Capstone Projects   **Graduate School**

Spring 5-13-2023

Addressing the Kentucky (9-12) High School Teacher Shortage Through Correlations of Teacher Turnover and Working Conditions

Ryan Cowsert

Follow this and additional works at: https://opensiuc.lib.siu.edu/gs_caps

ADDRESSING THE KENTUCKY (9-12) HIGH SCHOOL TEACHER SHORTAGE
THROUGH CORRELATIONS OF TEACHER TURNOVER AND WORKING CONDITIONS

by

Ryan Andrew Cowsert

B.S., Southern Illinois University, 2010
M.S., Southern Illinois University, 2019

A Capstone Project
Submitted in Partial Fulfillment of the Requirements for the
Doctor of Education

School of Education
in the Graduate School
Southern Illinois University Carbondale
May 2023

CAPSTONE PROJECT APPROVAL

ADDRESSING THE KENTUCKY (9-12) HIGH SCHOOL TEACHER SHORTAGE
THROUGH CORRELATIONS OF TEACHER TURNOVER AND WORKING CONDITIONS

by

Ryan Andrew Cowsert

A Capstone Project Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Doctor of Education

in the field of Educational Administration

Approved by:

Dr. William Bradley Colwell, Chair

Dr. Gary Kelly

Dr. David Skocy

Dr. Brian Chapman

Graduate School
Southern Illinois University Carbondale
March 28, 2023

AN ABSTRACT OF THE CAPSTONE PROJECT OF

Ryan Andrew Cowsert, for the Doctor of Education degree in Educational Administration, presented on March 28, 2023, at Southern Illinois University Carbondale.

TITLE: ADDRESSING THE KENTUCKY (9-12) HIGH SCHOOL TEACHER SHORTAGE THROUGH CORRELATIONS OF TEACHER TURNOVER AND WORKING CONDITIONS

MAJOR PROFESSOR: Dr. William Bradley Colwell

Our country is currently experiencing a nationwide teacher shortage that continues to grow as more teachers leave the profession than join it. According to a recent study, 55% of the nation's teachers are considering leaving the profession. Specifically, in Kentucky, 72% are considered at risk of leaving the profession. National teaching data suggest poor working conditions are the primary reason for teacher turnover (Carver-Thomas & Darling-Hammond, 2017). Therefore, can it be inferred that schools with better working conditions experience less turnover than schools with poorer working conditions? This study was designed to determine the magnitude of correlations between teacher turnover and working conditions in an effort to discover the effect working conditions has on teacher turnover.

The results showed that working conditions do matter when it comes to teacher turnover, but the overall correlations were moderate at best. Improving working conditions will help keep teachers in the classroom; however, this alone will not end the teacher shortage. More research needs to be conducted to identify other reasons why teachers are leaving the classroom.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Introduction of Study

A recent report from the American Association of Colleges for Teacher Education (AACTE) showed that the number of teacher education graduates peaked at more than 200,000 per year in the 1970s to fewer than 90,000 awarded in 2019 ("Colleges of Education," 2022). In the 2017-2018 school year, the country was estimated to have a shortage of over 110,000 public school teachers (Sutcher, Darling-Hammond, & Carver Thomas, 2016). These data alone show that colleges are not producing enough teachers, and the teacher shortage continues to grow at the "pipeline". The teacher pipeline is the supply of new teachers entering the field, prepared through both traditional and alternative programs (Bankert, 2018).

No doubt the recent pandemic has exacerbated the national teacher shortage, but this shortage has been years in the making (Barnes, 2022). According to the most recent National Center for Education Statistics (NCES) data (2013), there was a total teacher turnover rate of 16% in K-12 public schools. Specifically, the Economic Policy Institute (EPI) noted that in 2012, schools were already looking for teachers – finding itself short approximately 20,000 teachers ("Americas's Teacher Shortage," 2019).

This shortage can only be fixed by addressing two variables: (1) to remedy the decreasing teacher pipeline, and/or (2) to decrease teacher turnover. Thus far, state legislatures have prioritized addressing the teacher pipeline variable, since those solutions provide immediate relief to the teacher shortage. For example, legislatures have lowered certification fees, offered tuition waivers, and provided alternative certification programs as quick ways to address the pipeline (Carver-Thomas & Darling-Hammond, 2017). But, regardless of how teachers come

into the profession, they must be retained once they are in the classroom. Since most proposed legislative amendments have focused on increasing the pipeline, the objective of this research will be on the lesser-utilized variable of decreasing teacher turnover.

According to Price (1989), employee turnover is divided into attrition and migration. Consequently, "teacher turnover" is the term used to describe the combination of both teacher migration and teacher attrition. "Migration" refers to those teachers who switch teaching positions, whether it be in the same district or a different district, while "attrition" describes those teachers who leave the profession altogether.

Sutcher, Darling-Hammond, and Carver-Thomas (2016) have identified four main factors that drive the teacher shortage: A decline in enrollment for teacher preparation programs, a return to pre-recession pupil-teacher ratios, increased student enrollment, and high teacher attrition. The most significant of these factors affecting the teacher shortage is the teacher attrition rate. In 2013, teacher attrition was estimated to be nearly 8% of the annual workforce (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Some attrition is due to retirement, but approximately 66% of teachers leave for other reasons, mostly due to being dissatisfied with the teaching profession. According to the National Center for Educational Statistics Teacher Follow-up Survey (2012-2013), reasons teachers are dissatisfied and leaving include poor salary, students discipline problems, poor administrative support, and poor student motivation.

The onset of COVID-19 has only made tenuous attrition data worse. For instance, according to a National Education Association (NEA) survey conducted in January 2022, over one-half of all teachers are considering leaving the profession earlier than planned. Specifically, fifty-five percent of teachers are thinking about an early exit, which is up eighteen percent from those that had similar feelings in August 2021.

These phenomena were most recently in national news when in June 2022, the Education Commissioner from the Commonwealth of Kentucky, Dr. Jason Glass, stated that approximately 72% of Kentucky's educators are considered "at risk" of leaving the teaching profession. Dr. Glass explained to lawmakers, in regards to the Commonwealth's teacher shortage, that out of Kentucky's 42,525 full-time teachers, 30,801 are "at risk" of leaving the profession, of which 21,448 have less than five years teaching experience.

Problem Statement/Purpose of the Study

National teaching data suggest poor working conditions are the primary reason for teacher turnover (Carver-Thomas & Darling-Hammond, 2017). Therefore, can it be surmised that schools with better working conditions experience less turnover than schools with poorer working conditions? Therefore, the purpose of this study is to determine the correlation between teacher turnover and working conditions.

Research Questions

1. What is the correlation between teachers' perception of work conditions and teacher turnover in high schools (9-12) in the Commonwealth of Kentucky?

    A. What is the correlation between teachers' perception of working conditions and teacher turnover in rural and urban schools in Kentucky?

    B. What effect does student enrollment have on the correlation between teachers' perception of working conditions and teacher turnover in Kentucky?

    C. What effect does expenditure per student have on the correlation between teachers' perception of working conditions and teacher turnover in Kentucky?

Research Design

A quantitative design is the most appropriate means by which to answer the research

question. The researcher will conduct a statistical analysis of secondary data sets to determine if there is a correlation between teacher working conditions and teacher turnover rate in Kentucky (9-12) high schools.

The researcher will create a spreadsheet that includes data gathered from the 2020-2021 Kentucky Teacher Turnover Data Spreadsheet and the 2020 Impact Kentucky Working Conditions Survey. The researcher will analyze these data to determine if there is a correlation between the turnover rate and working conditions.

Significance of Study

This study is significant because it is the first in the Commonwealth of Kentucky that will find the magnitude of correlation between turnover percentage rates and a variety of working conditions. This is important, because unlike previous studies that identify whether or not there is a correlation between turnover and a specific work condition, this study will allow a multitude of working conditions to be compared to each other in an effort to identify which working conditions have the greatest degree of correlation in Kentucky. The information gathered from this study will potentially identify specific work conditions that, once addressed, could lower the teacher turnover rate. Lessening the teacher turnover rate will lower both the teacher attrition and migration rates, resulting in a decrease in the shortage of teachers in the Commonwealth of Kentucky.

Positionality

I am a middle school teacher in rural Kentucky. During my 11 years in the classroom, I have seen multiple teachers leave to teach at different schools as well as to pursue careers outside of education. I have always been curious as to what motivated those teachers' decisions. Could they have left because of the work conditions in the school? This question is the driving force

behind my research as I examine the relationship between teacher turnover and school working conditions.

Limitations

The Commonwealth of Kentucky collects and monitors teacher turnover data; however, they do not separate attrition and migration. Based on the national average for turnover being 16% and the national average of attrition being 8%, the researcher will presume that attrition and migration are split equally.

The 2020 Impact Kentucky Working Conditions Survey was conducted prior to the Covid-19 pandemic. However, as Covid-19 led to the shutdown of schools in March 2020, there is no way to know how many teachers left the field of education due to Covid-19, thus impacting the turnover data.

The Commonwealth of Kentucky has 206 public (9-12) high schools. The researcher will be utilizing the turnover data and working conditions data from each of these schools for this study. If for any reason the turnover data was incorrectly reported, or a school did not complete the work conditions survey in the year 2020, those high schools will be omitted from the study. Schools that are not classified as (9-12) high schools will be omitted from the study.

Delimitations

A multitude of variables exist that could be considered "working conditions." However, this study will be limited to the nine variables that are on the 2020 Impact Kentucky Working Conditions Survey.

Definitions

Expenditure Per Student- "Current expenditures made divided by the total primary through grade 12 end-of-year average daily attendance in the school or district"

("Spending Per Student," 2022).

Student Enrollment- "Number of students enrolled" ("Student Enrollment", 2022).

Teacher Attrition- teachers that leave their positions and the teacher profession (Price, 1989).

Teacher Migration- teachers that leave their positions to seek a different teaching position in the same district or different district (Price, 1989).

Teacher Pipeline- the supply of new teachers entering the field, prepared through both traditional and alternative programs (Bankert, 2018).

Teacher Retention- the ability to reduce teacher mobility and provide more stable learning conditions in schools ("What is Teacher Retention," 2022).

Teacher Shortage- "the inability to staff vacancies at current wages with individuals qualified to teach in the fields needed,"(Sutcher, Darling-Hammond, & Carver-Thomas, 2016).

Teacher Turnover- "The rate at which personnel whose primary function is classroom teaching leave or separate from the district, or change from their classroom teaching to another position from one school year to another, expressed as a percentage. This rate is determined by comparing the classroom teachers reported in the current year against those reported in the previous year" (Colorado Department of Education).

Working Conditions- School working conditions are generally defined as those elements of teachers' workplaces unrelated to their pay or benefits and encompass a variety of aspects of schools, including their physical environments; organizational patterns of authority, supervision, and interaction among employees; employees' characteristics, roles, and statuses; the sense of equity and voice among the staff; the strength and

supportiveness of the school culture; teachers' opportunities for learning and growth; and

educational aspects of schools such as curricula and assessments (Johnson, 2006).

Summary and Organization of the Remainder of the Study

The rest of the study will include an in-depth look at the literature behind teacher

working conditions, teacher turnover, teacher retention, and teacher shortages. After exploring

the literature, the researcher will describe the research project. The researcher will discuss

reasons behind using quantitative methods in an effort to find a correlation between teacher

working conditions and teacher turnover. The researcher will discuss the methods that were used

by the state to gather the rough data that I analyzed for my project. The researcher will identify

any correlations or a lack of correlation in the data sets that will either support or refute my

hypothesis.

CHAPTER 2

LITERATURE REVIEW

In the 2017-2018 school year, the United States was estimated to have a shortage of over 110,000 public school teachers (Sutcher, Darling-Hammond, & Carver Thomas, 2016). This shortage was not only because of a decline in enrollment, but also due to the high rate of turnover in schools. According to the most recent National Center for Education Statistics (NCES) data (2013), there was a total teacher turnover rate of 16%.

The teacher shortage can only be fixed by addressing two variables: (1) to remedy the decreasing teacher pipeline, and/or (2) to decrease teacher turnover. Thus far, state legislatures have prioritized addressing the teacher pipeline variable, since those solutions provide immediate relief to the teacher shortage. For example, legislatures have lowered certification fees, offered tuition waivers, and provided alternative certification programs as quick ways to address the pipeline (Carver-Thomas & Darling-Hammond, 2017). But, regardless of how teachers come into the profession, they must be retained once they are in the classroom.

According to Price (1989), employee turnover is divided into attrition and migration. Consequently, "teacher turnover" is the term used to describe the combination of both teacher migration and teacher attrition. "Migration" refers to those teachers who switch teaching positions, whether it be in the same district or a different district, while "attrition" describes those teachers who leave the profession altogether.

Sutcher, Darling-Hammond, and Carver-Thomas (2016) have identified four main factors that drive the teacher shortage: A decline in enrollment for teacher preparation programs, a return to pre-recession pupil-teacher ratios, increased student enrollment, and high teacher attrition. The most significant of these factors affecting the teacher shortage is the teacher

attrition rate. Specifically, in 2013, teacher attrition was estimated to be nearly 8% of the annual workforce (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). However, the same researchers suggested that reducing teacher attrition by half – to the same 4% attrition seen by Finland, Singapore, and Ontario, Canada – would essentially eliminate the teacher shortage.

The following literature review will explore teacher turnover in an effort to identify reasons or characteristics that cause teachers to either stay in or leave the profession. In particular, I will be exploring how "working conditions" have impacted a teacher's decision to stay or leave. I will also explore policies that have been put in place to negate turnover.

Teacher Turnover

Teaching has one of the highest rates of turnover among all professions (Harrision, 2006). The annual turnover rate is about 16%, and it is evenly split between those that migrate within and to other schools and those who leave the teaching profession. (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Hammer and Williams (2005) cited that those leaving the profession of teaching exceed those entering the profession by 23%. According to Richard Ingersoll (2003), the United States suffers from a turnover crisis. Ingersoll's (2001a) research showed evidence that the shortage of teachers is not due to retirement, but rather from teachers moving schools or exiting the profession to pursue other career options outside of education.

Various incentives, such as mentoring, have been put into place to attract and retain quality teachers; however, 30%-50% are still leaving the profession within the first five years of their teaching careers (Darling Hammond, 1998). Love and Kritsonis (2008) cited that recent studies showed that it costs local school districts in the U.S. over a billion dollars a year because of teacher turnover. Kimball and Nink (2006) concluded that individual, local school districts can realize hundreds of thousands of dollars in savings each year by reducing teacher turnover.

Policies to Reduce Teacher Turnover (Financial Incentives)

Research revealed that it is more effective to find ways to retain good teachers than to focus on hiring new ones. Some suggestions to reduce teacher turnover have included improving training programs, implementing recruitment plans, and raising compensation (Cochran-Smith, 2004). Ingersoll (2001b) focused on the financial component of recruitment when he noted that additional efforts might include providing signing bonuses, student loan forgiveness, housing assistance, and tuition reimbursement. Consequently, it is not surprising that researchers have primarily focused on the impact of financial incentives to retain the teacher workforce. For example, Stinebricker (1998) found that there was a positive relationship between beginning teacher salaries and their willingness to continue to teach. Research has shown that as teachers' salaries increase, attrition decreases (Brewer, 1996). Eight years later, Hanuchek found that an unfortunate outcome of higher salaries was the increased chance a teacher switches schools to follow the money (Hanushek et al., 2004).

Over the last 25 years, local districts have utilized various financial incentive models in an effort to retain quality teachers, namely the use of merit pay and career ladders. Merit pay is a bonus paid to teachers based upon student performance or outstanding accomplishment (Kelly, 1997). Kelly concluded that merit pay is positively correlated with student achievement. However, Ballou and Podgursky (1997) collected data that show that merit pay leads to lower staff morale and is often quickly abandoned due to cost factors.

During this same time, Shen (1997) suggested that teacher career ladders, which put the teachers into leadership roles, promote resiliency. Under a career ladder plan, teachers receive additional pay based on advanced degrees, or classifications such as being board certified. Teachers with these credentials assume roles such as mentoring, teaching staff

professional development, or curriculum development. Barth (1999) agreed with Shen that when teachers are in positions of leadership their feeling of being isolated is reduced, and their personal and professional satisfaction increases. Unfortunately, just like merit pay, the career ladder plan was also short lived due to the cost factor (Brandt, 1990).

Preparing for the Profession

Darling-Hammond (2001) stated that the dominant policy response to teacher turnover has been to increase the supply (pipeline) through recruitment efforts. However, researchers and seasoned educators have a growing concern that loosened recruitment policies to reduce teacher turnover have actually lowered the standards of the teaching profession, going so far as to encourage aspiring educators to pursue alternative routes to teacher certification (Darling-Hammond, 1999).

Darling-Hammond (2001) concluded that traditional training of teachers has been correlated with lower attrition rates. In her study, she examined two groups of teachers. One group was traditionally trained and certified, and the other group went through alternative certification programs. Ninety percent of graduates that were traditionally trained received teaching jobs right after graduation, and after several years of teaching, 90% of the group were still employed as teachers. Of those that received alternative route certification, 70% had quit the teaching profession after several years. Darling-Hammond drew the conclusion that although alternative route teachers may feel compelled to teach, they lack the tools to make them feel competent and effective at their work, and they leave the profession.

Other researchers focused on initiatives other than teacher recruitment to decrease teacher turnover. Specifically, Ingersoll (2001b) believed that lessening teacher stress is the most effective way to reduce turnover. He suggested the focus should be on stress reduction

programs, management programs, teacher induction programs, teacher mentoring programs, and professional development opportunities. Hancock (1998) defined stress as being a persons' perception that demands are greater than his or her ability to satisfy them. Shen (1997) stated that all newcomers to an organization experience some type of stress and anxiety. Reactions to stress can be feelings of fear, depression, high blood pressure, sweating, and withdrawal from a situation.

Bernshausen and Cunningham (2001) suggested teaching resilience to teachers that are experiencing stress. They also cited that teachers that do not learn resilience cannot sustain their enthusiasm and commitment over time and will eventually leave the profession. They also found that factors such as lack of support from administrators and not being involved in the decision making process can lead to experienced teachers leaving the profession.

Assigning a mentor to a new teacher is another way to reduce teacher stress. Studies have concluded that when new teachers are paired with a mentor, and go through a structured mentor program, they are more likely to stay in the teaching profession (Darling-Hammond, 2003). Earlier, Darling-Hammond (1999) cited that school districts that had a well-structured mentoring program were able to reduce teacher attrition rates from as high as 30 % down to as low as 5%.

Teacher Turnover and Student Achievement

Teacher quality is the single most critical factor in improving student achievement (Hill & Barth, 2004). Sanders et al. (1996) found that differences in teacher effectiveness are a strong determinant of differences in student learning. Lee et al., however, notes that it takes years to develop a skilled teacher (1995). Nine years later, Rockoff concurred when he determined that in schools with a significant teacher turnover, students are more likely to have teachers that are

inexperienced and less effective (Rockoff, 2004). Stated another way, Laczko-Kerr and Berliner (2002) found that students taught by a fully qualified and certified teacher outperformed students on standardized tests who were taught by teachers holding emergency, temporary, and provisional certificates.

Teacher Turnover and Student Characteristics

Student characteristics have also played a role in a teacher's desire to change schools or leave the profession. These include lack of home support, high poverty, and student disciplinary issues.

Elfers, Plecki, and Knapp (2007) found that 35% of teachers they surveyed believed that students' lack of support from home is the primary reason teachers left the district. In high poverty schools, this percentage goes up to 62%. This study also found that 29% of teachers cite student disciplinary issues as the reason they left. In high poverty schools, this percentage rises to 53%. Earlier, Ingersoll (2001c) established there were significant correlations between the level of discipline problems reported in schools and teacher turnover rate. Gonzalez et al. (2008) reaffirmed the role of student discipline as a factor when he found it as one of the top three reasons teachers left the profession.

Teacher Turnover and Characteristics of Teachers

Self-efficacy is a characteristic that leads teachers to prematurely leave the profession. Teacher self-efficacy refers to a teacher's own confidence in their instructional abilities and classroom management skills, as well as their ability to have a positive impact on learning (Epstein & Willhite, 2015). Higher levels of self-efficacy lead to more confidence and the teachers' ability to perform (Robbins & Judge, 2013). When situations are too difficult, people with low self-efficacy are more likely to quit, whereas those with high self-efficacy are going to

try harder to get through the challenge (Robbins & Judge, 2013). Bandura (1994) cited that people with high self-efficacy set high goals for themselves and are fully committed to achieving them.

Research has shown that an essential aspect of self-efficacy is type of teacher preparation. For example, Johnson and Birkeland (2002) found that teachers that came to the profession by an alternative route were more likely to leave than those that have traditional training and certifications. Lewis-Spector (2016) noted that when teachers are inadequately prepared, it could lower their sense of self-efficacy. Fox and Peters (2013) have linked self-efficacy to a teacher's ability to motivate students and implement classroom management techniques. Low self-efficacy can lead to job dissatisfaction (Zhang & Zeller, 2016), which can lead to teachers leaving as they lack feelings of personal satisfaction and achievement (Knobloch, 2001). If a teacher feels that they have been inadequately prepared for the task of teaching, they may be unmotivated to teach (Robbins & Judge, 2013).

Similar to self-efficacy is a teacher's self-motivation. Motivation is the internal and external forces that drive a person to move toward their goals (Hodgetts & Hegar, 2008). Daft (2003) claimed that motivation is one of the primary intrinsic factors that influences behavior and productivity. He went on to add that employee motivation is a decisive factor in determining success. Folkes (2014) stated that motivation is determined by the expectancy of success. Therefore, if an individual expects success, they are more likely to achieve it. Those that do not believe they are going to be successful are less motivated to try (Folkes, 2014).

Lastly, research revealed two additional variables that could impact teacher turnover: subject matter taught as well as years of experience. Ingersoll's research showed that when analyzing the general teaching population that teacher turnover is highest in the fields of math,

science, and special education (2001c). Interestingly, though, he noted that salary was not a statistically significant predictor when determining overall teacher turnover. However, Brewer emphasized that when only math and science teachers were asked about the most important factor that would help in retention, the majority said higher salaries (Brewer, 1996). Consequently, it appears that math and science teachers have the opportunity to command a larger salary if they move to the private sector.

Years of experience also played a factor in teacher turnover rates. Specifically, Ingersoll (2018) found that 44% of teachers leave within the first five years, with compensation being a key in a teacher's decision to leave within that five-year window (Stinebricker, 1998). Murnane and Olsen (1990), as well as Shen (1997), cited evidence that teachers that work in states with higher compensation rates teach longer. Looking at additional factors, Boe (1997) reported that teacher turnover rate decreases as the following variables increase: age, number of dependent children, level of certification, number of years since the last degree was earned, teaching experience, and salary level.

Teacher Turnover and Work Environment

Studies have shown that school-related factors are mostly responsible for a teacher's decision to change schools or leave the profession. Ingersoll (2001b) cited lack of collegial and administrative support, lack of teacher preparation, lack of instructional materials, lack of teacher autonomy, and lack of teacher influence in the decision making process have all attributed to teacher turnover. Bernhausen and Cunningham (2001) concluded that unreasonable teaching assignments, lack of professional development opportunities, inability to handle stress, lack of management skills, and inadequate allocation of time as reasons for teacher migration. Ingersoll (2001b) also stated that high levels of student misbehavior and student disinterest in school also

lead to teachers leaving.

Teachers and administrators are more likely to stay at their current school when they have positive perceptions about their working conditions (Elfers Plecki, & Knapp, 2006). In this same study, the researchers determined that teachers remain at their current school when there is stability in their teaching assignment, they get along with colleagues, like the school location, like the school climate, and get support from administrators when dealing with parents. On the other hand, both teachers and administrators are more likely to leave when they have negative perceptions of the working conditions. The amount of respect and trust between administrators and teachers also impacts teacher turnover (Hirsch & Emerick, 2007). Darling-Hammond (1998) concluded that teachers having large classes and a lack of participation in a teacher-mentor program have contributed to teacher migration and overall turnover.

Certo and Fox (2002) determined that the factors most related to job dissatisfaction and possible attrition are: (a) the amount of time administrators spend visiting the classroom; (b) whether or not administrators listened to teachers' needs and opinions; (c) availability of professional development; (d) availability of resources and school supplies; (e) whether or not children with special needs are understood and effectively placed and educated; (f) consistency and coherency of teacher placement practices; (g) timely meetings that are run effectively; (h) scheduling issues and workload concerns; (i) class size; (j) standardized test pressures; (k) lack of parental support; and (l) discipline practices and students attitudes. McElroy (2005) determined that the most important factors that led to job satisfaction in descending order were the ability to spend time working with students and to find time for personal growth, being involved in the schools decision making process, having a supportive administrator, and having the opportunity for professional development.

Districts with large populations of high poverty pupils impact teacher retention rates. For example, Krieg (2006) reported that teachers would more likely leave urban schools than rural schools, while Smith and Ingersoll (2004) found that teachers are more likely to leave when there is a large population of high poverty students. Nelson (2004) cited that a high-needs school is one that has at least 20% of the students' families living below the poverty line. Schools with high poverty students have a teacher turnover rate that is 50% higher than in low poverty communities (Ingersoll, 2001c). To assist with retention in these districts, Holt and Garcia (2005) concluded that teachers entering high-risk schools, whether it be urban or rural, need to receive specialized training to prepare them for the challenges that disadvantaged schools endure.

Ingersoll (2001c) found that schools with a high level of teacher input in the decision-making process have a lower turnover rate. Pastor and Erlandson (1982) cited that teachers desire to participate in decision-making, be valued, be challenged, and have professional growth opportunities.

Futernick (2007) cited that teachers leave the system for reasons such as too little planning time, not enough textbooks, and lack of administrative support. Ingersoll (2003) explained that teachers leave the profession due to being dissatisfied with low salaries, lack of administrative support, lack of student motivation, student discipline problems, and the lack of teacher influence over decision-making. Certo and Fox (2002) noted that lack of administrative support was the top reason teachers gave for leaving. Stressful schedules and salary were the second and third reasons teachers gave for leaving.

Teacher Turnover and School Administration

Ingersoll (2001c) defined administrator support as an index of the degree of assistance administrators provide all the teachers on the school staff. According to Lukens et al. (2004),

38% of teachers say that they left a school system primarily because of a lack of administrative support. The remaining studies are a summation of the research showing how school leadership/administration impact a teacher's decision to leave the school. In 2002, Barnett found that having effective leadership is the most important working condition when it comes to teacher retention, and in that same year, Eggen (2002) concluded that administrative support was the primary issue in teacher attrition.

Three years later, in 2005, Hirsch reported that more than one-quarter of teachers said that leadership is the most crucial working condition in making their decision about whether to stay at a school or not (2005). Two years later, he and his team (2007) found that teachers that have positive perceptions about their working conditions are more likely to stay at their school than teachers who have negative perceptions of their work conditions. Then, in 2008, Gonzalez et al. concluded that administration was one of the top reasons that teachers cited on why they left the profession (2008).

Summary

As the teacher shortage continues to grow, it has become vital to examine not only how to attract teachers to the profession, but to retain the ones that are currently in the classroom. The literature review has examined suggested policies that aim to curb the rate at which teachers leave the profession. It has also examined characteristics of teachers, students, administrators, and working conditions that have been correlated with teacher turnover.

To some extent, it can be argued that each of these is really a subset of overall working conditions. Are there other working conditions, other than the ones in the review, that also have a high correlation with teacher turnover? The remaining chapters of the dissertation will explore that very question as I seek to identify other working condition factors that could be reasons

teachers are leaving the profession.

CHAPTER 3

METHODOLOGY

Introduction

The United States has a teacher shortage crisis that has been years in the making. This shortage can only be fixed by addressing two variables: (1) remedy the decreasing teacher pipeline, and/or (2) decrease teacher turnover. Thus far, state legislatures have prioritized addressing the teacher pipeline variable, since those solutions provide immediate relief to the teacher shortage. For example, legislatures have lowered certification fees, offered tuition waivers, and provided alternative certification programs as quick ways to address the pipeline (Carver-Thomas & Darling-Hammond, 2017). But regardless of how teachers come into the profession, they must be retained once they are in the classroom. Since most proposed legislative amendments have focused on increasing the pipeline, the objective of this research will be on the lesser-utilized variable of decreasing teacher turnover.

National teaching data suggest poor working conditions are the primary reason for teacher turnover (Carver-Thomas & Darling-Hammond, 2017). Therefore, can it be surmised that schools with better working conditions experience less turnover than schools with poorer working conditions? Therefore, the purpose of this study is to determine if improving teacher working conditions would help reduce teacher turnover rate.

Research Question

This study will attempt to provide answers to the following research questions:

1. What is the correlation between teachers' perception of working conditions and teacher turnover in high schools (9-12) in the Commonwealth of Kentucky?

   A. What is the correlation between teachers' perception of working conditions and

teacher turnover in rural and urban schools in Kentucky?

B. What effect does student enrollment have on the correlation between teachers'

perception of working conditions and teacher turnover in Kentucky?

C. What effect does expenditure per student have on the correlation between teachers'

perception of working conditions and teacher turnover in Kentucky?

Research Design

Gall, Gall, and Borg (2003) stated that researchers make different epistemological

assumptions about the nature of scientific knowledge and the methods used to acquire

it. Methods researchers use will either be a positivist research method or a postpositivist

research method. Positivism and postpositivism often go by another name in the field of

research. They are more often referred to as quantitative and qualitative research. As positivist

research assumes features of the social environment form an independent reality that remains

constant across time and settings, a positivist researcher gains new knowledge by collecting

numerical data and analyzing that data. Hence, the term quantitative is used to describe this type

of research. On the contrary, postpositivist research assumes features of the social environment

are formed by the interpretations of the individual conducting the research. For this reason,

postpositivist researchers gain new knowledge through verbal data such as case studies and

interviews. Hence, the term qualitative is used to describe this type of research.

According to Biddle and Anderson (1986), it is not appropriate to compare the

effectiveness of quantitative and qualitative research, as each has different purposes. Gall, Gall,

and Borg (2003) stated that qualitative research is best used to discover themes and relationships,

and quantitative research is best used to validate these discoveries. However, Park and Park

(2016) argued that only after identifying a problem and studying the current literature on that

problem, can one select between quantitative or qualitative research to answer the proposed research questions.

Qualitative Research

Qualitative research is a process of analyzing non-numerical data, such as language. This type of research is often used to understand how an individual gives meaning to their social reality. Types of qualitative data include audio recordings, photographs, video, text, and open ended interviews and questionnaires. According to Lowhorn (2007), qualitative research describes an event in its natural setting. It is a way to look at life as it is lived in an attempt to explain the event being studied. Instead of providing a broad view of a phenomenon that is generalized to a population, qualitative research attempts to explain a current situation and only describes the situation for the group that is being studied. The goal is to arrive at a theory that explains the observed behavior of the group being studied. Rather than designing an experiment and artificially controlling the variables, qualitative researchers use methods to study the participants.

Quantitative Research

Quantitative research is a strategy that allows researchers to numerically represent the data collected which then will be analyzed. This type of research is used to develop mathematical models, theories, and hypotheses. The designs most often utilized when conducting quantitative research are descriptive, causal-comparative, experimental, and correlational (Bryman, 2012).

Descriptive design is used when the purpose is to create a detailed description of a phenomenon. Descriptive studies are often referred to as survey research, as it primarily uses statistical data when measuring variables. Terms such as mean, median, and mode will be used

to measure the central tendency of the variables, while terms such as standard deviation, variance, and range will be used to measure the variability. Other forms of descriptive methods include questionnaires, test scores, attitude scales, and classroom observation instruments.

The second quantitative research design is causal-comparative. This type of design aims to explain the cause of phenomena through the examination of cause-and-effect relationships. The cause is the independent variable, and the effect is the dependent variable. The researcher will examine a sample population where the independent variable is present, and then see the effect that occurs.

In most causal-comparative studies, researchers will compare the mean scores of two samples using the *t*-test. This method is only used when only one variable is in question. When testing more than one variable, a multivariate analysis of variance is used to determine whether the groups differ on more than one dependent variable. Standard deviation and variance are two statistics that are used to describe this variability of scores.

The third type of research design is experimental. Experimental studies have the greatest amount of control and are often referred to as the "gold standard" of quantitative research (Shields & Smyth, 2016). When using experimental design, there will be a random assignment of participants into groups. There must be a control group to compare. There will be researcher-controlled manipulation of the dependent variable. The dependent variable is the intervention that is being tested. Everyone is randomly assigned to ensure that both the test group and control group are equivalent.

The last type of quantitative design is correlational research. According to Bloomfield and Fisher (2019), correlational research is used to determine if two or more variables are related, and if they are related, what is the nature of the relationship. It is similar to descriptive

research in that the variables that are investigated are not manipulated, nor does the study

determine cause and effect. According to Shields and Smyth (2016), correlational studies are

used to describe relationships or to test theoretical models of relationships. Findings from these

studies will have a positive correlation, negative correlation, or no correlation.

A positive correlation is a relationship in which both variables increase or decrease at the

same time. A negative correlation is a relationship where one variable increases while the other

decreases. No correlation is used to describe a scenario where no relationship exists between the

variables.

The correlation coefficient is a statistical value that is given to explain correlational

studies. This value goes from +1 to -1. The closer the value is to +1, the stronger the positive

correlation. The closer the value is to -1, the stronger the negative correlation. A correlation

coefficient of 0, or close to it, is considered to have no correlation (Fisher & Fethney, 2016).

Given the proposed research question and the above descriptions of the different types of

research design, it is appropriate for the researcher to select a quantitative design as he seeks to

identify the correlation between teacher turnover rate and teacher working conditions.

Methodology

Since the researcher is trying to determine the relationship between teacher turnover and

working conditions, it is necessary that he use correlational research. In this study, the

researcher will be manipulating preexisting statistical data using computational techniques. After

analyzing these secondary data sets, the researcher will make his own spreadsheet that contains

information from the documents. This spreadsheet will then be used to perform a Pearson

correlation comparing the turnover percentage rate to each of the nine variables on the working

condition survey. The Pearson correlation coefficient is a measure of linear correlation between

two sets of data. It is the ratio between the covariance of the two variables and the product of their standard deviations ("Correlation Coefficient", 2022). The researcher will use the following ranges, from the Political Science Department at Quinnipiac University, to determine the magnitude of correlation (Correlation Coefficients).

Range of Correlation Coefficient Values

0.70 to 1.00 Very Strong Positive Relationship

0.40 to 0.69 Strong Positive Relationship

0.30 to 0.39 Moderate Positive Relationship

0.20 to 0.29 Weak Positive Relationship

0.01 to 0.19 Negligible Relationship

0 No Relationship

-0.01 to -0.19 Negligible Relationship

-0.20 to -0.29 Weak Negative Relationship

-0.30 to -0.39 Moderate Negative Relationship

-0.40 to -0.69 Strong Negative Relationship

-0.70 to -1.00 Very Strong Negative Relationship

Data Collection

Once the researcher developed the research question, he sought to locate two distinct sets of data: teacher turnover and working conditions. Regarding the first data sets, the researcher will secure teacher turnover data for School Year 2020-2021 from the Commonwealth of Kentucky by visiting the Kentucky School Report Card website (www.kyschoolreportcard.com). Detailed instructions of how to access the 2020-2021 Kentucky Teacher Turnover Data Spreadsheet can be found in Appendix A.

Next, the researcher will visit the website of Impact Kentucky (www.impactky.org). This is where the researcher will find the work condition scores for all Kentucky public schools that were collected via the 2020 Impact Kentucky Work Conditions Survey. The 2020 Impact Kentucky Working Conditions Survey was administered to certified educators across the state of Kentucky. All public schools in Kentucky were eligible and invited to participate. The survey window was 7.5 weeks in length from November 1 - December 17, 2019. All participating schools identified a survey coordinator from their own faculty. This coordinator was responsible for the distribution of anonymous survey access codes to colleagues. In order for schools to be included in the study and receive a report, they had to have at least 10 responses and an overall response rate of 50% or better. Collectively, across the Commonwealth, 85% of certified educators responded to the survey. The directions for accessing the 2020 Impact Kentucky Work Conditions Survey results can be found in Appendix B. The researcher will then generate his own spreadsheet utilizing the information from both the 2020-2021 Kentucky Teacher Turnover Data Spreadsheet and the 2020 Impact Kentucky Work Conditions Survey.

To create his own spreadsheet, the researcher generated a blank spreadsheet in Google Sheets. The researcher then examined the 2020-2021 Kentucky Teacher Turnover Data Spreadsheet and copied all the high schools, county they are located in, and the school's teacher turnover percentages into his personal spreadsheet he had created. This left the researcher with county, school, and turnover data for 206 high schools on his data sheet. After examining the data, the researcher noticed that two schools stood out for having 100% turnover and 93.8% turnover. All the other schools ranged from 0% to 36.4%. The researcher inferred that something was wrong with the data from these two schools. By chance, it just so happened that one of the schools was in the district that the researcher worked for and he knew that the

information was not correct. The other school was a neighboring district and the researcher was able to verify that the turnover rate was incorrect there also. Therefore, given the researcher knew the information to be wrongly reported for these two schools, he deleted them from the study as not to skew the data results. This left the researcher with 204 high schools on his data sheet.

The researcher then needed to add the 2020 working conditions for each school to his spreadsheet. He did this by visiting the Impact Kentucky website and manually entering each of the 204 schools one at a time. After entering the school's name into the search bar on the Impact Kentucky website he was taken to that school's results page. He then used the drop down menu to change from the 2022 to the 2020 results page. The school's scores for each of the nine working conditions were all visible, and the researcher was able to record their working condition scores onto his personal spreadsheet. After manually searching each of the schools, he found out that there were six schools that did not have results for the 2020 working conditions survey. He therefore deleted these schools from his study, leaving him with a total of 198 high schools for which he now had the county, school name, turnover percentage, and working conditions.

The researcher then needed to classify each school as rural or urban and add this information to his spreadsheet. To determine which schools were rural or urban, the researcher used the locale lookup tool located on the National Center for Education Statistics (NCES) website (www. nces.ed.gov/programs/maped/LocaleLookup/). The researcher then typed the name of a school, and the locator tool would show the school on a map. Once clicking on the dot that represented the school, locale codes would appear on the screen.

There are 4 different classes of locale codes. The city codes are 11,12, and 13. The suburb codes are 21,22, and 23. Town codes are 31,32, and 33, and the rural codes are 41,42, and 43. In order for me to signify which schools were urban and which were rural, schools with city/suburb codes were classified as urban, and schools with town/rural codes were classified as rural per the National Center for Education Statistics Locale Classifications and Criteria rules. (NCES, 2022). Once determining if schools were rural or urban, the researcher created a column on his spreadsheet and typed rural or urban depending on the locale code. This will allow the researcher to sort the data alphabetically to easily separate which schools were rural and which were urban.

The researcher then needed to add the schools' student enrollments and expenditure per student information to the respective columns he had labeled on his spreadsheet. The researcher found both the enrollment and expenditure per student information by manually searching each school's School Report Card. He did so by visiting the Kentucky School Report Card website (www.kyschoolreportcard.com). Once on this page the researcher searched the name of each school one at a time. After typing the name of the school in the search box, and clicking enter, the researcher was taken to that schools particular report card. The researcher then clicked on the drop down menu at the top of the page to change the report card from the 2021-2022 school year to the 2020-2021 school year.

The 2020-2021 report card will generate. At the top of the report card, underneath the summary section, it tells how many students are enrolled in the school. The researcher took this information and added it to his spreadsheet under the enrollment column. The researcher then scrolled down to the last section of the report card called Financial Transparency. Under this heading was the total spending per student dollar amount. The researcher added this information

to his spreadsheet under the expenditure per student column. The researcher did this process for all 198 schools in the study. During the process of collecting the student enrollment and expenditure per student data, the researcher noticed that some schools he initially thought were high schools actually contained middle school grade levels as well. In fact, there were 15 schools listed as high schools that included grades that were not under the (9-12) parameters set forth at the beginning of the study. As not to have the information of these 15 schools skew the data, they were eliminated from the study. This left the researcher with a total of 183 (9-12) high schools that qualified for the study. The researcher's spreadsheet was now complete with the county, school name, turnover percentage, nine working condition scores, rural or urban designation, student enrollment, and expenditure per student for the 183 (9-12) high schools that qualified out of the original 206.

Data Analysis

The researcher will use the Pearson Correlation formula in Google Sheets to find the Pearson correlation coefficient between the 2020-2021 Kentucky Teacher Turnover data and each of the nine components of the 2020 Impact Kentucky Working Conditions Survey.

The Teacher Turnover percentage rate will serve as the dependent variable, which is also considered to be the outcome variable when doing correlational studies. Each of the nine working conditions on the 2020 Impact Kentucky Work Conditions Survey will serve as an independent variable, or predictor variable. These nine independent variables from this survey include: Staff-Leadership Relationships, Educating All Students, Managing Student Behavior, School Leadership, School Climate, Professional Learning, Feedback and Coaching, Resources, and Emotional Well-Being. Definitions for each working condition can be found in Appendix C. The Questions for the 2020 Impact Kentucky Working Conditions Survey can be found in

Appendix D.

The researcher performed the Pearson correlation comparing teacher turnover to the nine working conditions on eleven subgroups resulting in a total of ninety-nine Pearson correlations that were conducted. The first set of correlations compared the teacher turnover to the working conditions for all 183 high schools (hereinafter "schools") that qualified for the study. This subgroup will also serve as the baseline data from which other subgroups will be compared. The researcher then sorted the schools by their NCES locale code of rural or urban. Pearson correlations were then performed to determine the correlation between teacher turnover and the nine working conditions for the 132 schools that qualified as rural as well as for the 51 urban schools.

The researcher then sorted the schools by student enrollment (lowest to highest). The researcher then divided the 183 schools into quartiles by enrollment – with the first, second, and third quartiles consisting of forty-six schools each, and the fourth quartile consisting of forty-five schools (quartile range - First: 0-25%, Second: 25.1-50%, Third: 50.1-75%, and Fourth: 75.1-100%). The first quartile was classified as Low Enrollment, the second quartile was classified as Mid-Low Enrollment, the third quartile was classified as Mid-High Enrollment, and the fourth quartile was classified as High Enrollment. The researcher chose to use quartile ranges to be consistent with how the National Center for Education Statistics reports comparable similar data (NCES, 2022). The researcher then conducted Pearson correlations for each quartile comparing teacher turnover to each of the nine work conditions.

The researcher then sorted the schools by expenditure per student (lowest to highest). The researcher then ranked the schools into a similar-four quartile format, with quartile one being the forty-six schools with the least expenditure per student, classified as Low Expenditure

(0 to 25%), quartile two consisted of the next forty-six schools and were classified as Mid-Low Expenditure per student (25.1 to 50%), quartile three consisted of the forty-six schools classified as Mid-High Expenditure per student (50.1 to 75%), and quartile four consisted of the forty-five schools with the highest expenditure per student, classified as High Expenditure per student (75.1 to 100%). The researcher then conducted Pearson correlations for each quartile comparing teacher turnover to each of the nine work conditions.

After performing Pearson correlations, the researcher will identify the degree of correlation for each test. Thereafter, he will create a table that lists the correlation coefficient, thus, allowing him to identify which variables have a strong correlation, weak correlation, or no correlation. From there, the researcher will determine if a particular subgroup or aspect (school leadership, climate, etc.) is more indicative of turnover based on the coefficient scores.

Reliability/Validity

Quantitative researchers must strive to adopt an objective perspective in an attempt to minimize bias. Specifically, the research design must be reliable and valid. Establishing reliability and validity is necessary to ensure that data are sound and replicable, and that the results are accurate. Evidence of reliability and validity are prerequisites to ensure data collection tools are of high quality and integrity (Kimberlin & Winterstein, 2008).

In quantitative studies, reliability is the ability of separate researchers to come to similar conclusions when using the same experimental design. This is in contrast to validity, which is the extent to which a concept is accurately measured. (Heale & Twycross, 2015). The below quotes for 'Kentucky Teacher Turnover' and 'Impact Kentucky' authenticate that the processes used to gather information for the two secondary data sets were both valid and reliable:

Kentucky Teacher Turnover: **"**Teacher Turnover is calculated by dividing the number of teachers considered turnover by the number of teachers at the end of the prior year." ("Teacher Turnover, 2022"). "To ensure quality of the calculations," the basic assumption is that teachers are licensed, have at least one course during instructional time, and that their final working date was accurately recorded ("Teacher Turnover, 2022").

Impact Kentucky: "The Working Conditions Survey utilized content from Panorama's research-backed survey instruments. Panorama's survey instruments have gone through a rigorous research process to provide you with valid and reliable data that you can act on" ("Impact Kentucky, 2022").

Chapter Overview of Chapter 4 and 5

The next two chapters will include a detailed description and analysis of the results from the Pearson correlation test that was performed on the secondary data sets. The researcher will provide tables of the data and describe the degree of correlation for the working conditions as they relate to the turnover rate. The researcher will also identify the relationship between teacher turnover and working conditions for the subgroups.

CHAPTER 4

RESULTS

National teaching data suggest poor working conditions are the primary reason for

teacher turnover (Carver-Thomas & Darling-Hammond, 2017). Therefore, can it be surmised

that schools with better working conditions experience less turnover than schools with poorer

working conditions? Thus, the purpose of the study was to determine if there was a correlation

between teacher turnover and work conditions. In particular, Pearson correlation tests were

performed between the teacher turnover percentage and each of the nine work condition

variables of the Impact Kentucky Work Conditions Survey. These variables include Staff-

Leadership Relationships, Educating All Students, Managing Student Behavior, School

Leadership, School Climate, Professional Learning, Feedback and Coaching, Resources, and

Emotional Well-Being.

The researcher performed the Pearson correlation comparing teacher turnover to the nine

work conditions on eleven subgroups (see, Chapter 3) resulting in a total of ninety-nine Pearson

correlations that were conducted. The first set of correlations compared the teacher turnover to

the work conditions for all 183 high schools (hereinafter "schools") that qualified for the

study. This subgroup will also serve as the baseline data from which other subgroups will be

compared. The researcher then sorted the schools by their NCES locale code of rural or

urban. Pearson correlations were then performed to determine the correlation between teacher

turnover and the nine working conditions for the 132 schools that qualified as rural as well as for

the 51 urban schools.

The researcher then sorted the schools by student enrollment (lowest to highest). The

researcher then divided the 183 schools into quartiles by enrollment – with the first, second, and

third quartiles consisting of forty-six schools each, and the fourth quartile consisting of forty-five schools (quartile range - First: 0-25%, Second: 25.1-50%, Third: 50.1-75%, and Fourth: 75.1-100%). The first quartile was classified as Low Enrollment, the second quartile was classified as Mid-Low Enrollment, the third quartile was classified as Mid-High Enrollment, and the fourth quartile was classified as High Enrollment. The researcher chose to use quartile ranges to be consistent with how the National Center for Education Statistics reports comparable similar data (NCES, 2022). The researcher then conducted Pearson correlations for each quartile comparing teacher turnover to each of the nine work conditions.

The researcher then sorted the schools by expenditure per student (lowest to highest). The researcher then ranked the schools into a similar-four quartile format, with quartile one being the forty-six schools with the least expenditure per student, classified as Low Expenditure (0 to 25%), quartile two consisted of the next forty-six schools and were classified as Mid-Low Expenditure per student (25.1 to 50%), quartile three consisted of the forty-six schools classified as Mid-High Expenditure per student (50.1 to 75%), and quartile four consisted of the forty-five schools with the highest expenditure per student, classified as High Expenditure per student (75.1 to 100%). The researcher then conducted Pearson correlations for each quartile comparing teacher turnover to each of the nine work conditions.

All 183 Kentucky (9-12) High Schools - Turnover vs. Nine Working Conditions

A summary of the correlation results for the first Pearson correlations, consisting of the teacher turnover percentage and nine working conditions for all 183 schools in the state, rounded to the nearest hundredth, are located in the table below listed in order of strongest to weakest correlation coefficient.

Table 1: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions of the

183 Public (9-12) High Schools in the Commonwealth of Kentucky

School Climate	-0.35
Emotional Well-Being	-0.33
Managing Student Behavior	-0.29
Resources	-0.25
School Leadership	-0.24
Professional Learning	-0.23
Feedback and Coaching	-0.23
Staff-Leadership Relationships	-0.22
Educating All Students	-0.07

School Climate and Emotional Well-Being had correlations of -0.35 and -0.33, respectively, and have a "moderate negative" relationship to teacher turnover. Educating All Students had a -0.07 correlation coefficient and has a "negligible" relationship with teacher turnover. All of the other work conditions ranged from -0.22 to -0.29 and have a "weak negative" relationship with teacher turnover.

Rural (9-12) High Schools

The next set of Pearson correlations was conducted on the 132 rural schools. The results of these correlations are in the table below.

Table 2: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions of the 132 Rural (9-12) High Schools in the Commonwealth of Kentucky

School Climate	-0.39
Emotional Well-Being	-0.38
Managing Student Behavior	-0.34
Resources	-0.32
School Leadership	-0.32
Professional Learning	-0.31
Feedback and Coaching	-0.30
Staff-Leadership Relationships	-0.30
Educating All Students	-0.11

Educating All Students had a correlation coefficient of -0.11 and has a "negligible" relationship with teacher turnover. The other eight work condition variables had correlation coefficients in the -0.30 to -0.39 range and have a "moderate negative" relationship with teacher turnover.

Urban (9-12) High Schools

The next set of Pearson correlations was conducted on the 51 urban schools. The results of these correlations are in the below table.

Table 3: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions of the 51 Urban (9-12) High Schools in the Commonwealth of Kentucky

Managing Student Behavior	-0.24
School Climate	-0.21
Emotional Well-Being	-0.17
Educating All Students	0.16
Resources	-0.08
Professional Learning	0.08
Staff-Leadership Relationships	0.08
School Leadership	0.05
Feedback and Coaching	-0.04

School Climate and Managing Student Behavior had correlation coefficients of -0.21 and -0.24, respectively, and have a "weak negative" relationship to teacher turnover. The remaining six work condition variables all have correlation coefficients resulting in a "negligible" relationship to teacher turnover.

Student Enrollment

After conducting the correlations on rural and urban schools, the schools were then sorted into quartiles based on student enrollment (lowest to highest). The first quartile (Low enrollment) consisted of the schools in the 0-25% range, the second quartile (Mid-low enrollment) consisted of the schools in the 25.1-50% range, the third quartile (Mid-high

enrollment) consisted of the schools in the 50.1 to 75% range, the last quartile (High enrollment) consisted of the schools in the 75.1 to 100% range based on enrollment.

Low Enrollment

Pearson correlations were then conducted on the first quartile of student enrollment. The enrollment in this quartile ranged from 172 to 575 students with the average number of students being 413. The results of the Pearson correlations conducted on the first quartile can be found in the below table.

Table 4: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the First Quartile Based on Student Enrollment (Low Enrollment 0-25%)

Managing Student Behavior	-0.55
School Climate	-0.53
Emotional Well-Being	-0.51
Feedback and Coaching	-0.50
Resources	-0.49
Staff-Leadership Relationships	-0.46
School Leadership	-0.44
Professional Learning	-0.44
Educating All Students	-0.16

Educating All Students had a correlation coefficient of -0.16 and has a "negligible" relationship with teacher turnover. The other eight work condition variables have correlation coefficients with a "strong negative" relationship with teacher turnover.

Mid-low Enrollment

　　Pearson correlations were next conducted on the second quartile of student enrollment. The enrollment from this quartile ranged from 593 to 840 with an average enrollment of 715 students. The results are in the below table.

Table 5: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the Second Quartile based on Student Enrollment (Mid-low Enrollment 25.1-50%)

School Climate	-0.30
School Leadership	-0.28
Managing Student Behavior	-0.26
Emotional Well-Being	-0.25
Resources	-0.23
Professional Learning	-0.21
Staff-Leadership Relationships	-0.21
Educating All Students	-0.20
Feedback and Coaching	-0.18

　　Feedback and Coaching had a correlation coefficient of -0.18 and has a "negligible" relationship with teacher turnover. School Climate has a correlation coefficient of -0.30 and has a "moderate negative" relationship with teacher turnover. The other six variables have correlation coefficients ranging from -0.20 to -0.28 and have a "weak negative" relationship to teacher turnover.

Mid-high Enrollment

The Mid-high enrollment quartile had an enrollment ranging from 846 to 1,252 with an average enrollment of 1,006 students. The results from the enrollment and working condition correlations can be found in the below table.

Table 6: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions of for the Third Quartile Based on Student Enrollment (Mid-high Enrollment 50.1-75%)

Emotional Well-Being	-0.41
Resources	-0.37
School Climate	-0.35
Managing Student Behavior	-0.29
Professional Learning	-0.25
Feedback and Coaching	-0.19
School Leadership	-0.18
Staff-Leadership Relationships	-0.16
Educating All Students	0.05

Emotional Well-Being had a correlation coefficient of -0.41 and has a "strong negative" relationship to teacher turnover. School Climate and Resources had correlation coefficients of -0.35 and -0.37, respectively, and have a "moderate negative" relationship with teacher turnover. Managing Student Behavior and Professional Learning had correlation coefficients of -0.29 and -0.25 and have a "weak negative" relationship with teacher turnover. School Leadership, Feedback and Coaching, Staff-Leadership Relationships, and Educating All Students all had correlation coefficients that have a "negligible" relationship to teacher turnover.

High Enrollment

In the final enrollment correlation, High Enrollment, was conducted on schools that had the highest number of students enrolled, ranging from 1,257 to 2,440. The average number of students in this quartile was 1,603. The results of these correlations can be found in the below table.

Table 7: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the Fourth Quartile Based on Student Enrollment (High Enrollment 75.1-100%)

Educating All Students	0.25
Professional Learning	0.12
Emotional Well-Being	-0.11
Resources	0.09
Managing Student Behavior	-0.08
School Climate	-0.06
School Leadership	0.06
Staff-Leadership Relationships	0.04
Feedback and Coaching	-0.02

Educating All Students had a correlation coefficient of 0.25 and had a "weak positive" relationship with teacher turnover. The other eight work condition variables had correlation coefficients that had "negligible relationships" to teacher turnover.

Expenditure Per Student

After conducting the correlations on student enrollment, the schools were then sorted into quartiles based on the schools expenditure per student (lowest to highest). The first quartile (Low Expenditure per student) consisted of the schools in the 0-25% range, the second quartile (Mid-Low Expenditure per student) consisted of the schools in the 25.1-50% range, the third

quartile (Mid-High Expenditure per student) consisted of the schools in the 50.1 to 75% range, the last quartile (High Expenditure per student) consisted of the schools in the 75.1 to 100% range based on expenditure per student.

Low Expenditure Per Student

Pearson correlations were conducted on the first quartile based on the expenditure per student. Total expenditure per student in this quartile ranged from $8,559 to $12,100, with an average expenditure of $11,070. The correlation coefficients can be seen in the below table.

Table 8: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the First Quartile Based on Expenditure Per Student (Low Expenditure Per Student 0-25%)

Staff-Leadership Relationships	0.28
Educating All Students	-0.23
Resources	-0.21
Emotional Well-Being	-0.19
Professional Learning	-0.17
School Climate	-0.11
Managing Student Behavior	-0.10
Feedback and Coaching	-0.08
School Leadership	0.01

School Leadership had a "negligible" relationship to teacher turnover with a correlation coefficient of 0.01. School Climate, Emotional Well-Being, Managing Student Behavior, Professional Learning, and Feedback and Coaching also had "negligible" relationships with teacher turnover with correlation coefficients ranging from -0.08 to -0.19. Resources had a "weak negative" relationship with teacher turnover with a correlation coefficient of -0.21. Staff-

Leadership Relationships had a "weak positive" relationship with teacher turnover with a correlation coefficient of 0.28.

Mid-Low Expenditure Per Student

Pearson correlations were then conducted on the second quartile based on expenditure per student. Total expenditure per student in this quartile ranged from $12,137 to $13,784, with an average expenditure of $12,946. The results are in the below table.

Table 9: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the Second Quartile Based on Expenditure Per Student (Mid-low Expenditure Per Student 25.1-50%)

School Climate	-0.39
School Leadership	-0.24
Professional Learning	-0.24
Staff-Leadership Relationships	-0.22
Managing Student Behavior	-0.20
Resources	-0.19
Emotional Well-Being	-0.18
Feedback and Coaching	-0.14
Educating All Students	0.12

School Climate had a "moderate negative" relationship with teacher turnover having a correlation coefficient of -0.39. Managing Student Behavior, Staff-Leadership Relationships, Professional Learning and School Leadership all had "weak negative" relationships with teacher turnover having correlation coefficients ranging from -0.20 to -0.24. Emotional Well-Being, Resources, and Feedback and Coaching, all had a "negligible" relationship with teacher turnover

having correlation coefficients in the -0.14 to -0.19 range. Educating All Students also had a

"negligible" relationship with teacher turnover having a correlation coefficient of 0.12.

Mid-High Expenditure Per Student

The range of expenditure per student for the third quartile was $13,842 to $16,513, with

an average expenditure of $14,869. When Pearson correlations were conducted on the third

quartile, it showed the following correlation coefficients.

Table 10: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the

Third Quartile Based on Expenditure Per Student (Mid-high Expenditure Per Student 50.1-75%)

Feedback and Coaching	-0.47
School Climate	-0.45
Managing Student Behavior	-0.45
School Leadership	-0.38
Resources	-0.35
Emotional Well-Being	-0.34
Staff-Leadership Relationships	-0.33
Professional Learning	-0.31
Educating All Students	-0.04

Feedback and Coaching, School Climate, and Managing Student Behavior had

correlations of -0.47, -0.45 and -0.45, respectively, and have a "strong negative" relationship

with teacher turnover. Emotional Well-Being, Resources, School Leadership, Professional

Learning, and Staff-Leadership Relationships all had correlations ranging from -0.31 to - 0.38,

meaning they have a "moderate negative" relationship with teacher turnover. Educating All

Students had a correlation coefficient of -0.04 and has a "negligible" relationship with teacher

turnover.

High Expenditure Per Student

The fourth quartile had an expenditure per student range of $16,531 to $36,207, with an average of $20,435. When Pearson correlations were conducted comparing the teacher turnover rate to the nine working conditions for the fourth quartile, it showed the following correlation coefficients.

Table 11: Correlation Coefficient of Teacher Turnover and the Nine Working Conditions for the Fourth Quartile Based on Expenditure Per Student (High Expenditure Per Student 75.1-100%)

Emotional Well-Being	-0.56
School Climate	-0.38
Managing Student Behavior	-0.37
Staff-Leadership Relationships	-0.31
Resources	-0.25
School Leadership	-0.25
Professional Learning	-0.16
Educating All Students	-0.15
Feedback and Coaching	-0.14

Emotional Well-Being had the highest correlation coefficient at -0.56. This signifies that there is a "strong negative" relationship between this variable and teacher turnover. School Climate, Managing Student Behavior, and Staff-Leadership Relationships had correlation coefficients in the -0.31 to -0.38 range and had a "moderate negative" relationship with teacher turnover. Resources and School Leadership had correlation coefficients of -0.25 and have a "weak negative" relationship with teacher turnover. Professional Learning, Feedback and

Coaching, and Educating All Students had correlation coefficients in the -0.14 to -0.16 range and have a "negligible" relationship to teacher turnover.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

In the 2017-2018 school year, the United States was estimated to have a shortage of over 110,000 public school teachers (Sutcher, Darling-Hammond, & Carver Thomas, 2016). This shortage was not only because of a decline in enrollment, but also due to the high rate of teacher turnover in schools. According to the most recent National Center for Education Statistics (NCES) data in 2013, the total teacher turnover rate was 16%.

The teacher shortage can only be fixed by addressing two variables: (1) to remedy the decreasing teacher pipeline, and/or (2) to decrease teacher turnover. Thus far, state legislatures have prioritized addressing the teacher pipeline variable, since those solutions provide immediate relief to the teacher shortage. For example, legislatures have lowered certification fees, offered tuition waivers, and provided alternative certification programs as quick ways to address the pipeline (Carver-Thomas & Darling-Hammond, 2017). But, regardless of how teachers come into the profession, they must be retained once they are in the classroom.

Sutcher, Darling-Hammond, and Carver-Thomas (2016) have identified four main factors that drive the teacher shortage: (1) a decline in enrollment of teacher preparation programs; (2) a return to lower, pre-recession pupil-teacher ratios; (3) an increase in K-12 student enrollment; and (4) high teacher attrition. The most significant of these factors affecting the teacher shortage is the teacher attrition rate. In 2013, attrition accounted for nearly 8% of the annual teaching workforce (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). Some attrition is due to retirement, but approximately 66% of teachers leave for other reasons, mostly due to being dissatisfied with the teaching profession. According to the National Center for Educational Statistics Teacher Follow-Up Survey (2012-2013), reasons teachers are dissatisfied and leaving

include poor salary, students discipline problems, poor administrative support, and poor student motivation.

According to a National Education Association (NEA) survey conducted in January 2022, over one-half of all teachers are considering leaving the profession earlier than planned. Specifically, fifty-five percent of teachers are thinking about an early exit. Conditions in Kentucky are even worse. In June 2022, the Education Commissioner from the Commonwealth of Kentucky, Dr. Jason Glass, stated that approximately 72% of Kentucky's educators are considered "at risk" of leaving the teaching profession.

Purpose and Significance

National teaching data suggest poor working conditions are the primary reason for teacher turnover (Carver-Thomas & Darling-Hammond, 2017). Therefore, can it be inferred that schools with better working conditions experience less turnover than schools with poorer working conditions? Therefore, the purpose of this study was to determine the magnitude of correlation between teacher turnover and working conditions in Kentucky (9-12) high schools.

Research Questions

1. What is the correlation between teachers' perception of work conditions and teacher turnover in high schools (9-12) in the Commonwealth of Kentucky?

    A. What is the correlation between teachers' perception of working conditions and teacher turnover in rural and urban schools in Kentucky?

    B. What effect does student enrollment have on the correlation between teachers' perception of working conditions and teacher turnover in Kentucky?

    C. What effect does expenditure per student have on the correlation between teachers' perception of working conditions and teacher turnover in Kentucky?

RQ1: Statewide

After conducting Pearson correlations for all 183 high schools in the Commonwealth of Kentucky, comparing the teacher turnover percentages to the nine working conditions, the data had unexpected results. Since the national data revealed that working conditions were the most significant factor affecting teacher turnover, the researcher inferred that several work conditions would emerge as having "moderate negative" or "strong negative" correlations with teacher turnover. However, this was not what was discovered.

The highest magnitude of correlation was School Climate, with a correlation coefficient of -0.35, which is a "moderate negative" relationship. The second highest magnitude was Emotional Well-Being, with a correlation coefficient of -0.33, which was also a "moderate negative" relationship. Educating All Students had a "negligible" relationship, and the remaining five working conditions had "weak negative" relationships with teacher turnover. In sum, the two work conditions with the highest magnitude to teacher turnover in Kentucky are School Climate and Emotional Well-Being.

RQ1A: Rural vs. Urban Setting

After separating the schools into rural and urban subgroups and performing the correlations of each group separately, the magnitude of the correlations significantly changed compared to the statewide data. When the correlations were conducted on the rural schools, Educating All Students had a "negligible" relationship, which was similar to the state results. However, the other eight working conditions all had "moderate negative" relationships.

When correlations were conducted on the urban schools comparing the work conditions to the teacher turnover percentage, School Climate and Managing Student Behavior had "weak negative" relationships, while the remaining work condition variables had "negligible" relationships.

RQ1B: Student Enrollment

When analyzing correlation data comparing work conditions to teacher turnover, the data showed conflicting results as it relates to student enrollment. For the schools in the first quartile, eight of the nine working conditions had a "strong negative" relationship with teacher turnover. Educating All Students once again had a "negligible" relationship. Not only did eight of the nine working conditions exhibit a "strong negative" relationship, but this subgroup of correlations had the strongest relationship of all the subgoups examined. The "strong negative" relationships in this quartile indicate that in the schools with lowest enrollment, working conditions appear to significantly impact a teacher's decision to leave.

The results for the second and third quartiles of enrollment were mixed. Most of the correlations in these two quartiles were negligible or weak. The most significant working condition in the second quartile was School Climate with a "moderate negative" relationship to teacher turnover. In the third quartile, there were three working conditions that appeared to have an effect on a teacher's decision to leave: Emotional Well-Being with a "strong negative" relationship to teacher turnover, and both School Climate and Resources that had "moderate negative" relationships.

In the fourth quartile, Educating All Students had a "weak positive" relationship with teacher turnover. The eight remaining work conditions had "negligible" relationships with teacher turnover. The researcher concluded that for the schools with the largest number of students enrolled, working conditions do not appear to impact a teacher's decision to leave.

RQ1C: Expenditure Per Student

The results for the correlations based on the first quartile of schools with the lowest expenditure per student were mostly "negligible" with a few work conditions being "weak". The

researcher concluded that working conditions do not appear to in any way affect a teacher's decision to leave for this subgroup.

In the second quartile, most of the correlations were "negligible" or "weak". The only working condition that stood out was School Climate, which had a coefficient of -0.39. This was a "moderate negative" relationship and was very close to being a "strong negative relationship". The researcher concluded that in general, most working conditions do not appear to affect a teacher's decision to leave, with the occasional condition of School Climate playing a role.

The working conditions for the third quartile for student expenditure had several "strong negative" and "moderate negative" relationships to teacher turnover. The researcher determined that working conditions do impact a teacher's decision to leave for this subgroup.

Based on how the correlations had slowly been getting stronger based on expenditure, the researcher was surprised to see that in the fourth quartile of schools, with the highest expenditure, the correlation coefficients were collectively lower than the third quartile. There was no consistency in the strength level as some working conditions were "negligible", some "weak", some "moderate", and even one "strong". The researcher concluded that in the schools with the highest expenditure per student it appears that the working condition of Emotional Well-Being is the only variable that could be responsible for teachers leaving.

Conclusions

For those looking for the "magic bullet" to address the teacher shortage, they did not find it in this study. What the data implicitly showed was even though working conditions do matter, this alone will not mitigate the teacher shortage. The degree to how much working conditions matter remains inconclusive. Specifically, the data reinforce that (1) that there are lower

turnover rates when teachers perceive that working conditions are favorable, and (2) that teacher turnover rates are higher when teachers perceive working conditions as unfavorable – but the overall strength of these hypotheses' correlations was moderate, at best.

A second key insight was that urban schools had "negligible" correlations between teacher turnover and working conditions. In sum, working conditions, surprisingly, did not appear to greatly influence urban teachers' decision to leave. However, the opposite seemed true for rural schools, which had "moderate" correlations between teacher turnover and working conditions.

Consistent with this insight was that working conditions appeared to be a significant factor in the 1st quartile of schools where student enrollment was the smallest. As student enrollment increased, however, the relationship between teacher turnover and working conditions decreased, becoming mostly "negligible" in the 4th quartile of schools.

Lastly, and most perplexing, was that the variable of expenditure per student had the opposite impact of what was expected. The schools that spent the most money per student had the most significant correlations between teacher turnover and working conditions. This could mean that more money does not equate to better working conditions. Surprisingly, some of the smallest, rural schools with lower expenditure per student appeared to have some of the best working conditions.

One final thought: the only way to mitigate the teacher shortage and attract new teachers is to address both the pipeline and the turnover of the teaching profession. Further, no one entity – be it the legislature or school leaders – can be solely responsible to increase the number of future teachers. It will take a confluence of interests coming together and looking at how teachers are recruited, compensated, and retained in the profession. But one conclusive finding from the

current research is that as long as teachers are employed at schools with poor working conditions, teachers will continue to leave in significant numbers.

Recommendation to the Profession

So, what's next? If there's no strong link to working conditions, then what can public schools do to help address the teacher shortage? More research needs to be conducted to determine what building level administrator practices have the most impact on working conditions. School administrators need to evaluate their systems of collaboration, such as Professional Learning Communities and faculty meetings, to gauge how effective they are to improving overall working conditions of the school. Then administrators should utilize the results of the Impact Kentucky Working Conditions Survey to develop an action plan that will assist them in addressing their area of greatest need.

Recommendations for Policymakers

The big question resulting from this study is – if it is not working conditions, then what factor(s) are causing teachers to leave the profession? It appears that the Kentucky General Assembly is attempting to answer this question when in February 2023, a bill was introduced to mandated exit interviews for teachers leaving the profession. Unfortunately, this bill reinforces that policymakers have been taking action to address the teacher shortage, but do not yet know the source(s) of the problem it is attempting to fix.

Recommendations for Future Research

1. Conduct Pearson correlations comparing teacher turnover to working conditions after placing schools into quartiles based on starting salary.

2. Conduct Pearson correlations comparing teacher turnover to working conditions after placing schools into quartiles based on years of teaching experience.

3. Conduct a similar study using data from elementary and middle schools to see the degree working conditions is impacting teacher turnover from those grade levels.

4. Conduct a qualitative study and interview teachers that have changed schools or quit the profession to determine their reasoning.

REFERENCES

America's Teacher Shortage. (2019). America's Teacher Shortage is a Bigger Problem than

    Thought. Retrieved from https://learningenglish.voanews.com/a/study-america-s-

    teacher-shortage-is-a-bigger-problem-than-thought/4859004.html

American Association of Colleges for Teacher Education. (2022). Colleges of Education: A

    National Portrait. Retrieved from https://aacte.org/wp-

    content/uploads/2022/03/Colleges-of-Education-A-National-Portrait-Executive-

    Summary.pdf

Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed), *Encyclopedia of Human*

    Behavior. (Vol. 4, pp. 77-81). Academic Press.

Bankert, L. (2018) Defining the 'Pipeline' in 'Teacher and Leader Pipelines'. *Ahead of the*

    Heard. Bellwether Education Partners.

Barnes, A. (2022). Here's what's driving the nationwide teacher shortage. Retrieved from

    https://thehill.com/changing-america/enrichment/education/3276034-heres-whats-

    driving-the-nationwide-teacher-shortage/

Barnett, B. (2002). *Assessing and supporting new teachers. Lessons from the*

    Southeast. Teaching Quality in the Southeast Policy Brief. Southeast Center for

    Teaching Quality. Chapel Hill, NC.

Barth, R. (1999). *The teacher leader*. Providence, RI: The Rhode Island Foundation.

Bernhausen, D. & Cunningham, C. (2001). *The role of resiliency in teacher preparation and*

    retention. American Association of Colleges for Teacher Education. Dallas, TX.

Biddle, B.J., & Anderson, D. S. (1986). Theory, methods, knowledge, and research on

    teaching. New York: Macmillian.

Billingsley, B. (1995). Working conditions: *Administrative support*. National Dissemination Forum for Special Education Teachers. Washington, D.C.

Bloomfield, J. & Fisher, M. J. (2019). Quantitative research design. *Jarna, 22*(2), 27-30

Boe, E. E. (1997). Why didst thou go? Predictors of retention, transfer, and attrition of special and general education teachers from a national perspective. *Journal of Special Education, 30*, 371-389.

Brandt, R. (1990). A close up look: Third party evaluation of program components. American Educational Research Association. Boston, MA.

Brewer, D. (1996). Career paths and quit decisions: Evidence from teaching. *Journal of Labor Economics, 14*, 313-339.

Bryman, A. (2012). Social research methods. Oxford University Press.

Buczek, K. (2022). Kentucky Education Commissioner: 72% of state teachers at risk of leaving. Lexington News. Retrieved from https://www.lex18.com/news/ky-education-commissioner-72-of-state-teachers-at-risk-of-leaving#:~:text=He%20explained%20that%20out%20of,for%20less%20than%20five%20years.

Carver-Thomas, D. & Darling-Hammond, L. (2017). *Teacher Turnover*: Why it matters and what we can do about it. Learning Policy Institute.

Certo, J., & Fox, J. E. (2002). Retaining quality teachers. *High School Journal, 86*(1), 2-5.

Cochran-Smith, M. (2004). *Stayers, leavers, and dreamers: Why people teach and why they stay*.

Colorado Department of Education. (2022). Definition of Teacher Turnover. Retrieved from https://www.cde.state.co.us/cdereval/rvdefine

Correlation Coefficient. (2022). Correlation Coefficient: Simple Definition, Formula, Easy

    Steps. Statistics How To. Retrieved from statisticshowto.com/probability-and-

    statistics/correlation-coefficient-formula/

Daft, T. (2003). *Management.* (6th edition). South Western

Darling-Hammond, L. (1998). Teachers and teaching: Testing policy hypotheses from national

    commission report. *Educational Researcher, 27*, 2-15

Darling-Hammond, L. (1999). Teacher quality and student achievement: A review of state

    policy evidence. Research Report. Center for the Study of Teaching and Policy,

    University of Washington.

Darling-Hammond, L. (2001). The challenge of staffing our schools. *Educational Leadership,*

    59, 12-17.

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can

    do. *Educational Leadership, 60*, 6-13.

Eggen. B. (2002). *Administrative accountability and the novice teacher*. The American

    Association of Colleges for Teacher Education. New York, NY.

Elfers, A.M., Plecki, M.L., & Knapp, M.S. (2007). Teacher mobility: Looking more closely at

    the movers within a state system. *Peabody Journal of Education, 81*, 94-127.

Epstein, A., & Willhite, G. L. (2015). Teacher efficacy in an early childhood professional

    development school. *International Electronic Journal of Elementary Education, 7*(2),

    189-198.

Expenditure Per Student. (2022). Spending per student. Retrieved from

    https://www.kyschoolreportcard.com/glossary?year=2022.

Fisher, M. J., & Fethney, J. (2016). Analyzing data in quantitative research. Sidney

Folkes, V. S. (2014). Attribution Theory: Applications to achievement, mental health, and interpersonal conflict. Taylor & Francis.

Fox, A. G., & Peters, M. L. (2013). First year teachers: Certification program and assigned subject on their self-efficacy. *Current Issues in Education, 16*(1).

Futernick, K. (2007). *A possible dream: Retraining California's teachers so all students learn.* Sacramento: California State University, The Center for Teacher Quality.

Gall, M. D., Gall, J. P. Borg, W. R. (2003). *Educational research: An introduction.* Seventh Edition. Pearson Education, Inc.

Gonzalez, L., Brown, M., & Slate, J. (2008). Teachers who left the teaching profession: A qualitative understanding. *The Qualitative Report, 13*, 1-11

Hammer, M. D., & Williams, P. (2005). Rejuvenating retirees: *Mentoring first-year teachers. Delta Kappa Gamma Bulletin*, 20-25.

Hancock, D. (1998). Encouraging teachers to remain in the profession: A model for stress reduction. *The Educational Forum, 63*, 166-172.

Hanushek, E., Kain, J. & Rivkin, S. (2004). Why public schools lose teachers. *Journal of Human Resources, 39*, 326-354.

Harrison, D. (2006). Teacher turnover spikes: Some former Roanoke teachers say morale was low and pressure from No Child Left Behind was high. The Roanoke Times.

Heale, R. & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing. July 2015 18*(3) 66-67

Hill, D. M., & Barth, M. (2004). NCLB and teacher retention: Who will turn out the lights? *Education and the Law, 16*(2-3), 173-181.

Hirsch, E. (2005). Listening to the experts: *A report on the 2004 South Carolina teacher working conditions survey*. Chapel Hill, NC: Southeast Center for Teacher Quality.

Hirsch, E., & Emerick, S. (2007). *Teacher working conditions are student learning conditions: A report on the 2006 North Carolina teacher working conditions survey*. Hillsborough, NC: Center for Teaching Quality.

Hodgetts, R., & Hegar, K. (2008). *Modern human relations at work*. (10th edition). Thomson South-Western

Holt, C. B., & Garcia, P. (2005). Preparing teachers for children in poverty: The Nashville district picks up the mantle for qualified instruction in high-needs schools. *School Administrator, 62*(11), 3.

Impact Kentucky. (2022). Retrieved from https://www.impactky.org/research.

Impact Kentucky Work Conditions Survey. (2020). Retrieved from www.impactky.org.

Ingersoll, R. (2001a). *Teacher turnover, teacher shortages, and the organization of schools*. Seattle, WA: Center for the Study of Teaching and Policy, University of Washington.

Ingersoll, R. (2001b). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*, 449-534.

Ingersoll, R. (2001c). *A different approach to solving the teacher shortage problem* (Teaching Quality Policy Brief No. 3). Seattle, WA: Center for the Study of Teaching and Policy, University of Washington.

Ingersoll, R. (2003). *Is there really a teacher shortage?* Washington, DC: Center for the Study of Teaching and Policy.

Ingersoll, R.M. (2018). *Seven Trends: The Transformation of the Teaching Force*. Graduate
        School of Education. University of Pennsylvania.

Johnson, S. & Birkeland, S. (2002). Pursuing a sense of success: New teachers explain their
        career decisions. American Educational Research Association. New Orleans, LA.

Johnson, S. M. (2006). *The Workplace Matters. Teacher Quality, Retention, and*
        Effectiveness. Harvard Graduate School of Education. National Education
        Association. Washington, D.C.

Kelly, C. (1997). Teacher compensation and organization. *Educational Evaluation and Policy*
        Analysis, 19, 15-28.

Kentucky School Report Card. (2021). Kentucky School Report Card. Retrieved from
        www.kyschoolreportcard.com

Kentucky Teacher Turnover Data Spreadsheet. (2021). Kentucky School Report
        Card. Retrieved from www.kyschoolreportcard.com.

Kimball, S.L., & Nink, C.E. (2006). How to improve employee motivation, commitment,
        productivity, well-being and safety. *Corrections Today, 68*, 66.

Kimberlin, C. L. & Winterstein, A. G. (2008). Validity and Reliability of Measurement
        Instruments Used in Research. *American Journal of Health-System Pharmacists, 65*(1),
        2276-2284.

Knobloch, A. (2001). The influence of peer teaching and early field experience on teaching
        efficacy beliefs of pre-service educators in agriculture. *28th Annual National*
        Agricultural Education Research Conference.

Krieg, J. (2006). Teacher quality and attrition. *Economics of Education Review, 25*, 13-27.

Laczko-Kerr, I., & Berliner, D. (2002). The effectiveness of Teach for America and other under-certified teachers on student achievement: A case of harmful public policy. *Educational Policy Analysis Archives, 10(37)*.

Lee, V., Smith, J., & Croninger, R. (1995). Another look at high school restructuring: More evidence and more insight into why. *Issues in Restructuring Schools.* Center of Organization and Restructuring of Schools, University of Wisconsin.

Lewis-Spector, J. (2016). State-level regulations for alternative routes to teacher certification in the U.S.: Are candidates being prepared to develop their students' literacy? *Literacy Practice & Research, 42*(1), 5-15.

Love, A. & Kritsonis, W.A. (2008). A principal's role in retaining first year teachers. *National Forum of Teacher Education Journal, 18*, 44-50.

Lowhorn, G. L. (2007). Qualitative and quantitative research: How to choose the best design.

Lukens, M.T., Lyter, D.M., & Gox, E.E. (2004). *Teacher attrition and mobility: Results From the Teacher Follow-up Survey, 2000-01.* Washington, DC: United States Department of Education, National Center for Education Statistics.

McElroy, E. J. (2005) Teachers want what students need. *Teaching PreK-8, 35*(7), 6.

Murnane, R., & Olsen, R. (1990). The effects of salaries and opportunity costs on length of stay in teaching: Evidence from North Carolina. *The Journal of Human Resources, 25*, 106-124.

National Center for Education Statistics. (2002). Concentration of Public School Students Eligible for Free or Reduced-Price Lunch. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved from https://nces.ed.gov/programs/coe/indicator/clb.

National Center for Education Statistics. (2022) Locale Classifications and Criteria rules. Retrieved from https://nces.ed.gov/surveys/annualreports/topical-studies/locale/definitions.

National Center for Education Statistics. (2023) Locale Lookup Tool. Retrieved from https://www. nces.ed.gov/programs/maped/LocaleLookup/

National Education Association Survey. (2022) GBAO Strategies. Stress and Burnout Pose Threat of Educator Shortages. Washington, D.C. Retrieved from https://www.nea.org/sites/default/files/2022-02/NEA%20Member%20COVID-19%20Survey%20Summary.pdf

Nelson, C. (2004). Reclaiming teacher preparation for success in high needs schools. *Education, 124*(3), 475-480.

Park, J., & Park, M. (2016). Qualitative versus quantitative research methods: Discovery or justification? *Journal of Marketing Thought 3*(1), 1-7.

Pastor, M.C., & Erlandson, D.A. (1982). A study of higher order need strength and job satisfaction in secondary public school teachers. *Journal of Educational Administration, 20*(2), 172-183.

Price, J. L. (1989). The Impact of Turnover on the Organization. *Work and Occupations, 16*,461-473.

Robbins, S. P., & Judge, T. A. (2013). *Organizational behavior*. Prentice Hall

Rockoff, J.E. (2004). The impact of individual teachers on student achievement: *American Economic Review Proceedings, 94*, 247-252.

Sanders, W.L., & Rivers, J.C. (1996). *Cumulative and residential effects of teachers on future student academic achievement.* Knoxville, TN: Knoxville University of Tennessee Value-Added Research and Assessment Center.

Shen, J. (1997). Teacher retention and attrition in public schools. *The Journal of Educational Research, 91*, 81-88.

Shields, L., & Smyth, W. (2016). Common quantitative methods. *Nursing and midwifery research: Methods, critical appraisal and utilization* (5th ed.). Sydney, NSW.

Smith, T.M., & Ingersoll, R.M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Education Research Journal, 41*, 687-714.

Stinebricker, T. (1998). An empirical investigation of teacher attrition. *Economics of Education Review, 17*, 127-136.

Student Enrollment. (2022). Enrollment. Retrieved from https://www.kyschoolreportcard.com/glossary?year-2022.

Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). A Coming Crisis in Teaching? Teacher Supply, Demand, and Shortages in the U.S. Learning Policy Institute.

Teacher Turnover. (2019). Program Requirements Document Teacher Turnover. Kentucky Department of Education. Division of Student Data Services.

United States Department of Education. (2013). Teacher Attrition and Mobility. Results from the 2012-2013 Teacher Follow-up Survey. National Education for Education Statistics.

What is Teacher Retention. (2022). IGI Global. Retrieved from https://www.igi-global.com/dictionary/teacher-retention/33607

Zhang, G. & Zeller, N. (2016). A longitudinal investigation of the relationship between teacher preparation and teacher retention. *Teacher Education Quarterly, 43*(2).

APPENDIX A

DIRECTIONS FOR ACCESSING TEACHER TURNOVER RATES

The 2020-2021 Kentucky Teacher Turnover Data Spreadsheet was accessed on the Kentucky School Report Card Website (https://www.kyschoolreportcard.com). Specific directions to access the teacher turnover spreadsheet are as follows:

1. The researcher will visit www.kyschoolreportcard.com.

2. The researcher will scroll to the bottom of the page and click on "Data Sets".

3. Once on the "Data Sets" page, the researcher will click on the "School Year" tab at the top of the page and select 2020-2021.

4. The researcher will then click on "Faculty Staff And Community" which is located under the "Overview" heading.

5. The researcher will then scroll down to the "Faculty Profile" heading and click on the download button beside teacher turnover.

6. Once the download is complete, it will open as an excel spreadsheet that contains all the schools in the Commonwealth of Kentucky along with their turnover rates.

APPENDIX B

DIRECTIONS FOR ACCESSING IMPACT KENTUCKY WORKING CONDITIONS

The 2020 Impact Kentucky Working Conditions Survey data were collected from the Impact Kentucky website (https://www.impactky.org). Directions to access these data are as follows:

1. Go to https://www.impactky.org. Scroll down and select "Explore the 2022 Results Here". This is where the results are stored for public access.

2. After clicking on the "Explore the 2022 Results Here" link, one will then click on the "School" icon. A drop down menu will appear where one can search each of the schools in the Commonwealth of Kentucky.

3. After searching and selecting a particular school, one will be taken to that individual schools page that lists the 2022 results for all nine variables of the Impact Kentucky Survey. In the upper right hand corner, click on the drop down menu to change from the 2022 results to the 2020 results page.

4. Once on the 2020 results page, one can see the scores for each of the nine variables of the 2020 Impact Kentucky Work Conditions Survey.

APPENDIX C

2020 IMPACT KENTUCKY WORKING CONDITIONS SURVEY VARIABLES -

DEFINITIONS

Staff-Leadership Relationships- Perceptions of faculty and staff relationships with school leaders.

Educating All Students- Faculty perceptions of their readiness to address issues of diversity.

School Leadership- Perceptions of the school leadership's effectiveness.

Managing Student Behavior- Perceptions of the management of student behavior in the classroom and school.

School Climate- Perceptions of the overall social and learning climate of the school.

Professional Learning- Perceptions of the amount and quality of professional growth and learning opportunities available to faculty and staff.

Feedback and Coaching- Perceptions of the amount and quality of feedback faculty and staff receive.

Resources- Perceptions of the adequacy of the school's resources.

Emotional Well-Being- Perceptions of educator well being, efficacy, and belonging.

APPENDIX D

2020 IMPACT KENTUCKY WORKING CONDITIONS SURVEY QUESTIONS

Staff-Leadership Relationships

- How friendly are your school leaders toward you?

- How confident are you that your school leaders have the best interests of school in mind?

- How much trust exists between school leaders and faculty?

- When you face challenges at work, how supportive are your school leaders?

- At your school, how motivating do you find working with the leadership team?

- How much do your school leaders care about you as an individual?

- How respectful are your school leaders towards you?

- When challenges arise in your personal life, how understanding are your school leaders?

- How fairly does the school leadership treat the faculty?

Educating All Students

- How easy do you find interacting with students at your school who are from a different cultural background than your own?

- How comfortable would you be incorporating new material about people from different backgrounds into your curriculum?

- How knowledgeable are you regarding where to find resources for working with students who have unique learning needs?

- If students from different backgrounds struggled to get along in your class, how comfortable would you be intervening?

- How easy would it be for you to teach a class with groups of students from very different religions from each other?

- In response to events that might be occurring in the world, how comfortable would you be having conversations about race with your students?

- How comfortable would you be having a student who could not communicate well with anyone in class because his/her home language was unique?

- When a sensitive issue of diversity arises in class, how easily can you think of strategies to address the situation?

- How often do teachers use assessment data to inform their instruction?

School Leadership

- How positive is the tone that school leaders set for the culture of the school?

- For your school leaders, how important is teacher satisfaction?

- Overall, how positive is the influence of the school leaders on the quality of your teaching?

- How effectively do school leaders communicate important information to teachers?

- How knowledgeable are your school leaders about what is going on in teachers' classrooms?

- How responsive are school leaders to your feedback?

- How clearly do your school leaders identify their goals for teachers?

- When the school makes important decisions, how much input do teachers have?

- How effective are the school leaders at developing rules for students that facilitate their learning?

Managing Student Behavior

- How effective are the school leaders at developing rules for students that facilitate their learning?

- How respectful are the relationships between teachers and students?

- How effective do you think you are at managing disruptive classes?

- How well do school administrators support teachers' classroom management efforts?

- How often does student misconduct disrupt the learning environment at your school?

- Overall, how safe is the school environment?

School Climate

- On most days, how enthusiastic are the students about being at school?

- When new initiatives to improve teaching are presented at your school, how supportive are your colleagues?

- How optimistic are you that your school will improve in the future?

- How supportive are students in their interactions with each other?

- To what extent are teachers trusted to teach in the way they think is best?

- How positive are the attitudes of your colleagues?

- How often do you see students helping each other without being prompted?

- Overall, how positive is the working environment at your school?

- How respectful are the relationships between teachers and students?

Professional Learning

- At your school, how valuable are the available professional development opportunities?

- How helpful are your colleagues' ideas for improving your teaching?

- How much input do you have into individualizing your own professional development opportunities?

- Through working at your school, how many new teaching strategies have you learned?

- Overall, how much do you learn about teaching from the leaders at your school?

- How often do your professional development opportunities help you explore new ideas?

- How relevant have your professional development opportunities been to the content that you teach?

- Overall, how supportive has the school been of your growth as a teacher?

Feedback and Coaching

- How often do you receive feedback on your teaching?

- At your school, how thorough is the feedback you receive in covering all aspects of your role as a teacher?

- How useful do you find the feedback you receive on your teaching?

- How much feedback do you receive on your teaching?

- How much do you learn from the teacher evaluation processes at your school?

Resources

- To what extent does the quality of the resources at your school need to improve?

- When students need help from an adult, how often do they have to wait to get that help?

- At your school, how crowded do the learning spaces feel?

- How urgently does your school's technology need to be updated?

- How often do your school's facilities need repairs?

- For students who need extra support, how difficult is it for them to get the support that they need?

- How much of your own money do you spend on your classroom?

- How important is it for your school to hire more specialists to help students?

- How many more resources do you need to adequately support your students' learning?

- Overall, how much does your school struggle due to a lack of resources?

- To what extent does the access to instructional technology, including computers, printers, software and internet access at your school need to improve?

Emotional Well-Being

- How concerned are you about the emotional well-being of your colleagues as a result of their work?

- How concerned are you about your own emotional well-being as a result of your work?

VITA

Graduate School
Southern Illinois University Carbondale

Ryan Andrew Cowsert

ryancowsert@gmail.com

Southern Illinois University Carbondale
Bachelor of Science, Elementary Education, December 2010

Southern Illinois University Carbondale
Master of Science, Educational Administration, May 2019

Capstone Project Title:
Addressing the Kentucky (9-12) High School Teacher Shortage Through Correlations of
Teacher Turnover and Working Conditions

Major Professor: Dr. William Bradley Colwell