Lower Bound	95% Conf Upper Bound
<b>Intercept</b>	-1.136	.6600	.086	-2.431	.160
<b>InstructionalPPE</b>	-4.558E-5	5.1270E-5	.374	.000	5.503E-5
<b>AdminPPE</b>	7.982E-6	9.9953E-6	.425	-1.163E-5	2.760E-5
<b>Compensation</b>	5.850E-6	5.1861E-6	.260	-4.328E-6	1.603E-5
<b>Enrollment</b>	-.001	.0006	.183	-.002	.000
<b>Multi-Site</b>	.328	.2645	.216	-.191	.847
<b>Multi-Role</b>	-.021	.2484	.932	-.509	.466
<b>EcoDis</b>	-.364	.4157	.381	-1.180	.452
<b>AP</b>	.172	.2126	.420	-.246	.589

There were eight Level 2 predictors included in the Model 2 analysis, which were district financial and demographic characteristics. These predictors included (1) instructional and support per-pupil expenditures, (2) administrative per-pupil expenditures, (3) district enrollment, (4) district percent of principal turnover, (5) district percentage of economically disadvantaged students, (6) district percentage of elementary schools employing an assistant principal, (7) district locale, (8) district charter status. Level 2 predictors of district locale (0=no, 1=yes) and charter status (0=no, 1=yes) were dummy-coded. Finally, to accommodate potential discrepancies in turnover rates attributable to variations in the predictors, Level 1 variables were

introduced as compositional variables at Level 2 for Model 2. Adding compositional variables at Level 2 allowed for a test of whether the role of between-district characteristics significantly predicts variation in between-district variation in principal turnover rates. As Table 4.24 suggests, the parameter is redundant and did not produce significance in variation across districts. This finding of redundancy is expected, due to the unconditional model lacking variance and significance.

*Table 4.24: Estimates of Covariance Parameters*

Random Effect						
Random Effect Covariance	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
					Lower	Upper
Var(Intercept)	1.554E-11 <sup>a</sup>	.	.	.	.	.

Covariance Structure: Variance components

Subject Specification: DistrictID

a. This parameter is redundant.

**Research Question 1:** Are there relationships between principal turnover and school site related fiscal decisions and characteristics (including head elementary principal salary, instructional and support expenditures per pupil, administrative expenditures per pupil, head elementary principal serving multiple sites, head elementary principals assuming multiple job-roles, site percent economically disadvantaged students, site enrollment, and site elementary assistant principal employment status)? The first question's hypotheses stated there is a statistically significant relationship between principal turnover and district fiscal decisions and school characteristics.

After the unconditional ANOVA was run and displayed that the intercept was not significant, the analysis could have been concluded. However, the researcher felt that additional information could be useful to investigate if there was any significance when nested data were added. For Model 1, each of the Level 1 data were entered together into the HLM multilevel

model and then binary logistic regression was employed. Table 4.25 reflects the results for the Level 1 analysis, with all the variables reporting nonsignificant through the Level 1 analysis.

*Table 4.25: Estimates of Fixed Effects, Level 1*

<b>Model 1 Fixed Coefficients (Level 1 predictors)</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>df</b>	<b>t</b>	<b>Sig</b>	<b>95% Conf Lower Bound</b>	<b>95% Conf Upper Bound</b>
<b>Intercept</b>	-1.136	.6600	978	-1.721	.086	-2.431	.160
<b>InstructionalPPE</b>	-4.558E-5	5.1270E-5	978	-.889	.374	.000	5.503E-5
<b>AdminPPE</b>	7.982E-6	9.9953E-6	978	.799	.425	-1.163E-5	2.760E-5
<b>Compensation</b>	5.850E-6	5.1861E-6	978	1.128	.260	-4.328E-6	1.603E-5
<b>Enrollment</b>	-.001	.0006	978	-1.333	.183	-.002	.000
<b>Multi-Site</b>	.328	.2645	978	1.239	.216	-.191	.847
<b>Multi-Role</b>	-.021	.2484	978	-.085	.932	-.509	.466
<b>EcoDis</b>	-.364	.4157	978	-.876	.381	-1.180	.452
<b>AP</b>	.172	.2126	978	.807	.420	-.246	.589

**Research Question 2:** Are there relationships between principal turnover and district fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, percent economically disadvantaged students, district enrollment, the district percentage of elementary principal turnover, and the district percentage of elementary schools with an assistant principal)? The second question's hypotheses stated there is a statistically significant relationship between principal turnover and district fiscal decisions and district characteristics.

The Model 2 analysis displayed that none of the Level 1 variables were significant predictors of principal turnover. Table 4.26 displays that the Level 2 (district) variables exhibited one variable as a significant predictor of principal turnover, which was the district elementary principal turnover percentage ( $p = .000$ ). This result indicates that an elementary school has a

greater likelihood of principal turnover, as the district elementary principal turnover percentage increases. In essence, a principal is more likely to be at a school with greater turnover, if the district has a greater percentage of turnover. Although this finding is significant, it is an obvious and unremarkable finding.

*Table 4.26: Estimates of Fixed Effects, Levels 1 and 2*

<b>Model 2 Fixed Coefficients</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>df</b>	<b>t</b>	<b>Sig</b>	<b>95% Conf Lower Bound</b>	<b>95% Conf Upper Bound</b>
<b>Intercept</b>	-2.416	1.1194	970	-2.158	.031	-4.612	-.219
<b>L1 InstructPPE</b>	-9.749E-5	9.5394E-5	970	-1.022	.307	.000	8.972E-5
<b>L1 AdminPPE</b>	-1.496E-7	2.5052E-5	970	-.006	.995	-4.931E-5	4.901E-5
<b>L1 Compen</b>	-2.865E-6	8.5369E-6	970	-.336	.737	-1.962E-5	1.389E-5
<b>L1 Enrollment</b>	.000	.0008	970	-.589	.556	-.002	.001
<b>L1 Multi-Site</b>	.277	.5123	970	.540	.589	-.729	1.282
<b>L1 Multi-Role</b>	-.330	.5154	970	-.641	.522	-1.342	.681
<b>L1 EcoDis</b>	.472	.8215	970	.574	.566	-1.140	2.084
<b>L1 AP</b>	-.250	.3652	970	-.685	.493	-.967	.466
<b>L2 InstructPPE</b>	3.282E-5	.0001	970	.239	.811	.000	.000
<b>L2 AdminPPE</b>	1.992E-7	6.5753E-5	970	.003	.998	.000	.000
<b>L2 Enrollment</b>	1.802E-5	1.3033E-5	970	1.382	.167	-7.560E-6	4.359E-5
<b>L2 Turnover%</b>	6.575	.4787	970	13.737	.000	5.636	7.515
<b>L2 EcoDis</b>	-.466	1.1742	970	-.397	.692	-2.770	1.839
<b>L2 District AP%</b>	.377	.5008	970	.754	.451	-.605	1.360
<b>L2 Locale</b>	-.194	.3515	970	-.553	.580	-.884	.495
<b>L2 Charter</b>	-.159	.8888	970	-.179	.858	-1.904	1.585

**Research Question 3:** Are there relationships between principal turnover and district classification and type (whether a district is rural or nonrural, and whether charter or noncharter)? The third question's hypotheses stated that there is a statistically significant relationship between principal turnover and district classification and type.

To answer this research question, Level 2 variables were added to the Model 2 analysis. Both Level 2 variables were found to be nonsignificant predictors of principal turnover. Table 4.27 exhibits that Locale was nonsignificant ( $p=.580$ ) and Charter was nonsignificant ( $p=.858$ ).

*Table 4.27: Parameters and Estimates of Fixed Effects, Level 2 Dichotomous Variables*

<b>Parameters</b>	<b>Estimate</b>	<b>Std. Error</b>	<b>df</b>	<b>t</b>	<b>Sig</b>	<b>Lower Bound</b>	<b>Upper Bound</b>
<b>Locale</b>	-.194	.3515	970	-.553	.580	-.884	.495
<b>Charter</b>	-.159	.8888	970	-.179	.858	-1.904	1.585

### **Follow-Up Analysis**

The initial method employed in the study, Hierarchical Linear Modeling (HLM), did not provide significant insights into principal turnover at elementary schools in Oklahoma. This was possibly due to an overly simplistic interpretation of the dependent variable. As such, the method didn't fully encompass the diverse aspects of principal turnover. This led to the reassessment of the research approach and the subsequent adoption of multinomial logistic regression (MLR). The decision was made to conduct a follow-up analysis, due to the relative ease of the researcher's ability to adjust the dependent variable from the data that was compiled throughout the original analysis. The purpose of conducting the follow-up analysis was not to grasp significance, but rather, to gain deeper insight into the nuances of principal turnover, while already having the necessary data to complete the analysis. The ultimate goal is to provide useful insights that could assist district leaders and policymakers in effectively addressing principal turnover.

Multinomial logistic regression (MLR) is advantageous for further analysis as it allows the usage of multi-categorical data of the dependent variable. This makes it possible to

investigate the relationship between a multinomial dependent variable and multiple independent variables (El-Habil, 2012). In the follow-up study, the dependent variable of principal turnover was refined and classified as (0)=No Turnover, (1)= Turnover out of the Oklahoma education dataset, (2)= Lateral turnover to another elementary head principalship, (3)= Promotion, (4)= In Oklahoma education, but demoted to a different position. All independent variables remained consistent with the original HLM model. This added precision aids in a more nuanced analysis and allowed the researcher to gain additional descriptive statistic information regarding principal turnover and its relationship with the independent variables.

### **Multinomial Logistic Regression Model 1**

The Multiple Linear Regression (MLR) Model 1 was utilized with the dependent group category "(0)=No Turnover" as the reference category. This facilitated a comparison of independent variables with schools that did not witness principal turnover. In alignment with the initial Hierarchical Linear Modeling (HLM) analysis, the singular district-level predictor of principal turnover was the "turnover percent at the district level". This, however, isn't practically significant since it's somewhat self-evident; a school located in a district with a higher turnover rate is likely to experience principal turnover.

An intriguing difference was observed in MLR Model 1 related to school-level variables when compared with the initial HLM analysis. As Table 4.28 indicates, Administrative Per-Pupil Expenditures emerged as a significant predictor ( $p < .001$ ) of turnover in cases where principals received promotions. This could be speculated to occur due to the rural nature of nearly half the elementary schools in Oklahoma, many of which are single-elementary-school districts. In such cases, elementary principals are likely to be promoted to superintendent or other district-level positions.

*Table 4.28: MLR Results with Non-Turnover Group as Reference Category*

<b>Principal Promotion Parameters</b>	<b>B</b>	<b>Std. Error</b>	<b>Wald</b>	<b>df</b>	<b>Sig</b>	<b>Exp(B)</b>	<b>Lower Bound</b>	<b>Upper Bound</b>
<b>Intercept</b>	-8.116	1.599	25.776	1	<.001			
<b>School AdminPPE</b>	.002	.000	16.351	1	<.001	1.002	1.001	1.003

### **Multinomial Logistic Regression Model 2**

The MLR Model 2 was conducted utilizing the dependent category group of "(1)=Out of Oklahoma Education" as the reference category. This decision was influenced by the fact that this category possesses the largest sample size among all dependent variable categories. The benefit of adopting "(1)=Out of Oklahoma Education" as the reference category lies in its ability to allow comparisons of other principal turnover categories against it. Essentially, this model facilitates the investigation of the predictors of principal turnover when it occurs.

It is noteworthy to mention that the outcome of the MLR Model 2 strongly mirrored the results obtained from the Hierarchical Linear Modeling (HLM) analysis and was virtually identical to the MLR Model 1 analysis. An intriguing observation was that, when principal turnover took place, there still wasn't a significant predictor category associated with the type of principal turnover.

### **Multinomial Logistic Regression Descriptive Statistics**

The follow-up multinomial regression analysis reveals intriguing patterns in principal turnover, as the detailed statistics in Table 4.29 demonstrate. Noteworthy is the fact that 119 schools, making up 12% of the total sample, experienced principal turnover because the individual left the field of education entirely. This represents an astounding 58% of all



elementary principal turnover. Furthermore, 28 schools (2.8% of the total sample) saw their principals leave for equivalent roles in other schools or districts, accounting for nearly 14% of total principal turnover. Promotions were the cause of turnover in 39 schools, which formed 4% of the total sample and about 19% of the turnover group. Lastly, 20 schools, or 2% of the total sample, witnessed their principals step down from their positions but remain within Oklahoma's education sector, contributing to about 10% of the principal turnover group.

*Table 4.29: Frequency of DV Category in Follow-Up Analysis*

<b>DV Turnover</b>	<b>N</b>	<b>% Total of Group</b>	<b>% Total N</b>
<b>0</b>	781		79.10%
<b>1</b>	119	57.76%	12.10%
<b>2</b>	28	13.59%	2.80%
<b>3</b>	39	18.39%	4.00%
<b>4</b>	20	9.71%	2.00%

The data demonstrates a trend in turnover among principals in schools with multiple sites and those with multiple roles. Of the 40 multi-site principal schools that experience turnover, principal turnover occurred in various ways, including leaving the education field (32.5%), transitioning to a lateral position (10%), obtaining a promotion (40%), or accepting a position considered a demotion (17.5%). This is illustrated in Table 4.30.

*Table 4.30: Frequency of Multi-Site Turnover in Follow-Up Analysis*

<b>Turnover Multi-Site Principals</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	13	32.50%
<b>2</b>	4	10.00%
<b>3</b>	16	40.00%
<b>4</b>	7	17.50%
<b>Total</b>	40	100%

Table 4.30 provides the frequency data for the rate of turnover in schools guided by multi-site principals, further broken down into specific categories of turnover. Taken as a whole, schools led by multi-site principals observed a turnover rate of 27%, representing 14.8% of the total sample. A deeper analysis of the turnover categories reveals that 40% of these schools experienced a principal's departure due to promotion, while 32.5% were due to the principal exiting the education sector. Schools witnessing lateral shifts and demotions formed the minority in the turnover categories, accounting for 10% and 17.5% respectively.

In comparison, Table 4.31 reveals the frequency data for schools run by multi-role principals. These schools displayed a slightly lower turnover rate of 24%, yet they made up a larger portion of the total sample at 21.3%. Upon scrutinizing the turnover categories more closely, it was found that 46% of these schools saw their principals leave the education field altogether. Schools, where principals were promoted, accounted for the second highest turnover category at 36%, followed by those experiencing demotions and lateral moves at 12% and 6% respectively. It's important to note that the "left education" and "promotion" categories of turnover possessed rates that significantly surpassed the overall turnover rate of 21% mentioned in the study. A thorough evaluation of the turnover sub-categories suggests that resignations

from the education sector and promotions are the leading causes of principal turnover in schools with multi-site and multi-role principals.

*Table 4.31: Frequency of Multi-Role Turnover in Follow-Up Analysis*

<b>Turnover Multi-Role Principals</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	23	46.00%
<b>2</b>	3	6.00%
<b>3</b>	18	36.00%
<b>4</b>	6	12.00%
<b>Total</b>	50	100%

As illustrated in Table 4.32, an intriguing observation can be made about the turnover of principals in schools that have an assistant principal. Notably, half of these schools have experienced the departure of head principals who have exited the field of education entirely. Unlike the patterns observed with other independent variables, the second largest group is characterized by lateral principal turnover, constituting 23%. This is followed by principals gaining promotions (19%) and those experiencing demotion (8%). Although this may seem significant at first-observation, it would be beneficial to further explore as to why the principals with the support of assistant principals would leave education altogether at such a high rate.

*Table 4.32: Frequency of Turnover in Schools with Assistant Principals in Follow-Up Analysis*

<b>Turnover Schools w/ Asst. Principals</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	31	50.00%
<b>2</b>	14	23.00%
<b>3</b>	12	19.00%
<b>4</b>	5	8.00%
<b>Total</b>	62	100%

The data presented in Table 4.33 and Table 4.34 offers valuable insights into the turnover categories of school principals in rural and nonrural areas. Of note, 53% of principals from rural schools and 62% from nonrural schools have exited the education sector entirely. A noteworthy divergence emerges in the cases of lateral transitions and promotions. Rural schools display a lower rate of lateral transitions, 9.5%, and a notably higher rate of promotions, 29.5%. In contrast, nonrural schools remain relatively stable with 17% lateral turnovers and 10% promotions. This disparity might be attributed to the limited administrative positions in smaller, rural districts. Thus, when an opportunity arises, it often leads to an internal promotion to superintendent. This finding warrants further examination to understand the dynamics of career progression in educational institutions across different geographic locales.

*Table 4.33: Frequency of Turnover in Rural Schools in Follow-Up Analysis*

<b>Turnover Rural Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	50	53.00%
<b>2</b>	9	9.50%
<b>3</b>	28	29.50%
<b>4</b>	8	8.00%
<b>Total</b>	95	100%

*Table 4.34: Frequency of Turnover in Nonrural School in Follow-Up Analysis*

<b>Turnover Nonrural Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	69	62.00%
<b>2</b>	19	17.00%
<b>3</b>	11	10.00%
<b>4</b>	12	11.00%
<b>Total</b>	111	100%

When examining data on district locale and multi-site/multi-role turnover, several noteworthy trends are revealed in Tables 4.35 and 4.37. There was a total of 95 instances of principal turnover in rural districts, while nonrural districts saw 111 turnovers. Specifically, in schools designated as "rural multi-site", 33 instances of turnover were observed, making up almost 35% of the total turnover in rural schools. This is vastly different when compared to "nonrural multi-site" schools, which only had 7 turnovers, a mere 6% turnover rate.

Similarly, "rural multi-role" schools had 40 instances of principal turnover, which constituted 42% of the total turnover in rural schools. This contrasts with "nonrural multi-role" schools, which only had 10 turnovers, equating to a 9% turnover rate.

The most striking trend is that more than half of the principal turnover in rural districts (52%) occurred in schools with multi-site or multi-role principals, while nonrural districts had a much lower turnover at 12.6%. This stark disparity in turnover rates is of concern, particularly for rural districts, which are situated in less densely populated areas and may struggle to attract a large pool of qualified candidates. Such a situation could perpetuate the practice of principals serving in multi-site or multi-role capacities, potentially leading to higher turnover rates in the future.

*Table 4.35: Frequency of Turnover in Rural and Nonrural Multi-Site Schools*

<b>Turnover Rural Multi- Site Schools</b>	<b>N</b>	<b>% Total of Group</b>	<b>Turnover Nonrural Multi-Site Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	12	36.40%	<b>1</b>	1	14.00%
<b>2</b>	4	12.10%	<b>2</b>	0	0.00%
<b>3</b>	13	39.40%	<b>3</b>	3	43.00%
<b>4</b>	4	12.10%	<b>4</b>	3	43.00%
<b>Total</b>	33	100%	<b>Total</b>	7	100%

*Table 4.36: Frequency of Turnover in Rural and Nonrural Multi-Role Schools*

<b>Turnover Rural Multi-Role Schools</b>	<b>N</b>	<b>% Total of Group</b>	<b>Turnover Nonrural Multi-Role Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	16	40.00%	<b>1</b>	7	70.00%
<b>2</b>	3	7.50%	<b>2</b>	0	0.00%
<b>3</b>	15	37.5%	<b>3</b>	3	30.00%
<b>4</b>	6	15.00%	<b>4</b>	0	0.00%
<b>Total</b>	40	100%	<b>Total</b>	10	100%

*Table 4.37: Comparison of Turnover Between Rural & Nonrural Multi-Site/Multi-Role Schools*

<b>Turnover of Rural Schools</b>	<b>N</b>	<b>% of Turnover in Rural Schools</b>	<b>Turnover of Nonrural Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>Multi-Site</b>	33	34.70%	<b>Multi-Site</b>	7	6.30%
<b>Multi-Role</b>	40	42.10%	<b>Multi-Role</b>	10	9.00%
<b>Individual Instances of MS or MR</b>	49	51.60%	<b>Individual Instances of MS or MR</b>	14	12.60%
<b>Total</b>	95		<b>Total</b>	111	

Tables 4.38 and 4.39 provide a comparative analysis of turnover characteristics among charter and noncharter school principals, with a more precise definition of the dependent variable. The study, however, faces a limitation of a small sample size for charter school principals - only 20 observed instances in the overall sample. Despite the small sample size, all of the charter school principals (5 in number) chose to step away from the educational field

entirely. In contrast, an examination of the 201 non-charter or traditional school principals revealed diverse career paths post their principalship. A majority, 57%, opted to leave the education sector. On the other hand, 19% ascended to higher positions, 14% transitioned to roles of similar hierarchy, and a minor 10% took on roles considered to be a step down in their career ladder. This data prompts an in-depth investigation into the factors influencing such distinct career trajectories among charter and non-charter school principals.

*Table 4.38: Frequency of Turnover in Charter Schools in Follow-Up Analysis*

<b>Turnover Of Charter Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	5	100%
<b>2</b>	0	0%
<b>3</b>	0	0%
<b>4</b>	0	0%
<b>Total</b>	5	100%

*Table 4.39: Frequency of Turnover in Traditional Schools in Follow-Up Analysis*

<b>Turnover Of Traditional Schools</b>	<b>N</b>	<b>% Total of Group</b>
<b>1</b>	114	57.00%
<b>2</b>	28	14.00%
<b>3</b>	39	19.00%
<b>4</b>	20	10.00%
<b>Total</b>	201	100%

### **Summary**

The purpose of this quantitative, causal comparative study was to explore the effect that various district-level fiscal decisions and demographic characteristics had on elementary principal turnover within Oklahoma public schools. The research employed the Hierarchical



Linear Modeling (HLM) binary logistic regression model to assess the predictive relationships at the school level; however, it was determined that none of the eight school-level variables significantly influenced principal turnover. This conclusion was mirrored during the examination of district-level relationships, where no significant predictors of principal turnover were identified among the eight district-level variables.

Owing to the inherent limitation that the binary dependent variable could not accurately identify the specific type of principal turnover, a supplementary analysis was conducted using multinomial logistic regression. This examination revealed a significant correlation between school-level administrative per-pupil expenditures and the promotion of principals, compared to the group with no turnover. Regardless, all other Level 1 and 2 independent variables verified no significance, whether compared to the non-turnover or turnover groups. This result reaffirms the earlier HLM analysis that found no significant relationships between any independent variables and principal turnover.

While the predictor variables demonstrated limited significance, the descriptive data yielded valuable insights for policymakers, educational leaders, and future researchers studying principal turnover. It was found that turnover rates were significantly higher in schools with principals serving multiple sites and multiple roles. Moreover, schools with multi-site and multi-role principals indicated a greater turnover rate among individuals promoted to higher positions.

In terms of economic disadvantage, schools and districts with rates between 21-40% and 61-80% displayed the highest turnover rates. An interesting pattern also emerged in the district locale data, where a considerable number of principals from rural schools left their positions for promotions.

In conclusion, this quantitative, causal comparative study brings forward crucial insights into principal turnover within Oklahoma public schools, highlighting the influence of district-level fiscal decisions and demographic factors. While none of the analyzed school or district-level variables significantly influenced principal turnover, important patterns emerged in the descriptive data. Notably, schools with multi-site and multi-role principals and districts with certain rates of economic disadvantage observed significantly higher turnover rates. Moreover, the study identified a pronounced trend of rural school principals leaving their positions. The findings underscore the need for further research and thoughtful consideration from policymakers and education leaders to effectively address these trends and potentially improve principal retention rates in Oklahoma public schools.

## CHAPTER FIVE

### FINDINGS, CONCLUSIONS, & RECOMMENDATIONS

The current study conducted was divided into two main phases. The initial phase used predictors at the school level, while the second phase incorporated district-level predictors. Hierarchical linear modeling, specifically multilevel binary logistical regression, was employed to anticipate the effects of fiscal decisions and characteristics at the school and district level on principal turnover. The methodology and data analysis results were extensively reviewed in Chapter Four.

In Chapter Five, the results of the research are summarized. It includes an analysis of the study design and how different variables were used to measure the effects of fiscal decisions and demographic characteristics at the school and district level on principal turnover. This data could support further research to understand the reasons behind principal turnover in Oklahoma elementary schools. Upon analyzing the variables, it was concluded that all of the variables, excluding one, were not significant predictors of principal turnover. Despite this, Chapter Five also suggests potential avenues for future research. These could help uncover the reasons for this turnover and could provide districts with the necessary insight to address this issue.

There was a follow-up analysis conducted, which employed multinomial logistic regression to address a key limitation of the HLM analysis' dependent binary variable, which was unable to accurately discern the specific type of principal turnover. The dependent variable was adjusted to include five categories: No Turnover, Exited Education, Lateral Turnover, Promotion Turnover, and Demotion Turnover. Following this adjustment, the analysis revealed a significant correlation between school-level administrative per-pupil expenditures and principal promotions, but only when compared to the non-turnover group. Remarkably, all other independent variables

at Level 1 and Level 2 demonstrated no significant relationship, regardless of whether they were compared to the non-turnover or the turnover groups. Therefore, these results essentially confirm the findings of our previous HLM analysis, which also did not identify any significant relationships between the independent variables and principal turnover.

The role of a principal in a school extends beyond simple administration. They are entrusted with curriculum development, behavior management, shaping school culture, leading human resources, financial management, and overseeing operations. Research has shown that principal responsibilities significantly affect various areas of education, including teacher retention, student performance, and overall graduation rates (Levin, Scott, Yang, Leung, & Bradley, 2020). The aim of any school district is to facilitate the growth and learning of both students and staff while judiciously managing its financial resources. Given this aim, the principal's role is a key factor in achieving these outcomes (Seashore, Leithwood, Wahlstrom, & Anderson, 2010; Partlow & Ridenour, 2008; Fuller, Young, & Baker, 2007).

However, high rates of principal turnover in Oklahoma have resulted in districts reassigning substantial funds for the recruitment and training of new principals. It's estimated that districts spend at least \$75,000 on the discovery, recruitment, and onboarding of a single principal (Lazarte Alcalá, 2021; Palmer, 2017; Willert, 2015; School Leaders Network, 2014). Principal turnover tends to be linked with decreased test scores, lower school proficiency rates, and teacher retention (Henry & Harbatkin, 2019). It's therefore important to understand how principal turnover impacts key aspects of education, such as teacher satisfaction and student achievement.

This study aimed to explore the potential relationships between multiple variables and the turnover rate of elementary school principals. The variables considered in this study included

per-pupil instructional and support expenditures, administrative per-pupil expenditures, principal compensation, the status of multi-site and multi-role principals, the percentage of economically disadvantaged students, enrollment numbers, employment of assistant principals, the principal turnover percentage of the district, district location, and district charter status. By gaining a deeper understanding of how these variables may influence principal turnover, it is hopeful that this information can assist district leaders and policymakers in making well-informed decisions related to funding allocation.

This study employed a quantitative approach to evaluate Oklahoma elementary school principal turnover data, from the 2021-2022 school year. It applied a cross-sectional method, which means that data was gathered at a specific point in time, allowing for a snapshot overview of the situation. The data was analyzed using a multilevel binary logistical regression model, which allowed for the examination of variables at the school and district levels. The study aimed to understand the relationship between fiscal decisions and demographic characteristics and principal turnover. The following variables were examined to determine whether any are significant predictors of principal turnover.

- Principal turnover (dependent variable). The site-level dependent variable used to address the research question is whether there was principal turnover at the school site during the 2021-2022 school year. This information was collected through the OSDE end-of-year School Personnel Report (SPR). The OSDE school directory was cross-referenced with the OSDE-SPR report to determine the employee listed with the job description of "Principal, Headmaster/Headmistress, Head of School" at schools that were designated by the OSDE as "elementary".

- Principal compensation (level 1). These data were each head elementary principal's total compensation listed in the OSDE end-of-year SPR report, for the year observed. Due to some districts paying additional fringe benefits, a total compensation package datapoint will be observed to create a more encompassing picture of compensation. Total compensation includes the columns on the SPR reported labeled: base salary, total fringe, and other fringe.
- Multi-site principal (level 1). The multi-site principal independent variable was whether a school site employed a head elementary principal that served multiple school or district sites. This variable is a dichotomous categorical variable of “yes” or “no.” These data were gathered from the OSDE end-of-year SPR report, which lists the principal at multiple school sites (or not).
- Multi-role principal (level 1). The multi-role principal independent variable was whether a school site employed a head elementary principal who held more than one job-code on the OSDE end-of-year SPR report, for the year observed. This variable is a dichotomous categorical variable of “yes” or “no.”
- Site economically disadvantaged (level 1). These data were compiled from the OSDE Low Income Report. This independent variable is the school site’s percentage of students identified as "economically disadvantaged," which is continuously scaled from 0 to 100. This percentage is based on each school's number of students who qualify for free and reduced lunches.
- Site enrollment (level 1). These data were compiled from the OSDE website. The site enrollment independent variable is the number of students enrolled in a school on the OSDE October 1 Child Count report.

- Site employment of assistant principals (level 1). These data were from the OSDE end-of-year School Personnel Report (SPR). This independent variable is whether a school site employed at least one assistant principal for the observed year. Any employee listed with the job description of "Asst/Vice Principal," or job code "105," at the observed elementary schools was included. This variable is a dichotomous categorical variable of "yes" or "no."
- Instructional and support per-pupil expenditures (School-level 1 and District-level 2). These independent variables are continuously scaled. These expenditures and supports include teacher salaries, teacher assistant salaries, and paraprofessional salaries, but also the activities dealing directly with the interaction between teacher and student (OCAS, 2021; Byerly, 2019). The Oklahoma Cost Accounting System (OCAS) codes series 1000 (Instruction), 2100 (Support Services- Students), and 2200 (Support Services- Instructional) are associated with the instructional per-pupil expenditures variable for this study.
- Administrative per-pupil expenditures (School- level 1 and District- level 2). These independent variables are continuously scaled. Administrative expenditures include both district and school administration, using the OCAS series functions 2300 (Support Services- General Administration) and 2400 (Support Services- School Administration), which are activities involving the operations of the entire district and schools as an individual site (OCAS, 2021). Administrative expenditures are based on each district's total dollar amount expended on the salaries and support of the positions of superintendent, assistant superintendent, directors, principals, and assistant principals

(OCAS, 2021; Byerly, 2019). Administrative per-pupil expenditures are based on the total administrative expenditures and then divided by the district's ADM.

- District economically disadvantaged (level 2). These data are continuously scaled from 0 to 100. This percentage is based on each district's number of students who qualify for free and reduced lunches.
- District enrollment (level 2). This independent variable is the number of students enrolled in a district on the OSDE October 1 Child Count report. This is continuously scaled.
- District employment of assistant principals (level 2). This independent variable is the average number of elementary schools that employ an assistant principal at a given district, which is continuously scaled. This information was found through the OSDE end-of-year School Personnel Report (SPR).
- District principal turnover percent (level 2). This independent variable is the percentage of elementary principal turnover for each district. These data were found on the OSDE end-of-year School Personnel Report (SPR). The district-level principal turnover variable was coded as a continuous percentage.
- District locale (level 2). This independent variable is the location of each school district, which is a dichotomous categorical variable of rural or nonrural. This information is obtained from the National Center for Education Statistics (NCES).
- District type (level 2). This independent variable is the type of school district, which is a dichotomous categorical variable of charter or noncharter. This information is obtained from the OSDE district directory.



### Follow-Up Analysis Dependent Variable

- Principal turnover (dependent variable). The follow-up study employed a more precise measurement of the original study's dependent variable. For the multinomial logistic regression, principal turnover was coded as: (0) =No Turnover, (1) = Turnover out of the Oklahoma education dataset, (2) = Lateral turnover to another elementary head principalship, (3) = Promotion, (4) = In Oklahoma education, but demoted to a different position.
- Independent variables. All sixteen independent variables were consistent from the original HLM analysis to the follow-up MLR analysis.

**Research Question 1:** Are there relationships between principal turnover and school site related fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, head elementary principal salary, head elementary principal serving multiple sites, head elementary principal assuming multiple job-roles, site percent economically disadvantaged students, site enrollment, and site elementary assistant principal employment status)? The following variables were utilized in this analysis:

- Instructional and support per-pupil expenditures
- Administrative per-pupil expenditures
- Principal compensation
- Multi-site principals
- Multi-role principals
- Site economically disadvantaged

- Site enrollment
- Site employment of assistant principals

**Research Question 2:** Are there relationships between principal turnover and district fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, percent economically disadvantaged students, district total enrollment, district average percent of principal turnover, and the district percentage of elementary schools with an assistant principal)? The following variables were utilized in this analysis:

- Instructional and support per-pupil expenditures
- Administrative per-pupil expenditures
- District economically disadvantaged
- District enrollment
- District principal turnover percent
- District employment of assistant principals

**Research Question 3:** Are there relationships between principal turnover and district classification and type (whether a district is rural or nonrural, and whether charter or noncharter)?

- Rural or nonrural
- Charter or noncharter school

## Summary of Findings

### Research Question 1 Findings Summary

Research Question 1 asked, are there relationships between principal turnover and school site related fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, head elementary principal salary, head elementary principal serving multiple sites, head elementary principal assuming multiple job-roles, site percent economically disadvantaged students, site enrollment, and site elementary assistant principal employment status)? Hypothesis 1: There is a statistically significant relationship between principal turnover and district fiscal decisions and school characteristics. For Research Question 1's hypothesis, which examined Level 1 variables, there were eight sub-hypotheses that addressed school fiscal decisions or demographic characteristics, which are nested within districts. These variables included: (1a) principal compensation, (1b) instructional and support per-pupil expenditures, (1c) administrative per-pupil expenditures, (1d) multi-site principal, (1e) multi-role principal, (1f) percent economically disadvantaged students, (1g) student enrollment, (1h) employment of an assistant principal. Hypotheses 1a, 1b, 1c, 1d, 1e, and 1h were hypothesized to have statistically significant inverse relationships between principal turnover and the independent variables. Hypotheses 1f and 1g were hypothesized to have statistically significant relationships between principal turnover and the independent variables.

The initial phase involved conducting an unconditional model - also identified as a one-way ANOVA with random effects. The objective was to ascertain whether significant variations existed in the principal turnover rates among schools, considering they are nested within districts. However, the outcomes revealed that the variance estimate for the intercept was not statistically significant. This suggests that no considerable differences were detected in principal

turnover rates across different school districts, irrespective of the individual schools they contain. Despite the non-significant findings of the unconditional model, the decision was made to continue adding variables at Level 1 and Level 2. The aim was to determine any potentially insightful data that could be beneficial for future research, or for informing policy and practice.

The eight Level 1 school-level independent variables were added to Model 1 to determine if there was any improvement in the variance of school-level principal turnover between districts. However, Model 1 determined there was no variation across districts in the relationships between school Level 1 predictors and principal turnover. The results from Model 1 indicated that there is not enough evidence in this study to support Hypothesis 1.

### **Research Question 2 Findings Summary**

Research Question 2 asked, are there relationships between principal turnover and district fiscal decisions and characteristics (including instructional and support expenditures per pupil, administrative expenditures per pupil, percent economically disadvantaged students, district total enrollment, district average percent of principal turnover, and the district percentage of elementary schools with an assistant principal)? Hypothesis 2: There is a statistically significant relationship between principal turnover and district fiscal decisions and district characteristics. For Research Question 2's hypothesis, which examined Level 2 variables, there were six sub-hypotheses that addressed district fiscal decisions or demographic characteristics. These variables included: (2a) instructional and support per-pupil expenditures, (2b) administrative per-pupil expenditures, (2c) percentage of economically disadvantaged students, (2d) district student enrollment, (2e) district percentage of elementary principal turnover, (2f) district employment status of elementary principals. Hypotheses 2a, 2b, and 2f were hypothesized to have statistically significant inverse relationships between principal turnover and

the independent variables. Hypotheses 2c, 2d, and 2e were hypothesized to have statistically significant relationships between principal turnover and the independent variables. The six Level 2 district-level independent variables were added to create Model 2 to determine if there was any improvement in the variance of school-level principal turnover between districts. Again, the model did not produce significance in variation across districts. Of the six Research Question 2 variables, there was one variable that produced statistical significance. The results concluded that there is a statistically significant relationship between principal turnover and the district percentage of elementary principal turnover. This Level 2 (district) variable was found to be a significant predictor of principal turnover ( $p = .000$ ). This result indicates that an elementary school has a greater likelihood of principal turnover, as the district elementary principal turnover percentage increases. In essence, a principal is more likely to be at a school with greater turnover, if the district has a greater percentage of turnover. For this reason, the alternative hypothesis is accepted, because there is a positive and significant relationship between the dependent and predictor variables. Although this finding is significant, it is an obvious and unremarkable finding. The results from Model 2 on the remaining five independent variables indicated that there is not enough evidence in this study to support Hypothesis 2.

### **Research Question 3 Findings Summary**

Research Question 3 asked, are there relationships between principal turnover and district classification and type (whether a district is rural or nonrural, and whether charter or noncharter)? Hypothesis 3: There is a statistically significant relationship between principal turnover and district classification and type. For Research Question 3's hypothesis, which examined Level 2 variables, there were two sub-hypotheses that addressed district demographic characteristics of classification and type: (3a) district classification of rural or nonrural, (3b)

district type of charter or noncharter. Both of the sub-hypotheses were hypothesized to have statistically significant relationships between principal turnover and the independent variables. The district classification and type (Level 2) variables were added to Model 2. Both variables were found to be nonsignificant predictors of principal turnover.

### **Follow-Up Analysis Summary**

The original analysis used in the current study, Hierarchical Linear Modeling (HLM), failed to yield substantial insights into the issue of principal turnover in Oklahoma's elementary schools. This could be attributed to a rather oversimplified interpretation of the dependent variable, which did not adequately capture the complex dimensions of principal turnover. Consequently, the research approach underwent a re-evaluation, leading to the introduction of the multinomial logistic regression method. This revised approach goes beyond merely achieving statistical significance; it aims to understand more profoundly the intricate dynamics of principal turnover.

In the follow-up study, the dependent variable of principal turnover was refined and classified as (0) =No Turnover, (1) = Turnover out of the Oklahoma education dataset, (2) = Lateral turnover to another elementary head principalship, (3) = Promotion, (4) = In Oklahoma education, but demoted to a different position. The Multiple Logistic Regression (MLR) Model 1 was utilized with the dependent group category "(0) =No Turnover" as the reference category. MLR Model 1 compared the independent variables with schools that did not experience principal turnover. Like the study's initial HLM analysis, the MLR Model 1 only showed significance with the district-level predictor of "turnover percent at the district level". Again, this finding isn't particularly insightful, due to the logical nature that a school located in a district with a higher turnover rate is likely to experience principal turnover.

An intriguing finding occurred from the MLR Model 1 results, which was that school-level Administrative Per-Pupil Expenditures emerged as a significant predictor ( $p < .001$ ) of turnover in cases where principals received promotions. Furthermore, this relationship was positive, which suggests that when school-level administrative per-pupil expenditures increase, the likelihood for principal turnover also increases. It could be speculated to occur due to the rural nature of nearly half the elementary schools in Oklahoma, many of which are single-elementary-school districts. In such cases, elementary principals are likely to be promoted to superintendent or other district-level positions or a multiple-role position of principal/superintendent. It was also observed that rural districts more frequently have principals managing multiple sites or roles. This might result in a significant portion of the administrative OCAS coding being allocated to the school. Given the increased turnover identified amongst multi-site and multi-role principals, it is reasonable to presume that escalating administrative costs associated with these positions could heighten the possibility of turnover.

In the follow-up study MLR Model 2, the dependent category group of "(1) =Out of Oklahoma Education" as the reference category. This decision was influenced by the fact that this category possesses the largest sample size among all dependent variable categories. The advantage of designating "(1) =Out of Oklahoma Education" as the reference category is that it affords a base for comparison with other categories of principal turnover. This model essentially aids in exploring the factors influencing principal turnover when it occurs. It's worth pointing out the similarity of results from the MLR Model 2 and the Hierarchical Linear Modeling (HLM) analysis, which also closely matched the findings from the MLR Model 1 analysis. An interesting finding was that even in the event of principal turnover, there was no significant predictor category linked to the type of principal turnover.

### **Important Statistical Findings**

The study in question may not have identified statistically significant determinants of principal turnover, but it unveiled some insightful data through the analysis of descriptive statistics. A striking observation was that Oklahoma's elementary schools face a 21% head principal turnover rate, a figure that surpasses the national average of 16.7% (U.S. Department of Education, National Center for Education Statistics, 2019). As the ultimate objective of any school district is to facilitate teaching, learning, and the development of both students and staff while exercising financial prudence, the role of the principal is of utmost importance. Principals are instrumental in various aspects of school improvement and education, with a profound bearing on teacher retention, student performance, and graduation rates (Levin, Scott, Yang, Leung, & Bradley, 2020). Moreover, the principal is a key contributor to the achievement of the overall school goals (Seashore, Leithwood, Wahlstrom, & Anderson, 2010; Partlow & Ridenour, 2008; Fuller, Young, & Baker, 2007). Therefore, the high principal turnover rate in Oklahoma could cause enduring adverse effects on the school environment and future outcomes (Henry & Harbatkin, 2019).

### **Important Findings from the Initial Analysis**

The initial study was conducted using HLM, which provided important insights into the patterns of principal turnover in various schools and districts. The results indicate that schools led by multi-site and multi-role principals have witnessed a higher turnover rate. The figure stands at 27% for multi-site principals and 24% for multi-role principals, outpacing both state and national averages. Among the 146 multi-site principals surveyed, only 36 were not considered multi-role principals. The turnover rate for this subset of "solely multi-site principals" was a staggering 39%, considerably higher than national and state averages. Similarly, 100



schools possessed principals considered multi-site and multi-role, and these schools experienced a turnover rate of 27%. Regardless of the overlap of these variables, it's evident that they influence principal turnover in Oklahoma elementary schools. Both multi-site and multi-role factors are associated with turnover rates exceeding both the national and state averages. This suggests a possible link between the complexity of a job role and higher turnover rates (Gilman & Lanman, 2005; Tran, 2017), thereby highlighting the significant impact of job complexity on principal turnover.

Surprisingly, the variables of enrollment size and assistant principal support, do not appear to elevate the principal turnover rate greater than the state average, with a slightly elevated turnover rate of the least populated schools. Interestingly, the percentage of students considered economically disadvantaged at both the school and district levels exhibit the lowest principal turnover rates at the schools and districts with the least (0-20%) and greatest (81-100%) concentration. This is an interesting finding that warrants further investigation due to the opposite ends of the variable's continuum being consistent with turnover data. Rural and nonrural districts exhibited consistent turnover rates of 21%, which was also consistent with the state average. Charter schools produced an elevated turnover of 25%, but the sample size was limited so this finding should be interpreted with caution.

### **Important Findings from the Follow-Up Analysis**

The MLR follow-up analysis provided deeper insight into what types of schools and districts are most likely to experience principal turnover. When principal turnover was more specifically defined, it's important to note that 119 schools, which make up 12% of the total sample, experienced principal turnover because the individual left the field of education entirely. This type of turnover represents an astounding 58% of all Oklahoma elementary principal turnover.

Furthermore, 28 schools (2.8% of the total sample) saw their principals leave for equivalent roles in other schools or districts, accounting for nearly 14% of total principal turnover. Promotions were the cause of turnover in 39 schools, which formed 4% of the total sample and about 19% of the turnover group. Lastly, 20 schools, or 2% of the total sample, witnessed their principals step down from their positions but remain within Oklahoma's education sector, contributing to about 10% of the principal turnover group.

Like the HLM analysis, the follow-up MLR analysis also rendered insightful outcomes for schools led by multi-site and multi-role principals. Within the sub-segment of schools with multi-site principals, it was found that a substantial 40% of principals transitioned out of their roles for promotions, whereas 46% of multi-role principals exited the educational sector entirely, with 36% leaving for a promotion. The results exhibit a considerable level of congruity between schools overseen by multi-site and multi-role principals, however, it would be prudent to conduct a more rigorous examination to ascertain the reasons why a greater percentage of multi-site principals pursued promotions, while multi-role principals chose to exit the educational field altogether.

A total of 62 elementary schools, employing assistant principals, underwent a transition in the position of the head principal, accounting for a 21% turnover rate. Strikingly, half of these transitions resulted in departures from the educational sector entirely. Upon contrasting this data with other variables, the next prominent category within this variable is lateral turnover, which stands at 23%. While seemingly significant at an initial glance, it necessitates a more in-depth exploration to comprehend why a notable proportion of principals, despite the advantage of assistant principal support, would opt to exit the educational sector entirely.

In the sample of 446 schools based in rural districts, principal turnover was observed in 95 schools, which equates to roughly 21% - a figure aligning with the state average. However, it is noteworthy that within this turnover, 53% of principals departed from the education sector entirely, while 29.5% turned over for promotions, and only 9.5% experienced lateral transitions. Of the 111 nonrural schools experiencing turnover, the pattern slightly differs. Here, a more significant 62% of principals exited the education field, while 19% transitioned to lateral positions. This particular subsection of principal turnover warrants a more in-depth analysis. The 19% lateral movements in nonrural schools could be due to these principals operating within more crowded job markets, potentially causing interdistrict turnover driven by higher salary prospects. Alternatively, these lateral moves might be involuntary, intradistrict shifts, positioning the principal to lead a school deemed a "better fit" for their particular skill set.

Upon an examination of the data about district locale and principal turnover in multi-site or multi-role schools, several trends emerged. Rural districts experienced a total of 95 instances of principal turnover, contrasted with 111 turnovers in nonrural districts. More specifically, rural schools classified as employing "multi-site principals" accounted for 33 instances of turnover, constituting approximately 35% of the total turnover in rural schools. This statistic diverges significantly from the "nonrural multi-site" schools, where a mere 7 turnovers were identified, amounting to a relatively low turnover rate of 6%. Parallel trends were observed in "rural multi-role" schools, where 40 instances of principal turnover were recorded, representing 42% of the total turnover in rural schools. In stark contrast, "nonrural multi-role" schools demonstrated only 10 turnovers, for a 9% turnover rate. The most prominent trend emerging from this data is the substantial prevalence of principal turnover in rural districts (52%) in schools with multi-site or multi-role principals, compared to a significantly lower turnover rate in nonrural districts

(12.6%). This pronounced divergence in turnover rates raises substantial concerns, particularly for rural districts. These districts are typically situated in less densely populated regions, potentially limiting their ability to attract a sufficiently large and qualified candidate pool. This limitation could inadvertently perpetuate the allocation of principals to multi-site or multi-role capacities, possibly resulting in escalated turnover rates in the future.

Within the examination of district type, 100% of charter school turnover was within the category of the principal leaving the education sector altogether. However, this data was collected from a limited sample size of only five schools, so a broad generalization would be ill-advised. In traditional schools, principal turnover was accounted for as follows: 57% exited the education sector, 19% moved on due to promotions, 14% transitioned to equivalent roles, and the remaining 10% stepped down to roles considered lower in the hierarchy compared to the principal's position.

### **Conclusions**

Excluding "district percent of principal turnover," the initial study did not provide insight into statistically significant relationships between principal turnover and the independent variables. However, throughout the initial and follow-up analyses, key information was garnered that could shed light on important aspects and trends of principal turnover. Most notably, the study discovered there are increased rates of turnover within schools with multi-site and multi-role principals, especially when a rural school employs a multi-site or multi-role principal. These findings are parallel with current research that suggests principal turnover is caused by the increasing and evolving job complexities of the role (Gilman & Lanman-Givens, 2005). Moreover, the research identified a trend where schools and districts with the highest and lowest concentrations of economically disadvantaged students had lower turnover rates. This unique

discovery calls for further investigation to discern its cause. A noteworthy observation is that 19% of nonrural schools underwent lateral principal transitions. A more detailed examination of these transitions in nonrural schools could provide valuable insights into turnover and retention in densely populated principal job markets. Finally, the follow-up analysis yielded a significant relationship between school-level administrative per-pupil expenditures and turnover among schools with principals who left for promotions. The possible relationship between this type of turnover should be further investigated, due to the possible interrelatedness of the turnover and schools with rural and multi-site/multi-role principals.

### **Links to Prevailing Research**

The current study contributes significantly to both reinforcing and expanding upon the existing body of research on principal turnover, with a strong focus on the role of principal salary. Despite the prevalence of research on this topic, initial analysis using HLM yielded results that diverged from the existing literature, suggesting no substantial connection between compensation and turnover. This approach, similar to methodologies used by Cullen and Mazzeo (2007) and Baker et al. (2010), did not account for the influence of principals' perceived satisfaction or dissatisfaction with their compensation on turnover. However, the subsequent MLR analysis, particularly looking at lateral transitions and job promotions, could potentially strengthen the research link between compensation and turnover. For instance, the MLR analysis revealed that while 19% of nonrural principal turnovers were lateral moves, only 9.5% of rural principals made similar transitions. This disparity implies the presence that with Oklahoma schools being nearly half rural and half nonrural, principal compensation should be studied in the context of two distinct labor markets.

This study presents some intriguing statistics that challenge the current body of research on the relationship between student socioeconomic status and principal turnover rate.

Traditionally, it has been observed that schools with a higher proportion of low-income students tend to have higher principal turnover rates (Rangel, 2018; Fuller et al., 2007; Clotfelter et al., 2006). In contrast, the present study indicates that schools and districts with the lowest (0-20%) and highest (81-100%) concentrations of economically disadvantaged students have the lowest rates of principal turnover. This suggests a potential paradigm shift and indicates a need for further in-depth examination to understand the complexities of the contributing factors.

The study provided significant insight into the relationship between schools employing multi-site and multi-role principals and the rate of turnover. Previous research regarding these variables and their relationship with principal turnover was not found. Oklahoma's demographic is distinctive, with almost 15% of school districts making fiscal decisions by opting to use multi-site principals, and 21% of districts employing multi-role principals. Troublingly, these schools have turnover rates exceeding the national and state averages, at 27% and 24% respectively. A startling 39% turnover rate is observed in schools with multi-site principals who don't also hold multiple roles. It's plausible that multi-role principals may receive higher compensation than multi-site principals, as managing various roles within a single school might be perceived as more challenging than managing a single role across different schools. However, the necessity of being physically present at multiple locations may compromise a multi-site principal's ability to foster strong community bonds and drive school improvement, an issue not faced by multi-role principals in a single school.

In conclusion, the complexities of principal turnover in Oklahoma schools are influenced by myriad of factors, including compensation, student socioeconomic status, and employment

structure. The insights gained from this study challenge conventional knowledge and shed light on the divergent factors influencing principal turnover in rural and non-rural districts. The unique demographics and fiscal decisions of Oklahoma schools - particularly the employment of multi-site and multi-role principals - present new avenues for research. A deeper understanding of these phenomena is necessary to develop effective strategies to address the high rates of principal turnover, ultimately contributing to improved school performance, student outcomes, and teacher retention.

### **Motivation-Hygiene Theory in Practice**

Chapter Two delineated the theoretical framework for this investigation, providing a comprehensive exposition of Herzberg's Motivation-Hygiene Theory and its practical implementation in the context of the principalship. At an initial assessment, it seemed remarkable that none of the examined variables emerged as significant predictors of elementary principal turnover in Oklahoma schools. However, examining these findings through the lens of the theoretical framework yields potential reasons for these outcomes.

Herzberg's Motivation-Hygiene Theory (1974) offers a framework for understanding job satisfaction and dissatisfaction. Herzberg (1974) identified satisfaction agents or motivators, which are precipitated by achievement, recognition, work responsibility, the nature of the work, progression, and personal growth. Dissatisfaction agents, or hygiene factors, pertain to work conditions, including company policies, supervision, salary, and working conditions, rather than the work itself.

This study examined the relationships between sixteen independent variables and principal turnover. Arguably, all of the current study's variables can be categorized as hygiene factors as they closely align with the working conditions of the principal, rather than the work

itself. As highlighted in the ensuing table, the Motivation-Hygiene Theory proposes that enhancing the quality of hygiene factors does not increase job satisfaction but mitigates job dissatisfaction (Herzberg, Mausner, & Snyderman, 1959). The study outlined in Chapter One emphasized that a significant limitation of the study was the inability to establish causation of retention or attrition, instead focusing on the relationships between attrition and the explored variables. Given that these variables are all hygiene factors, they do not elucidate the satisfaction derived from the work itself or potential motivating factors. Moreover, as motivators and hygiene factors operate on separate planes (Kacel, Miller, & Norris, 2005), there could be various reasons for the lack of statistical significance of the variables. This study demonstrates alarming rates of principal turnover in Oklahoma elementary schools, albeit without a significant impact from the observed variables.

The *Learning Policy Institute* published a multi-issue comprehensive research report discussing principal retention and attrition, encapsulating surveys, focus groups, and literature reviews. Within these reports, Levin, Bradley, and Scott (2019) delineate broad areas for principal retention and attrition, proposing strategies to address the turnover:

*Table 5.1: Areas of Supportive Strategies for Principals*

<b>Area:</b>	<b>Supportive Strategies:</b>
Professional Learning	Preparation with robust field experiences, tailored PD, strong mentorship, and growth-fostering relationships
Working Conditions	Strong administrative teams and greater funding
Compensation	Competitive principal salaries
Decision-Making Authority	Adequate authority to meet schools' unique needs
Accountability Systems	Timely and formative assessments



The areas and supportive strategies proposed by Levin et al. (2019) have not been explored in the present study. Within the context of Levin et al.'s (2019) findings, it could be argued that Professional Learning, Decision-Making Authority, and Accountability Systems are motivators, while Working Conditions and Compensation are hygiene factors. The current study only examined compensation, which, although not found to significantly impact turnover, remains relevant for considering principal attrition. The remaining areas not covered in this study may be the hidden causal factors for principal retention and turnover in Oklahoma elementary schools. The neglect of these factors in the current study underscores the complexity of principal turnover and retention. It also highlights the necessity of a more holistic approach that considers both hygiene and motivational factors.

### **Recommendations for Future Research**

Future research into principal turnover could benefit considerably from the following suggestions:

- Conduct a longitudinal study to determine patterns over multiple years, as the current study's focus is limited to the 2021-2022 period. Furthermore, the impact of the state-mandated pay raise for certified staff, post the 2022-2023 term, could be a focal point for a follow-up cross-sectional study. This would help gauge the influence of this compensation increase on principal retention.
- Investigate the relationship between principal turnover and student achievement in Oklahoma elementary schools. This data would provide valuable insights for both policymakers and district administrators.

- Investigate the disparity between the lateral transition turnovers for nonrural and rural schools/district, and how there could be two different labor markets for principals in Oklahoma elementary schools.
- Consider a replication study focusing on secondary school principal turnover. This could provide a comparative analysis between elementary and secondary school findings, expanding its usefulness to intradistrict comparisons of elementary versus secondary principal turnover rates.
- A study that surveys principals regarding motivation and hygiene factors and the impact these factors have on their intent to turnover the position would provide greater subjective data to this study. Comparing the survey data between rural and nonrural multi-site and multi-role principals would investigate the present study's findings with more precision.
- A study that considers the principal as the unit of analysis, rather than the school, would be beneficial. This study could investigate publicly available data such as the degree level, years of experience, ethnicity, and gender of the principal.
- Lastly, it would be advantageous to conduct a study that explores the causation of a principal's decision to leave or stay. The current study only examined hygiene factors; understanding the nature of the principalship and the motivating factors within the district could offer deeper insights into principal retention and attrition. Employing qualitative and mixed methods approaches through survey methods, in addition to quantitative methods, could provide a comprehensive understanding of the motivations and dissatisfactions driving Oklahoma principals to turnover their positions.

### **Implications for Policy and Practice**

While conducting the data collection, the researcher determined there were inconsistent levels of reporting from the OSDE's published reports, when considering employee turnover and retention. For example, the researcher used the OSDE District Directory for a baseline of the principal's name and how many were employed in each district. When these data were compared with the School Personnel Report, which provides actual data regarding which people were paid for which role(s), the directory was often inaccurate. Furthermore, it is strongly recommended that the OSDE comprise causal data, by surveying current district employees on their intent to turnover, and previous employees for their reason(s) for turnover. The OSSBA often does this type of surveying of superintendents, so it would be advantageous for the OSDE to follow suit. Such measures would allow the OSDE to provide districts, researchers, and policymakers with causal data and not just topical data of principal turnover.

The study's results uncovered an intriguing pattern concerning economic disadvantage. Schools with economic disadvantage rates ranging from 21-40% and 61-80% experienced the highest principal turnover rates. Conversely, those schools at either end of the economic spectrum, featuring the highest and lowest concentrations of economically disadvantaged students, exhibited a higher rate of principal retention. It is crucial to scrutinize this finding further to ascertain whether underlying complexities exist, such as an increased level of district-provided financial support for the most impoverished schools or increased non-district-generated funding for the most affluent schools.

This research has yielded substantial data that could potentially influence policy and practice, particularly regarding district-level financial decisions. Although the study did not identify a significant relationship between fiscal decision-related variables and principal

turnover, aside from the obvious “district turnover percent” variable, important statistical evidence indicated an increase in turnover when a school district decided to assign a principal to multiple sites or roles, particularly in rural districts potentially utilizing this approach as a cost-saving measure. Given current research suggesting that the increasing complexity of the principal's role contributes to turnover (Gilman & Lanman, 2005; Tran, 2017), districts and policymakers must evaluate whether the monetary savings outweigh the potential for increased principal turnover, which can negatively impact student achievement and teacher retention (Henry & Harbatkin, 2019; Ronfeldt et al., 2013; Béteille et al., 2012).

In contrast, financial decisions allowing a principal to focus solely on leadership for a single building could enhance principal stability, leading to increased school stability and positively impacting student success and teacher retention (Beckett, 2018). Policymakers, particularly those representing rural communities in Oklahoma, should advocate for increased funding to supplement positions that support teachers, students, and principals, such as additional school counseling funding measures.

The follow-up analysis yielded a significant relationship between school-level administrative per-pupil expenditures and turnover among schools with principals who left for promotions. The possible relationship between this type of turnover should be further investigated, due to the possible interrelatedness of the turnover and schools with rural and multi-site/multi-role principals.

This study observed that principals were more likely to leave their positions for promotions as the scope of their responsibilities expanded. It is incumbent upon district leaders, researchers, and policymakers to partner with principals to delve into the reasons for this trend. This collaboration could reveal that principals might opt to remain in their current roles if they

received more financial support to delegate non-principal duties, potentially enabling schools and districts to retain principals for the 5 to 7-year period associated with significant change (Mascall & Leithwood, 2010). Although the current study did not investigate this facet of principal turnover, it can be concluded that principals may seek promotions to boost their compensation, particularly if they are already serving in multiple sites or roles. Given the evidence that principals can have the most direct impact on school and district goal attainment (Seashore et al., 2010; Partlow & Ridenour, 2008; Fuller et al., 2007), practitioners and policymakers should endeavor to explore policies, practices, and programs that could enhance job satisfaction, reduce aspects of job dissatisfaction, and increase principal retention, thereby improving teaching, learning, and the development of students and staff.

### **Summary**

Principals shoulder a broad spectrum of responsibilities that are both immense and dynamic, encompassing roles such as curriculum and instruction leader, behavior interventionist, culture crafter, human resources leader, financial steward, and operational leader. These wide-ranging responsibilities underscore the critical role that principals play in various aspects of school and educational enhancement, significantly affecting facets such as teacher retention, student performance, and graduation rates (Levin et al., 2020). The ultimate objective of a school district is to facilitate the teaching, learning, and development of students and staff, while judiciously managing fiscal resources. It is conceivable that the principal, given their extensive responsibilities, exerts the most direct influence on the attainment of these overarching goals (Seashore et al., 2010; Partlow & Ridenour, 2008; Fuller et al., 2007). There is an ongoing problem with principal attrition across school districts in Oklahoma, an issue that imposes financial burdens and substantially affects teacher retention, thereby influencing student

achievement. The purpose of this study was to explore if there are fiscal decisions and characteristics at the school and district levels that impact principal turnover.

Although the initial study only found a statistically significant relationship between principal turnover and the district percentage of elementary principal turnover, there were important statistical findings that added to the knowledge gap of principal turnover research. The initial study using HLM, and subsequent follow-up analysis using MLR, concluded that the following were substantial fiscal decision and demographic characteristic findings and should be further investigated:

- Increased rates of turnover within schools that employ multi-site principals.
- Increased rates of turnover within schools that employ multi-role principals.
- Increased rates of turnover in rural schools, especially when the rural school employs a multi-site or multi-role principal.
- Increased rates of lateral turnover in nonrural schools.
- Increased rates of retention in schools with the highest and lowest concentration of students considered economically disadvantaged.
- The follow-up analysis yielded a significant relationship between school-level administrative per-pupil expenditures and turnover among schools with principals who left for promotions.

Despite the study's unexpected results, it did provide critical insights that can spur further exploration into policies, programs, and practices aimed at mitigating the principal turnover issue that is plaguing Oklahoma's elementary schools. To put it into perspective, these schools are witnessing a high turnover rate of principals, a factor that is hurting both students and teachers. In response to this, the Oklahoma State Department of Education, lawmakers, and school

districts, who have been instrumental in executing strategies to retain teachers, need to devise comparable measures for principal retention as well. The rationale is clear: With stable leadership in place, the ideal of fostering student achievement becomes more attainable. If Oklahoma can support and retain quality principals our overall goal of student achievement has the best possible chance to flourish.

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