

University of Mississippi

eGrove

Electronic Theses and Dissertations

Graduate School

1-1-2022

Measuring Impact of New Teacher Mentoring Programs Through Teacher Sense of Efficacy Scale

Ezzard Beane

Follow this and additional works at: <https://egrove.olemiss.edu/etd>

Recommended Citation

Beane, Ezzard, "Measuring Impact of New Teacher Mentoring Programs Through Teacher Sense of Efficacy Scale" (2022). *Electronic Theses and Dissertations*. 2421.

<https://egrove.olemiss.edu/etd/2421>

This Dissertation is brought to you for free and open access by the Graduate School at eGrove. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of eGrove. For more information, please contact egrove@olemiss.edu.

Measuring Impact of New Teacher Mentoring Programs Through Teacher Sense of
Efficacy Scale

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Philosophy
in the Department of Leadership and Counselor Education
The University of Mississippi

by

EZZARD CHARLES BEANE JR.

December 2022

Copyright © 2022 by Ezzard Charles Beane Jr.
All rights reserved

ABSTRACT

The education gap between economically advantaged and economically disadvantaged students in the United States is accountable for most of the education gap in the United States and other technologically advanced countries. Unfortunately, the students who require the most academic support and quality instruction often receive instruction from the least qualified. The gap in effective instruction for the economically disadvantaged is related to the quality of instruction which is often facilitated by the least effective and least qualified teachers. The quality of teachers is directly related to the high teacher attrition rates of teachers serving economically disadvantaged students. Maximizing strategies to increase retention among teachers serving economically disadvantaged students is critical. This study is designed to determine if the mentoring experience has an impact on teacher self-efficacy. Teacher self-efficacy is related to teacher retention. Increasing teacher self-efficacy through mentoring may help reduce attrition rates among teachers serving economically disadvantaged students thus improving the quality of instruction for economically disadvantaged students.

DEDICATION

This work is dedicated to my wife, Sylvia Beane, and children, Sydney and Zoe, who allowed me to forgo quality family time throughout this process. My wife has been a source of inspiration and gave me strength to complete this study. I would also like to dedicate this work to my parents, Ezzard and Jennifer Beane. The two of them challenged and encouraged me to push through the process when I had doubts. I would also like to thank my former mentor, Randy Perry, for helping understand how to be a professional educator. Coach Perry's mentorship was the inspiration behind my desire to research mentoring. Lastly, I would like to thank the individuals and University of Mississippi faculty members who challenged me to complete this process, specifically, Dr. Timothy Ginn, Dr. Johnny Daves, Dr. Fred Hickman, and Dr. Douglas Davis.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION.....	1
Statement of the Problem.....	2
Purpose of the Study.....	5
Significance of the Study.....	6
Research Questions.....	7
Theoretical Perspectives.....	8
Overview of the Methodology.....	9
Assumptions, Limitations, and Delimitations of the Study.....	10
Definition of Terms.....	12
Summary.....	13
CHAPTER II: LITERATURE REVIEW.....	14
Retention and Attrition.....	14
Defining Retention and Retention Statistics.....	15
Factors Influencing Attrition and Retention.....	17
Teacher Efficacy.....	24
Teacher Efficacy and its Measures.....	25
Developing Teacher Self-efficacy.....	27
Mentoring.....	28
Purpose of Mentoring.....	28

Impact of Mentoring	29
Conclusion	30
CHAPTER III: METHODS AND PROCEDURES	32
Research Design.....	32
Research Instrument.....	33
Validity and Reliability of the TSES	36
Validity and Reliability of the RHI-M.....	37
Population Sample	38
Research Questions.....	39
Research Hypotheses	39
Procedures.....	40
Statistical Tests and Data Analysis	41
Summary.....	42
CHAPTER IV: DATA ANALYSIS.....	43
Introduction.....	43
Description of Participants.....	45
Instruments.....	45
Results.....	48
Chapter Summary	55
CHAPTER V: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS.....	56
Research Questions.....	56

Research Design.....	57
Summary of Results and Suggested Actions	57
Discussion.....	59
Limitations	61
Implications.....	63
Recommendations for Future Research	67
Conclusion	68
LIST OF REFERENCES	71
APPENDICES	88
Appendix A: Letter to Administrators	89
Appendix B: Letter to Participants #1	90
Appendix C: Letter to Participants #2	91
Appendix D: Survey Instrument	92
VITA.....	97

LIST OF FIGURES

Figure 1. Correlation Between the Mentoring Experience and Teacher Self-Efficacy.....	51
Figure 2. Correlation Between the Mentor/Mentee Relationship and Teacher Self-Efficacy.....	52
Figure 3. Mean Performance of Teacher Self-Efficacy Based on Socioeconomic Status.....	54

LIST OF TABLES

Table 1. *Descriptive Statistics and Cronbach Alpha*.....46

Table 2. *Descriptive Statistics*.....48

Table 3. *Mentoring Experience Descriptive Statistics*.....49

Table 4. *Multiple Regression Results for Teacher Self-Efficacy*.....49

Table 5. *Mentor/Mentee Relationship Descriptive Statistics*.....50

Table 6. *Descriptive Statistics for School SES and Teacher Self-Efficacy Scale Score*.....53

CHAPTER I

INTRODUCTION

The academic achievement gap for minorities, excluding Asian students, and economically disadvantaged (ED) students has plagued education in the United States (U.S.) for as long as standardized assessments have been collected and analyzed. The education gap between white students and non-Asian minority students continues to be significantly different since the 1970s (NAEP, 2012); however, there has been some minimal improvements in reading and mathematics as of 2017 (Bandeira de Mello et al., 2019; de Brey et al., 2019). Additionally, the income achievement gap between non-ED students and ED students has increased from approximately 40% (Reardon, 2013) to 75% (Wexler, 2019) from the 1970s to 2010s.

Administrators working in schools serving high percentages of ED and non-Asian minorities are expected to meet the same expectations as schools predominately populated by non-ED, and Asian students despite having limited resources. Administrators who work in schools populated by high percentages of non-Asian minorities and ED students find it difficult to close the achievement gap because their students are disproportionately taught by uncertified teachers. In 2012, schools serving large percentages of minority students were four times more likely to be served by uncertified teachers (Sutcher et al., 2016). A scarcity of qualified teachers is often identified as the major factor behind teacher shortages, and teacher attrition accounts for most of the teacher shortage problem. Teacher attrition is about eight percent in the U.S. and accounts for approximately 90 percent of the demand for new teachers (Carver-Thomas & Darling-Hammond, 2017). Efforts to improve teacher retention and decrease teacher attrition in schools

which serve a disproportionate number of non-Asian minorities and ED students may help improve the quality of education for those students.

In this study, I proposed to identify whether there is a relationship between the teacher mentoring experience for teachers with one or two years of teaching experience and the level of teacher self-efficacy. Teacher self-efficacy has a negative relationship with teacher burn-out (Skaalvik & Skaalvik, 2010) which impacts teacher retention (Fisher, 2011). According to Yost (2006), further research is needed to address how self-efficacy relates to teacher retention. I also identified if there is a relationship between the teacher and mentor relationship and teacher self-efficacy. Finally, I determined if there is a relationship between the socioeconomic status of a school for teachers with one or two years of experience and teacher self-efficacy. Chapter one offers the reader a statement of the problem addressed in the research study, the purpose of the study, the significance of the study, specific research questions, an overview of the theoretical perspectives used in the study, a summary of the methodology, limitation and delimitations, and definitions for selected terms.

Statement of the Problem

Imagining the U.S. as an international leader in education is not inconceivable. Closing the education achievement gap in the U.S. will move the country closer to the top of international rankings. Currently, U.S. students from non-ED backgrounds rank at the top of international rankings in reading (Darling-Hammond, 2014). According to Darling-Hammond (2014), white and Asian American students score above the Organisation for Economic Co-operation and Development's (OECD) average on international assessments. Conversely, African Americans, Latinos, and other American students in schools serving large percentages of ED students score near the bottom of OECD rankings. Closing the achievement gaps in the U.S. along racial and

socio-economic lines will improve the nation's international ranking. Improving the quality of education in all settings is instrumental to closing the achievement gap.

According to OECD (2016), the socio-economic impact on academic achievement is greater between schools than within the same school. The achievement gap is smaller for ED students when they can attend schools with white, Asian, or students from non-ED statuses (OECD, 2016). Additionally, students from non-ED backgrounds tend to outperform their less advantaged peers; however, many ED students can perform on par with their peers internationally (OECD,2016). According to Sirin (2005), a parent's location in the socioeconomic structure has a strong effect on student achievement. Improving the quality of instruction in schools with high percentages of ED students may minimize the gap for students who are unable to access schools populated by a majority of non-ED students. A student receiving instruction for consecutive years from quality teachers may go a long way toward closing the achievement gap (Rivkin, Hanushek, & Kain, 2005).

Several education systems around the world have been able to reduce the impact of socio-economic backgrounds, urban learning environments, and racial differences by providing the neediest students access to high performing teachers. School systems in places such as Shanghai, Singapore, British Columbia, Finland, and Hong Kong have been able to overcome racial or socio-economic differences by implementing a number of policies and procedures designed to improve equity to close education gaps (Tucker, 2016). Strategies to improve the quality of teachers serving students who need the most support is a common theme in schools internationally (Tucker, 2016). School systems which are able to minimize the education gap within their borders have demonstrated a commitment to improving teacher quality for all students (Zhang et al., 2016). If the U.S. expects to close the achievement gap among non-ED

and ED students, an effort to improve access to experienced and effective teachers is needed. Providing support services such as mentoring may help improve teacher attrition and the quality of instruction provided by inexperienced teachers. Retaining young teachers in schools serving ED students is the first step to improve the quality of instruction for ED students. Supporting novice teachers will stop the revolving door of teachers serving ED students and allow time for them to develop professionally. According to Harris and Sass (2011), strategies such as mentoring programs and professional development designed to retain young teachers can yield significant benefits and enhance the productivity of teachers in their early years.

Summer months for school administrators are like a tale of two cities. Administrators who work in schools populated by high percentages of ED students are often scrambling to fill teacher vacancies with qualified teachers well into the beginning of the school year. Conversely, administrators serving mostly non-ED and Asian students are less likely to suffer from teacher shortages and a limited teacher applicant pool. Nationally, the number of teacher vacancies and difficult-to-staff positions have decreased 15% and 21% respectively from the 1999-00 school year to the 2011-12 school year. However, schools serving high percentages of ED students have experienced difficulties filling positions and are disproportionately impacted by the shortage of qualified teachers (Argon, 2016; Sutchter et al., 2016). The shortage of qualified teachers for schools which serve mostly ED and non-Asian minorities means those students will receive instruction from the least qualified teachers. In 2012, high minority schools were four times more likely to be served by uncertified teachers than were low minority schools (Sutchter et al., 2016).

The shortage in the supply of teachers applying for open teaching positions has been associated with a lack of qualified teachers in the workforce. However, there are enough

qualified teachers in the U.S. workforce, but unfortunately, they are not willing to apply for positions which serve ED students. Despite the enrollment in teacher education programs having decreased from 719,081 students in 2008-09 to 465,563 students in 2013-14, representing a total loss of 253,545 students (Aragon, 2016); overall, the supply of teachers is greater than the number of teacher vacancies. According to Garcia and Weiss (2019), the teacher shortage is real and growing beyond expectations. The shortage is also more severe in schools serving large percentages of ED students (Garcia & Weiss, 2019). Teacher attrition in schools serving ED students has been identified as the leading contributor to the teacher shortage in high poverty and high minority schools. Teacher attrition is about eight percent in the U.S. and accounts for approximately 90 percent of the demand for new teachers (Carver-Thomas & Darling-Hammond, 2017). The extreme working conditions in urban and high poverty schools is a major factor in the high levels of attrition and the low number of applicants to fill the teaching vacancies (Gonzalez et al., 2008).

Purpose of the Study

The purpose of this study was to identify the nature of relationships between teacher self-efficacy and the quality of the mentoring experience and mentor/mentee relationship in new teacher induction programs for teachers with one or two years of teaching experience in the state of Mississippi. Additionally, the study was designed to identify the nature of a relationship between teacher self-efficacy and the mentor/mentee relationship. The study was also designed to identify any relationships between teacher self-efficacy and the socioeconomic makeup of a school for teachers with one or two years of teaching experience in Mississippi. The elements of the mentoring experience will include the frequency of meetings with mentors, duration of meetings with mentors, and the content focus of mentor meetings. The elements of the

mentoring experience are derived from a study by Desimone et al. (2013). Independent variables of teacher's mentoring relationship were measured by the mentor questions from the Relational Health Index (RHI-M). The RHI-M was initially used to assess the growth-fostering connections with peers, mentors, and the community for women (Liang, Tracy, Taylor, Williams, et al., 2002). Each scale was composed of the following subscales: engagement, authenticity, and empowerment/zest (Liang, Tracy, Taylor, Williams, et al., 2002). The Teachers' Sense of Efficacy Scale (TSES) short form was used to measure the dependent variable, teacher self-efficacy. The results obtained may add to the existing body of research by supplying insightful information on the relationship between the mentoring experience, the mentor/mentee relationship, and the socioeconomic status of a school has with teacher self-efficacy.

Significance of Study

Research data on schools populated by large percentages of minority students and students from ED backgrounds suggests the students are likely to receive their education from the least qualified teachers with the least amount of experience (Peske & Haycock, 2006). The limited access to quality teaching or instruction has been identified as an indicator of poor student achievement (Stigler & Hiebert, 1999; Stigler & Stevenson, 1991). Additionally, research suggests teacher quality is the most important factor for students to grow from one academic year to the next; according to Wenglinsky (2002), the total impact of teacher quality is the most significant factor for student growth, even greater than a student's socioeconomic status. Furthermore, high turnover rates for teachers have a significant and negative impact on student achievement (Clotfelter et al., 2006; Ronfeldt et al., 2013). A teacher who spends more than five years teaching one grade level is positively and significantly associated with student achievement (Huang & Moon, 2009). High teacher attrition rates and low retention rates are an

impediment for ED and minority students to receive a quality educational experience.

Conversely, teachers who have a high sense of teacher self-efficacy are more likely to stay in education and provide a more impactful educational experience than teachers with low teacher self-efficacy. This study was designed to determine if the mentoring experience and mentor/mentee relationship for teachers with one or two years of experience was related to a teacher's self-efficacy.

The variables associated with new teacher mentoring have been found to relate to high levels of teacher self-efficacy. The findings may assist school and district administrators with opportunities to improve teacher retention and ultimately student performance. Improving teacher retention and reducing teacher attrition is instrumental in improving student academic success. Improving retention rates will help districts which serve ED students to slow the revolving door of teachers entering and leaving the profession. Improving teacher retention rates will allow schools an opportunity to invest funds typically used to recruit new teachers and apply those funds to supporting inexperienced teachers and supporting their growth as professionals. Typically, teachers grow over the first few years of teaching before they plateau (Aaronson et al., 2007). By improving retention rates, schools could invest in teachers and hopefully improve the quality of education and academic performance of ED students.

Research Questions

Three questions will be used in the research. These questions address two areas identified in literature to improve teacher retention: teacher self-efficacy and mentoring.

1. To what extent does a teacher's mentoring experience relate to teacher self-efficacy for teachers with one and two years of teaching experience?
2. To what extent does the mentor/mentee relationship relate to teacher self-efficacy for teachers with one or two years of teaching experience?

3. To what extent does the school percentage of economically disadvantaged students relate to teacher self-efficacy for teachers with one or two years of teaching experience?

Theoretical Perspectives

Social Cognitive Theory (SCT) suggests human behavior, personal factors, and environmental factors influence and are influenced by one another (Beauchamp et al., 2018). The three factors of influence associated with SCT are defined as triadic reciprocal causation (TRC) (Wood & Bandura, 1989). According to Wood and Bandura (1989), TRC occurs when individuals who are influenced by their environments are able to influence their own environments because of the dual direction of influence. For example, a new teacher can be influenced by mentoring and induction programs because of the level of influence teachers have in schools and in turn the new teacher enjoys teaching and positively influences the school environment by remaining at the school. According to Borman and Dowling (2008), a teacher's decision to remain at a school or leave a school can be influenced by the mentoring and induction programs because the mentoring and induction programs often have an influence on the school environment. Additionally, teacher attrition is influenced by a number of factors: individual characteristics of teachers, compensation policies, and attributes of schools (Borman & Dowling, 2008).

Teacher attrition may also be influenced by environmental factors such as mentoring and induction programs (Guarino et al., 2006). The components of reciprocal causation between the teacher, the school environment, and the behavior of the teachers can be identified in the mentoring and induction process. A collegial work environment developed from mentoring and induction programs, positive behaviors developed by a teacher because of positive relationships

established with coworkers, and self-efficacy developed because mentees may be able to navigate through difficult tasks with the help of mentors and other support mechanisms are some of the reciprocal causations. SCT provides specific directions to equip individuals with competencies, self-regulatory capabilities, and a resilient sense of efficacy which will enable individuals to improve their well-being and their accomplishments (Wood & Bandura, 1989). When a new or novice teacher is able to efficiently manage his or her self-ability to complete and to overcome difficult tasks, the teacher is likely to overcome adversity and is more likely to enjoy his/her job. Exploring opportunities to improve teachers' sense of self-efficacy may provide school leaders, school district administrators, and legislators with insight to improve teacher retention and reduce teacher attrition.

According to Kim and Baylor (2006), educational theories maintain the following: teaching and learning are profoundly social activities and interactions with teachers, peers, and instructional materials influence the cognitive and affective development of learners (Kim & Baylor, 2006). The constructs of self-efficacy and teacher self-efficacy were developed by Bandura under the concepts of the social cognitive theory (Gavora, 2010). Teacher self-efficacy is considered to be an important correlate of teachers' job satisfaction, instructional behavior, well-being, and student outcomes (Scherer et al., 2016). Self-efficacy is a more important factor in the prediction of teacher behaviors than teacher intentions (Wilson et al., 2016). This study utilizes Teacher Sense of Efficacy Theory to identify factors which are related to (a) teacher satisfaction and (b) teacher retention and attrition.

Overview of the Methodology

Data collected from a survey composed of questions from the TSES was used as the independent variable in this research. The mentoring experience was measured by questions

from the RHI-M survey (Liang, Tracy, Taylor, & Williams, 2002). The RHI-M is an 11-item survey designed to measure the mentoring experience (Liang, Tracy, Taylor, & Williams, 2002). The TSES is a strong indicator of teachers' self-efficacy (Klassen et al., 2009). Teacher self-efficacy is also a strong predictor of teacher burnout and attrition (Ventura et al., 2015). A multiple regression analysis was used to determine if teacher self-efficacy as defined by the TSES can be predicted by a teacher's mentoring experience and the mentor/mentee relationship from the point of view of a first or second-year teacher.

Data collection was conducted through a combination of convenient sampling (CS) and snowball sampling (SS). CS is often used in quantitative studies with an emphasis placed on generalizability (Etikan et al., 2016). Additionally, CS is a kind of non-probability or nonrandom sampling of members in a target population (Farrokhi & Mahmoudi-Hamidabad, 2012). CS helped determine if the data and findings can be generalized among other first and second-year teachers. Because identifying and reaching first and second-year teachers was difficult, SS was used to reach and identify them. Snowball sampling is normally associated with qualitative research; however, it can be used as a branch of convenient sampling in quantitative studies (Landers & Behrend, 2015). Despite SS being traditionally used in qualitative studies, SS is an acceptable practice in quantitative studies when populations are difficult to reach (Cohen & Arieli, 2011; Kirzherr & Charles, 2018). According to Landers and Behrend (2015), SS is effective when the dynamics of a network is concerned.

Assumptions, Limitations, and Delimitations of the Study

Limits imposed on a research project and limits imposed by others are referred to as delimitations and limitations respectively (Andres, 2012). Researchers must account for delimitations and limitations; however, trusting survey participants to provide accurate data must

be assumed. An attempt to survey the entire population of first-year and second-year public school teachers in Mississippi will be accomplished through CS and SS. This process is a technique where every potential participant who meets a designated criterion is surveyed (Etikan et al., 2016). Because the participants will have an acceptable level of anonymity, due to the design of the survey and sample size, the assumption is the respondents will answer truthfully. Additionally, because the sample size is composed of all new teachers in the state, we can assume the sample is representative of new teachers in the state of Mississippi. The sampling methods may allow the results to be applied to other states located in the southeastern section of the U.S.

Limitations within a research study are constraints imposed by data collection (Newman et al., 1997) which includes the inability to access certain populations (Andres, 2012). The inability to have access to the entire population of first year teachers in the state of Mississippi is a limitation for the study. The validity and reliability of the survey instrument, the TSES, has Cronbach alpha's score of .90. However, access to the entire population of Mississippi Teacher Corp was a positive for the study. Additionally, the RHI-M survey has an alpha score of .85 (Liang, Tracy, Taylor, Williams, et al., 2002) and .82 (Munson, & McMillen, 2009). Validity is the relationship between an answer and the true score, and reliability is the extent people in similar situations will answer questions in a parallel fashion (Fowler, 2014).

An additional limitation of the study was the decision to use an internet survey. Success in collecting data from web-based formats vary, with the source of the survey and identifiable sponsors accounting for most of the variations (Fowler, 2014).

Besides the limitations related to this study, there are some delimitations associated with this study. Delimitations are boundaries within a study which are created by the researcher

(Andres, 2012). The researcher's decision to survey first-year teachers at the end of the academic school year, without a pre-assessment, limited the research from determining if new teacher mentoring and induction programs have an impact on teacher self-efficacy. The study was designed to determine if there is a relationship between the mentoring/induction experience and a teacher's self-efficacy; however, the opportunity was missed to determine if a teacher's sense of efficacy is impacted by the mentoring/induction process.

Definition of Terms

Terms are defined to provide readers a common understanding of terms.

Economically Advantaged: students whose parents are classified as upper-middle class to upper class, generally have college degrees, and have educational resources at home.

Economically Disadvantaged: students who meet requirements for free and reduced meals as defined by the National School Lunch and Child Nutrition Program.

Self-efficacy: individuals' beliefs about their capabilities to carry out a particular course of action successfully (Bandura, 1977).

Teacher self-efficacy: a three-dimensional construct in which one believes he/she can influence student engagement, instructional strategies, and classroom management (Tschannen-Moran & Hoy, 2001).

Teacher attrition: a component of teacher turnover, which may include teachers exiting the profession and teachers who change fields or schools (Bobbitt et al., 1991).

Teacher retention: teachers who enter the teaching profession and decide to remain in the teaching profession (Ruhland, 2001).

Teacher shortage: an imbalance between the number of teachers demanded and the

number of qualified teachers willing to offer their services to fill demanded positions (Sutcher et al., 2016).

Summary

Closing the student achievement gap for ED students will require access to effective and experienced teachers. Chapter one presents the significance of the study, research questions, and theoretical perspectives utilized in the study. Chapter two provides a comprehensive examination of theory and relevant research associated with teacher mentoring, teacher attrition, teacher self-efficacy, and teacher induction. Chapter three presents the method used in the study, the survey instrument, and descriptions of tests utilized to answer the research questions. Chapter four is a presentation of the data collected from the study and reports if there is or is not a level of significance for each research question. Chapter five provides suggestions and recommendations based on the findings from the study. Data collected from this study will be utilized to improve new teacher induction and mentoring techniques for first-year teachers.

CHAPTER II

LITERATURE REVIEW

Chapter two presents a summary of the literature related to elements of teacher retention, mentoring and induction, and teacher self-efficacy. The review of the literature begins with a discussion on the statistics related to teacher retention, causes of low retention rates, and how teacher retention has been addressed. Next, the elements of mentoring and teacher induction are identified. Finally, the elements of teacher self-efficacy and its relationship to teacher retention are presented. The conceptual model which is developed in the literature review supports the need for school, district, and state educational leaders to provide support for new teachers to increase teacher retention and decrease teacher attrition and to use teacher self-efficacy to evaluate the quality of the mentoring experience for new teachers. Improving teacher retention rates and stabilizing teaching staff in schools serving high percentages of ED students and minority students may help school leaders reduce the education gap.

Retention and Attrition

School districts in rural and urban areas around the United States (U.S.) are often scrambling to fill teacher vacancies at the start of each school year. Schools in large cities and rural areas are often more likely to face teacher shortages than other schools (Bland, Church, & Luo, 2014). The inability to fill teacher vacancies has been attributed to a teacher shortage in the U.S.; however, data suggests there are enough potential applicants to fill the number of teacher vacancies each year (Ingersoll & Perda, 2010). Unfortunately, low retention rates and high attrition rates have negatively impacted the number of qualified teachers serving schools with

large percentages of ED and minority students. Because a disproportionate number of young teachers leave the profession early in their careers, ED and minority students do not experience young, motivated, and experienced teachers. Consequently, the students needing experienced teachers who are highly motivated are likely to receive instruction from inexperienced and veteran teachers looking to retire.

If schools and school districts serving large numbers of ED and minority students were able to retain their promising young teachers, the teacher shortage would reduce significantly. According to Sutchter et al. (2016), if teacher attrition is reduced from approximately 7.6% to 4%, the annual demand for new teachers would reduce by half. Identifying why young teachers are likely to leave the profession is instrumental for school administrators to mitigate the problem of high attrition rates in schools serving large percentages of minority and ED students. Teacher attrition is affected by a wide range of varying factors which include: age, stress, gender, school administration, safety, student behavior, teacher efficacy, and teacher pay, to name a few (Borman & Dowling, 2008). Unfortunately, several of the factors which influence teacher attrition such as pay, gender, and age are beyond the control of school and district administrators. School safety, administration, school climate, stress, and teacher efficacy are factors school-level administrators and district administrators may be able to impact to mitigate the negative influences on teacher attrition and increase teacher retention.

Defining Retention and Retention Statistics

Teacher retention is defined as teachers who enter the teaching profession and are still teaching (Ruhland, 2001). Conversely, teacher attrition is defined as teachers who enter the teaching profession and then leave the profession or switch schools (Ruhland, 2001). All teacher attrition is not negative. There are times when schools must release ineffective teachers;

however, effective as well as ineffective teachers are leaving the profession at an alarming rate. There is a distinction between good and bad teacher attrition; good attrition is when bad teachers leave the profession and bad attrition is when good teachers leave the teaching profession (Borman & Dowling, 2008). Some good attrition may be influenced by school administrators who desire to remove ineffective teachers from their schools. It is understood that school districts desire to retain good teachers, especially in schools serving high numbers of poor and minority students. Unfortunately, the bad attrition is common in schools which serve ED and minority students along with rural and urban students. ED and minority students have the least amount of access to qualified teachers compared to their EA peers (Borman & Kimball, 2005; Ferguson, 1998; Kain & Singleton, 1996).

Young teachers are leaving the teaching profession at alarmingly high rates. Attrition rates for teachers are higher than most professions. Teachers have a higher annual turnover rate than other professionals (Ingersoll & Smith, 2003). Every profession will experience attrition of new employees; however, teachers lead the way in attrition for young professionals. One in ten new teachers leave the profession in their first year and 40 to 50% of new teachers leave within their first five years in the profession (Ingersoll & Smith, 2003; Ingersoll et al., 2018). The exodus of young teachers in the education field has also impacted the modal age of teachers as well. The average teacher's age has dropped from 55 years of age to mid-30s and mid-40s from 2007-2008 to 2015-2016 (Ingersoll, et al., 2018). In addition, the average years of experience for teachers have decreased from 15 years of experience between one to three years of experience (Ingersoll, et al., 2018).

When young teachers with the potential to develop into competent educators leave the profession, schools that serve large percentages of ED and minority students are often the

schools that are negatively impacted the most. According to Kini and Podolsky (2016), a teacher's experience level is positively associated with student achievement. School districts failing to retain teachers are challenged with the task of investing financial resources to recruit and hire new teachers. Hiring a new teacher may cost a district between \$10,000 to \$26,502 per new teacher, depending on the location of the school (Watlington et al., 2010). The cost of a teacher leaver in Granville County, North Carolina, costs approximately \$10,000 (Barnes et al., 2007). Teacher leavers cost Chicago Public Schools \$17,872 per teacher and approximately 86 million dollars a year (Barnes et al., 2007). The costs associated with teacher attrition are often not accounted for in the budget and have cost districts like Boston \$4 million dollars in accounted for funds (Levy et al., 2012).

Low retention rates for schools are most prevalent in schools serving large numbers of ED and minority students (Brill & McCartney, 2008; Colbert & Wolff, 1992; Boyd et al., 2011). A school's inability to retain teachers may also negatively impact student achievement (Loeb et al., 2012; Boyd et al., 2011). The negative impact of low retention rates is often felt the most at schools serving high percentages of ED students and students in need of the most academic support. According to Carver-Thomas and Darling-Hammond (2017), teachers employed in schools serving 25% or more minority and ED students are more likely to leave teaching than teachers in schools with low percentages of minority and ED students. Additionally, approximately half of the teacher turnover occurs in public schools serving ED, rural, urban and minority students (Ingersoll, et al., 2018).

Factors Influencing Attrition and Retention

Researchers have identified a number of factors which influence teacher retention and attrition with factors being within and outside of the school building. Factors within a school

include school environment, working conditions, relationships (Bobeck, 2002), sense of accomplishment (Bobeck, 2002), and leadership. According to Darling-Hammond (2003), working conditions influencing attrition are class size, teaching load, support, and resources. Outside factors, those outside the control of school districts and administrators, which influence attrition and retention include age (Billingsley, 2004), career competence and skills (Bobeck, 2002), sense of humor (Bobeck, 2002), and personal finances (Billingsley, 2004).

The school climate and environment often impact whether teachers stay at particular schools and influence whether teachers remain in the field of education. In a study conducted by Wynn et al., (2007), the researchers found six of the top eight reasons young teachers leave the profession are related to school climate. The teacher salary was identified as the most likely reason teachers leave the profession followed by disruptive students, lack of support from school administrators, lack of parental support, working conditions, lack of professional prestige, personal reasons, and lack of collegiality (Wynn et al., 2007). Additionally, in a meta-analytic review of 34 studies of 63 attrition moderators conducted by Borman and Dowling (2008), the organizational structure, student composition, instructional spending, and teacher salaries were major contributors to teacher attrition. Some indicators of teacher attrition may be mitigated by state and local policymakers and education leaders; however, the student composition of schools is a difficult factor to mitigate. Staffing classrooms which are mostly composed of students who are minorities or who are from a low socioeconomic background is a very difficult task (Borman & Dowling, 2008). Attrition is most likely to occur in the early years of teachers' careers and diminishes over time (Borman & Dowling, 2008).

Low salary (Gonzalez, Brown, and Slate, 2008; Ingersoll & Smith, 2003), student discipline (Gonzalez et al., 2008; Ingersoll & Smith, 2003; Kirby & Grissmer, 1993), support

from school administration (Gonzalez, Brown, & Slate, 2008; Ingersoll & Smith, 2003; Kirby & Grissmer, 1993), and the lack of student motivation (Ingersoll & Smith, 2003) have been found as major contributors to teacher attrition. In an analysis of the 1987-88 and 1993-94 School and Staffing Survey, Ingersoll (2001a), found turnover rates for teachers is much lower when teachers are employed in a school with a higher level of administrator support and fewer student discipline problems. Moore-Johnson and Birkeland's (2003) survey of new teachers in Massachusetts found poor working conditions which include student behavior as well as lack of administrative and collegial support as reasons for leaving teaching. Schools serving students in rural locations and with high percentages of ED and minorities are more likely to experience difficulties filling job vacancies and retaining teachers. In addition, student behavior has an impact on teacher retention as does the racial composition of schools and classrooms. Teachers employed in schools with 25% or more students of color are more likely to leave teaching than teachers in schools with fewer students of color (Carver-Thomas & Darling-Hammond, 2017).

Another factor related to attrition is gender. According to Hughes (2012), the gender of a new teacher is a factor in teacher retention with males showing a greater propensity to stay in the teaching profession. Conversely, high-ability African American male teachers are more likely to leave the teaching profession than any other sub-group (Adams, 1996; Podgursky et al., 2004). Young women in education are likely to leave the profession in their early years due to pregnancy or raising children. Moderate evidence suggests younger women leave the teaching profession for pregnancy or child-rearing (Tippens et al., 2013). The gender of a teacher also impacts the perceptions teachers have of their students (Dee, 2005). How teachers perceive students is an indicator of teacher attrition. Perceptions of students may impact how a teacher perceives student behavior which is a major indicator of teacher attrition (Alt et al., 1999).

The race of teachers can be used as a factor to determine if a teacher will remain in the teaching profession, especially when the racial composition of schools differ from the race of the teacher. White teachers are 1.36 times more likely to leave the teaching profession than non-white teachers (Hughes, 2012). Additionally, Ingersoll's (2001b, Fall) study of the 1991-92 Schools and Staffing Survey found minority teachers are less likely to leave the teaching profession. However, Kirby et al. (1999) found African American males have the shortest median teaching spell. Hispanic teachers in Texas were found to have the lowest early attrition rates (Kirby et al., 1999). According to Hughes (2012), teachers are more likely to remain if they match the ethnicity of much of a student population. Conversely, Ingersoll et al. (2018), found minority teachers leave the profession at a higher rate than their white counterparts when they are assigned to schools populated by a large percentage of minority and ED student population. Unfortunately, minority teachers in hard-to-staff schools are often assigned to the least desirable.

According to Kirby and Grissmer (1991), a teacher's decision to remain in the teaching profession is likely to be influenced by their life cycle which is related to one's existing family status and changes in one's family status. Teachers are more likely to leave for personal and family reasons rather than dissatisfaction with their jobs (Wayne, 2000). Additionally, teachers who have children are more likely to leave than those without children (Borman & Dowling, 2008).

Attrition and retention rates for teachers are influenced by the teachers' grade level and content area (Hughes, 2012). Elementary teachers are more likely to stay in the profession while middle school teachers are less likely to stay in the profession (Hughes, 2012). A teacher's content area is also an indicator of a teacher's likeliness to leave the teaching profession. There

is a high demand for individuals with math and science degrees in and out of education which explains their high attrition rates for math and science teachers (Borman & Dowling, 2008). Beginning mathematics and science teachers are more likely to leave the profession than other teachers; they are also more likely to have a master's degree or doctorate (Ingersoll et al., 2012). Mathematics and science teaching positions are often difficult to fill for schools which makes it imperative for schools serving large percentages of ED students to retain good teachers, especially mathematics and science teachers.

The measured academic ability of teachers has a negative correlation on teacher retention and a positive relationship with teacher attrition. Teachers who score well on the ACT (Hughes, 2012; Podgursky et al., 2004) and the National Teacher Exam (NTE) (Hughes, 2012) are more likely to leave the teaching profession (Hughes, 2012). Because teachers who perform well on the ACT and NTE are more likely to leave the profession, the teaching profession often loses some of the most promising teachers. Some of the individuals who demonstrate higher academic performance leave the profession to find better-paying jobs and professions with more opportunities for growth. Additionally, the level and the amount of education a teacher has is related to the likeliness a teacher decides to stay in the teaching profession. The amount of education and preparation make a difference in teachers' likelihood of staying in teaching (Ingersoll et al., 2014). Teachers from highly selective undergraduate institutions are more likely to leave the profession than teachers that attended less selective undergraduate institutions (Podgursky et al., 2004).

Overall, several factors contribute to teacher retention and attrition. Working conditions within districts and schools is a major contributor to retention and attrition (Geiger & Pivovarova, 2018; Ingersoll & Smith, 2003). Federal, state, and district policymakers should

explore key factors associated with teacher turnover which includes teaching conditions (Carver-Thomas & Darling-Hammond, 2017). According to Ingersoll (2001a; 2001b, Fall), organizational factors within a school which include lack of support from administration, student disciplinary issues, the lack of teacher input and decision making in school decisions all contribute to teacher attrition rates. Additionally, Ronfeldt et al. (2013) suggest schools located in high poverty or crime areas as well as those with poor leadership have increased teacher attrition. School accountability ratings have a correlation with teacher retention; the lower the accountability rating, the lower the retention rates (Ingersoll et al., 2014). New teachers often leave schools populated with high percentages of minority and ED students once they gain experience and transfer to more appealing jobs (Guin, 2004). According to Watson et al. (2010), stress is a significant contributor to decreased job satisfaction among new teachers. Increased levels of stress which translates to decreased job satisfaction may be a reason new teachers leave the profession (Watson et al., 2010). Issues with school leadership and the lack of input are also reasons veteran teachers choose to leave the profession as well and is classified as a form of teacher resistance (Glazer, 2018).

Retaining high-quality teachers in schools with high percentages of ED and minority students can be improved through positive working conditions, opportunities for professional development, and teacher influence (Geiger & Pivovarova, 2018). Retaining new teachers is often difficult because new teachers in the U.S. are likely to receive the most challenging assignments which is the opposite of practices in most other developed countries (Borman & Dowling, 2008).

Teacher attrition tends to be most common in new and novice teachers and teachers who are late in their careers. Teacher retention rates have a U-shaped distribution; attrition rates are

higher for teachers in their early and later years (Kirby & Grissmer, 1991). Young teachers in their first five years of teaching are more likely to leave the education profession as well as teachers at retirement age. The age of a teacher has a direct relationship with teacher retention (Hughes, 2012). Additionally, teachers who have not developed any personal attachment to the profession or have not invested in their professional growth are likely to leave the profession. Teachers who have accumulated less specific capital or knowledge have higher attrition rates; however, attrition rates diminish as teachers build capital (Borman & Dowling, 2008).

Teacher efficacy is defined as a teacher's belief in his or her ability to make a difference with their students (Hughes, 2012). Teacher efficacy has also been defined as one's judgment of competence in reference to an analysis of a given duty or task (Tschannen-Moren et al., 1998). If teachers feel they are making a difference in the lives of their students, they are more likely to stay in education than their peers who do not make an emotional attachment. According to Johnson and Birkeland (2003), a primary consideration for leaving the teaching profession was impacted by the teacher's belief in their ability to make a difference in the lives of children. According to Hughes (2012), more data is needed to comprehend the relationship between a teacher's efficacy and the impact on retention.

The percentage of minority and ED students, a teacher's level of education, a teacher's mentoring or induction experience, the level of a teacher's pedagogy, work environment, peer relationships, and several other factors contribute to the level of attrition and retention. Practice teaching, observing other teachers, and the amount of feedback were also significantly related to remaining in teaching (Ingersoll et al., 2012)

Teacher attrition has an adverse effect on the modal or most common age of teachers in education and student achievement. The reduction in the modal age of teachers suggests the

teaching profession is made up of teachers close to retirement and young teachers, which means there is a shortage of veteran teachers in the middle of their careers. The lack of middle-aged teachers may have a lasting impact on the supply of teachers willing to teach in schools, especially in schools serving minority and ED students. As a result of high attrition rates in education, the most common teacher age has dropped from 50 years or older from 1.3 million in 2007-08 to 1.1 million in 2015-16 (Ingersoll et al., 2018). Additionally, the level of experience has adversely changed over time as well. The modal teacher's years of experience has decreased from 15 years of experience in 1987-88 to one to three years in recent years (Ingersoll et al., 2018). Additionally, the change in teacher turnover has a negative impact on student achievement (Loeb et al., 2012).

Teacher Efficacy

The concept of teacher efficacy is based on Rotter's Locus of Control Theory (Dellinger et al., 2008). According to Rotter (1966), humans perceive an event as a reward or reinforcement based on the degree to which the individual perceives the event occurred because of one's own behavior or the event occurred because of forces outside of himself and may occur independently of one's own actions. The construct of teacher efficacy or teacher sense of efficacy was established in the 1970s when RAND researchers measured whether teachers believed their ability to affect student performance (outcome) was based on their own actions (internal) or the impact of students' home environments (external) (Dellinger et al., 2008). The construct of teacher efficacy, belief in one's own ability to affect student performance, was conceptualized from the RAND research.

The concept of teacher efficacy and teacher self-efficacy have been used interchangeably; however, they have different meanings and historical backgrounds (Dellinger et al., 2008;

Goddard et al., 2000). According to Dellinger et al. (2008), teacher efficacy or sense of efficacy is based on the premise of a teacher's belief in their ability to affect student performance and teacher self-efficacy is a teacher's belief in their capabilities to perform specific tasks. Dellinger et al. (2008) suggest teacher self-efficacy is derived from Bandura's work on self-efficacy. According to Bandura (1994), perceived self-efficacy is one's belief of his or her capacity to perform at a particular level which has an impact on events affecting one's life. Additionally, self-efficacy beliefs are formed by an individual's interpretations of one's own ability (Bandura, 1991) and impacts how individuals feel, think, motivate themselves, and behave which produces cognitive, motivational, affective, and selection processes (Bandura, 1994). Additionally, Bandura (1991) suggests an individual's beliefs in one's capability to generate particular actions (perceived self-efficacy) are not the same as an individual's beliefs about whether actions can affect outcomes (locus of control). Because teacher efficacy and teacher self-efficacy are based on two different theories and measures two different constructs, it is important for educators to know the difference.

Teacher Self-efficacy and its Measures

According to Bandura (1977), there are four sources for efficacy expectations: personal performance, vicarious experience, verbal persuasion, and emotional arousal. A teacher may develop self-efficacy in one's own ability based on his or her own experiences in education. The concept of teacher self-efficacy is based on Bandura's Instrument of Teacher Self-Efficacy which measures a teacher's belief in his or her ability to: influence decision making, influence school resources, influence instruction, influence discipline, ability to enlist parental involvement, the ability to enlist community involvement, and one's ability to create a positive school climate. Self-efficacy is an accurate predictor of performance on tasks because subjects

are more likely to execute tasks successfully when they perceive self-efficacy and fail when they feel a task is beyond their capabilities (Bandura, 1977). Bandura's Instrument of Teacher Self-Efficacy was considered evasive and not reliable (Tschannen-Moran & Hoy, 2001). Tschannen-Moran and Hoy (2001) developed the Teacher Sense of Efficacy Scale (TSES) to measure the construct of teacher efficacy. Recently, Dellinger et al. (2008) developed the Teachers' Efficacy Beliefs System-Self Form (TEBS-Self) to accurately measure teacher self-efficacy and reflect Bandura's theory of self-efficacy. The TEBS-Self is an instrument designed to measure teachers' individual beliefs about one's own abilities to successfully perform specific teaching- and learning-related tasks within the context of their own classrooms (Dellinger et al., 2008).

There are several instruments designed to measure the constructs of teacher efficacy and teacher self-efficacy. One of the first measures of efficacy among teachers was developed by RAND researchers (Ashton et al., 1984). The RAND researchers measured teacher efficacy by asking two questions:

Item 1: "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment."

Item 2: "If I really try hard, I can get through to even the most difficult or unmotivated students."

The items from the RAND researchers were based on Rotter's Locus of Control.

Gibson and Dembo (1984) developed a tool to measure efficacy among teachers; however, they incorporated Bandura's Social Cognitive Theory and his concept of self-efficacy to develop their measurement tool. Gibson and Dembo (1984) developed a 16-item tool to measure two constructs: General Teaching Efficacy and Personal Teaching Efficacy. The

instrument was found to be uncorrelated which left researchers looking for a more reliable instrument to measure teacher efficacy or teacher self-efficacy.

After the RAND instrument and the Gibson and Dembo tool did not prove to be an effective instrument to measure teacher efficacy or teacher self-efficacy, the Teacher Efficacy Scale (TES) was created. According to Ross (1994), the TES became the most common instrument to measure self-efficacy in teaching. The TES was also the foundation for other instruments which measured efficacy within content areas, such as the Science Efficacy Beliefs Teaching Instrument (Riggs & Enochs, 1990). Later, the Teacher Sense of Efficacy Scale was developed. Currently, the TSES is the most common instrument used to measure teacher efficacy or teacher sense of efficacy. The TSES is divided into three constructs: student engagement, instructional practices, and classroom management (Tschannen-Moran and Hoy, 2001).

Developing Teacher Self-efficacy

According to Bandura (1977), there are four sources for efficacy expectations: personal performance, vicarious experience, verbal persuasion, and emotional arousal. A study of teachers in Hong Kong and Shanghai found three sources of teacher efficacy: respect and confidence placed on them by the students and parents, the training they received from universities, and the experience they gained from daily teaching practice (Cheung, 2008). An international study of special education teachers in China, Finland, and South Africa on the self-efficacy of special education teachers found teaching experience, regardless of the type (special education or regular), was able to explain a teacher's sense of self-efficacy (Malinen et al., 2013).

Professional development has also been shown to improve teacher self-efficacy. After a series of professional development meetings consisting of one full day and three two-hour sessions, Ross and Bruce (2007) found teacher efficacy in classroom management to improve for both veteran and inexperienced teachers.

Teacher self-efficacy has been used to predict teacher success, teacher burnout, teacher retention, and student achievement. Perceived self-efficacy is a better predictor of behavior toward unfamiliar circumstances than past performance (Bandura, 1977). Teacher self-efficacy and classroom quality served as a significant, positive predictor and demonstrated significant interaction of some academic gains of children in pre-school (Guo et al., 2010).

Mentoring

As school districts and school-level administrators grapple with mitigating the lack of qualified applicants each year, teacher mentoring and teacher induction may be a useful tool for school districts to implement. Increasing professional collaboration through mentoring and teacher induction may increase job satisfaction and teacher self-efficacy (Duyar et al., 2013). According to Howe (2006), teachers need to be eased into the world of education with a clinical induction period which is intentional and heavily monitored. Induction and mentoring programs have a number of impacts which include: increased competence for new teachers, reduction in teacher attrition, improved classroom management, and enhanced workplace interaction. Successful mentoring programs have a set of three holistic processes which include relationships, developmental need, and contextual elements.

Purpose of Mentoring

Because hiring teachers in schools serving large percentages of ED and minorities is a difficult task which costs districts plenty of resources, it is imperative that schools are intentional

when implementing strategies to retain and develop young educators. Mentoring and induction programs have been used to retain new and novice teachers as well as build their capacity as quality educators. New teacher induction programs provide extra support, ease frustrations, help implement effective teaching strategies, and strengthen teaching skills for new and novice (Sellers, 2011). Induction programs also significantly help beginning teachers to build a professional identity and effective pedagogy which reflects the communities they serve (Howe, 2006). When schools are intentional about providing new teachers with formal learning experiences such as a quality teacher induction process, new and novice teachers grow as professionals. Formal organizational structures in schools are instrumental in providing beginning teachers a means to learn about instruction and formal leadership opportunities (Hopkins & Spillane, 2014).

Impact of Mentoring

School districts and schools have used mentoring for new and novice teachers to help teachers transition from pre-service or alternate route teachers into full-time teachers, reducing teacher attrition. High-quality induction and mentoring programs can increase the competency and effectiveness of beginning teachers as well as reduce teacher attrition (Learning Policy Institute, 2016). A novice teacher's experience in education is directly related to the mentoring experience (Britton et al., 2000; Graham et al., 1999). For schools serving ED and minority students, teacher mentoring programs may help schools improve retention among their first-year teachers. The mentoring experience for new and novice teachers may mitigate the teacher retention gap between high poverty and low poverty schools (Geiger & Pivovarova, 2018). Effective mentoring programs can also impact the level of instruction new teachers provide to students. Beginning teachers who participate in induction programs were more apt to keep

students on task, develop workable lesson plans, use effective questioning techniques, adjust classroom activities, and maintain positive classroom management (Podolsky et al., 2016).

When mentoring programs are implemented strategically with intense professional development, student achievement increases and the achievement gap decreases (Podolsky et al., 2016).

The mentoring process has proven to mitigate teacher attrition in a number of working environments. In a study of new teachers in a rural North Carolina school district, Malloy and Allen (2007) found a meaningful retention plan was able to mitigate teacher attrition for new teachers. The North Carolina school district incorporated a resiliency plan to develop and retain teachers. The model included providing care and support, meaningful participation, and high expectations (Malloy & Allen, 2007). The concepts of the resiliency plan are closely related to the mentoring process used in Griffin et al.'s (2003) study on mentoring. The mentoring process adopted by Griffin et al. (2003) included a culture of shared responsibility and support, interactions between new and experienced teachers, a continuum of professional development, a de-emphasized evaluation, clear goals and purposes, and diversified content (Ambrosetti, 2010; Ambrosetti & Dekkers, 2010).

Conclusion

The achievement gap between EA and ED students continues to grow despite government agencies investing millions of dollars to close the gap. The quality of education of ED students is negatively impacted because of high teacher attrition rates in schools which serve large percentages of ED students. A number of factors which reduce teacher attrition are not within the control of local educational leaders; however, providing mentoring for young teachers is one strategy to mitigate the exodus of teachers from schools serving ED students. Providing a quality mentoring experience may also increase a teacher's self-efficacy which is related to both

the quality of instruction a teacher provides and retention. By improving teacher retention, schools may be able to provide consistent gains in student achievement from students taught by experienced educators.

CHAPTER III

METHODS AND PROCEDURES

Chapter III is an explanation of the methodology used in the research and presents a summary of the research design, research instrument, population sample, research questions, research hypotheses, research procedure, statistical tests, and data analysis as well as the researcher's justifications for using the selected data set. The research questions and hypotheses specify the questions being explored and the hypotheses tested. The procedures and statistical tests and data analysis sections stipulate the steps of the research study, and the statistical tests to analyze data and identify significant predictors of new teacher retention.

Research Design

A predictive correlation was used as the research design for the study. The mentoring experience and the mentor/mentee relationship of teachers with one or two years of experience along with the socioeconomic status of students in the school was the independent variables. Teacher self-efficacy was the dependent variable. The study sought to determine if a teacher's mentoring experience and the mentor/mentee relationship, two predictor variables, would predict a teacher's self-efficacy, the criterion variable. A multiple regression was utilized to determine if there is shared variance between the quality of the mentoring experience and mentor/mentee relationship and the self-efficacy of teachers with one or two years of experience. Upon identifying the proportion of shared variance and computing the coefficient of correlation and the coefficient of determination, the researcher tested the research hypotheses to determine the significance of the prediction variables.

A new set of survey data was collected and utilized by the researcher from teachers with one or two years of teaching experience in the state of Mississippi. The quantitative, non-intervention design utilized survey data related to elements of teacher self-efficacy and new teacher mentoring. The study examined the mentoring experience and the mentor-mentee relationship for teachers with one or two years of teaching experience for the 2019-2020 SY and the teachers' level of teacher self-efficacy. The socioeconomic status of the school for teachers with one or two years of teaching experience was examined to determine if the economic status of a school influences a teacher's self-efficacy.

Research Instruments

To conduct the study, the following instruments were utilized: the Teacher Sense of Self-Efficacy Scale (TSES), the Relational Health Index-Mentoring (RHI-M), and survey questions measuring the mentoring experience from a study by Desimone et al. (2013) focusing on the differences in the characteristics of formal and informal mentoring were used.

Teacher Self-efficacy

According to Hoy (2000), teacher self-efficacy is a teacher's confidence in one's ability to promote student learning. An early construct of teacher self-efficacy was established by Rotter (1966) as perceived control which emerges in the research on locus control. Additionally, a concept of self-efficacy which suggests an individual's beliefs in one capability to generate particular actions was developed by Bandura (1991). Bandura used his definition of self-efficacy to develop the concept of teacher self-efficacy and used the Bandura's Instrument of Teacher Self-Efficacy to measure a teacher's belief in one's ability to influence decision making, influence school resources, influence instruction, influence discipline, enlist parental involvement, enlist community involvement, and create a positive climate. Because Bandura's

instrument was determined to be evasive (Tschannen-Moran & Hoy, 2001), the TSES was developed to provide an accurate measure of teacher self-efficacy. The TSES was used as the instrument to measure teacher self-efficacy. The TSES comprises three constructs: student engagement, instructional practices, and classroom management. There are two versions of the TSES, a long form consisting of 24 questions and a short form consisting of 12 questions. The twelve-question short form was used to measure self-efficacy for the study. The TSES is designed to measure a teacher's level of confidence to engage students, implement instructional strategies, and effectively manage a classroom.

According to Tschannen-Moran and Hoy (2001), early concepts of self-efficacy presented problems for researchers because of reliability and validity problems with the measures. Issues of the measures being transferable across contexts also presented problems for researchers (Tschannen-Moran & Hoy, 2001). Variations exist in the factor structures of both the confirmatory and exploratory factors in the Teacher Efficacy Scale (Brouwers & Tomic, 2003; Campbell, 1996; Tschannen-Moran & Hoy, 2001).

Tschannen-Moran and Hoy (2001) redefined teacher self-efficacy into three dimensions: student engagement, instructional strategies, and classroom management. The TSES was designed to measure the three dimensions of teacher self-efficacy as defined by Tschannen-Moran and Hoy (2001). A nine-point scale is used for each item on the TSES, (the anchors are 1- nothing, 3-very little, 5-some influence, 7-quite a bit of influence, and 9-a great deal). A copy of the TSES short form and scoring instructions is included in Appendix D. Below is a list of a few questions from the TSES:

- Factor 1: Efficacy for instructional strategies

* To what extent can you use a variety of assessment strategies?

- * To what extent can you provide an alternative explanation, or example when students are confused?
- Factor 2: Efficacy for classroom management
 - * How much can you do to control disruptive behavior in your classroom?
 - * How much can you do to get children to follow classroom rules?
- Factor 3: Efficacy for student engagement
 - * How much can you do to get students to believe they can do well in schoolwork?
 - * How much can you do to help your students to value learning?

Mentoring

One independent variable for the study was the new teacher experience with the mentor in teacher induction programs. Mentoring was assessed using measures from two studies. One question is from Ingersoll and Smith's (2004) study on the effects of mentoring in teacher induction programs. Ingersoll and Smith (2004) asked if the mentor is from the same field of study which is a dichotomous measure. Several questions came from a study by Desimone et al. (2013). The measures from the Desimone et al. (2013) study included two dichotomous measures and 12 non-dichotomous measures. The two dichotomous measures are related to mentor proximity, in the same school or outside the school, and whether there was or was not time available to meet. The non-dichotomous measures from the Desimone et al. (2013) study include (a) frequency of meeting, (b) duration of meeting, and (c) content focus of meetings.

The frequency and duration of meeting and several examples of content focus of meeting questions are listed below:

- Frequency of meeting: Since the beginning of the school year, how often have you had a formal, in-person, meeting with your mentor (other than a casual "hallway"

conversation)? 1=Never, 2=once or twice, 3=once a month (3-6 meetings), 4=a few times a month (7-12 meetings), 5= once a week (13-20 meetings), 6= a few times a week (21-40), 7 = every day or every other day (>40). The mid-point for meeting frequency was used for scoring purposes.

- Duration of meeting: Since the beginning of the school year, how long on average was each of your meetings with your mentor? 1 = less than 15 mins. 2 = 15-30 mins. 3 = 31-60 mins., 4 = more than 1 hour.
- Content Focus: Since the beginning of the school year, thinking about your meetings, formal and informal with your mentor, how much of a focus was each of the following general topics (e.g. classroom management, expectations of teachers in the school/district, parent involvement, assessment/testing, what content to teach, working with low-achieving students...)? 0 = not a focus, 1 = minor focus, 3 = major focus.

Mentor and Mentee Relationship

The mentor-mentee relationship was measured by the RHI-M which is an 11-question survey to measure the mentee's perception of the mentor and mentee relationship. The survey instrument was designed by Liang, Tracy, Taylor, Williams, et al. (2002). The RHI-M has three subcategories of engagement, authenticity, and empowerment/zeal and measures the relational qualities in the mentoring relationship (Liang, Tracy, Taylor, Williams, 2002). The instrument also provided the race and gender of participants.

Validity and Reliability of the TSES

The TSES, also known as the Ohio State Teacher Efficacy Scale, is an instrument designed to measure a teacher's efficacy beliefs. The TSES is also designed to measure three subscales: instruction, management, and engagement. There are two versions of the TSES, a

long form consisting of 24 items and a short form consisting of 12 items. The reader answer is a nine-point scale ranging from one (nothing) to nine (a great deal). A positive relationship exists between the TSES and several other scales measuring efficacy among teachers. The long and short-form are positively related to two separate instruments: the Rand instrument, and a variation of the Gibson and Dembo instrument (Tschannen-Moran & Hoy, 2001). According to Tschannen-Moran and Hoy (2001), the TSES is a valid and reliable instrument and a useful tool to measure the construct of teacher efficacy. The TSES is task and context-specific within the domain of teacher behavior (Tschannen-Moran & Hoy, 2001). The psychometric properties of the TSES hold for all levels of teachers (elementary, middle, and high school). The Cronbach alpha coefficient for scores in each subcategory for the TSES is as follows: engagement (.81-.91), instruction (.80 - .83), and management (.86 -.91) (Heneman et al., 2006; & Nie et al., 2012). The factorial structure of the TSES is stable across a variety of countries and cultures (Nie et al., 2012).

Validity and Reliability of the RHI-M

The RHI-M is a subscale of the Relational Health Index. RHI-M is an 11-item tool designed to assess the mentoring experience through the lens of the mentee. The survey tool is a five-point Likert-type scale with a format of one to five. One represents never and five represents always. RHI-M measure attitudes, behavior, and attributes of growth fostering relationships (Liang, Tracy, Taylor, & Williams, 2002). The empowerment portion of the RHI-I assessment contains items as “I know myself better than my mentor”, “I feel uplifted and energized by interactions with my mentor”, and “I feel comfortable expressing my deepest concerns to my mentor”. The engagement portion of the RHI-M assessment contains, “My

mentor gives me emotional support and encouragement” and “My mentor tries hard to understand my feelings and goals.” Finally, RHI-M’s authenticity portion of the assessment asks if a student/mentee can genuinely be his/herself with their mentor.

The RHI-M tool is comprised of three subcategories: engagement, empowerment/zeal, and authenticity. In previous studies, the overall consistency, Cronbach alpha coefficients, for scores on the RHI-M ranged from .82 - .96 (Frey et al., 2009; Slattery & Goodman, 2009). According to Munson and McMillen (2009), the RHI-M has good convergent evidence with other measures of relationship quality.

Other Measures

The survey questions from the Desimone study have been evaluated for reliability and validity. The Cronbach alpha of internal consistency from the Desimone et al. (2013) study was .79. An alpha coefficient of .79 suggests the items are reliable and are closely related as a group (Tavakol & Dennick, 2011). There were several other questions to collect demographic information from participants. The demographic information collected included: teacher certification route, years of teaching experience, economic status of school, race, grade level taught, and subject taught.

Population Sample

The target population for this study was teachers with one or two years of teaching experience in the state of Mississippi. An attempt was made to survey a variety of teachers with one or two years of experience from different regions of the state, different school populations, different grade-levels, and different certification routes. Convenience Sampling (CS) technique was employed. CS is utilized when every participant which meets the required criterion is surveyed (Etikan et al., 2016).

Research Questions

The purpose of the study was to identify the relationship between the mentoring experience of teachers with one or two years of experience and the teacher sense of self-efficacy. Because teacher self-efficacy is a reliable predictor of teacher retention, the study will help school districts and policy makers determine how much time, money, and effort is placed on mentoring to reduce teacher attrition. The predictable relationship between the independent variables, mentoring and the mentor-mentee relationship, and the dependent variable, teacher self-efficacy, was investigated to determine if a predictable relationship exists. Additionally, the relationship between the economic status of schools and a teacher's self-efficacy was investigated.

1. To what extent does a teacher's mentoring experience relate to teacher self-efficacy for teachers with one or two years of experience?
2. To what extent does the mentor/mentee relationship relate to teacher self-efficacy for teachers with one or two years of teaching experience?
3. To what extent does a school's socioeconomic makeup relate to teacher self-efficacy for teachers with one or two years of teaching experience?

Research Hypotheses

Hypotheses one and two address the first and second research questions related to mentoring practices. Hypotheses one and two address the first and second research questions related to mentoring experience and the mentor/mentee relationship. Many mentoring practices exist, but clarification of which practices are more effective and how they were carried out provide necessary information to develop a more specific induction plan. Assigning school mentors to new and novice teachers is normal; however, paying attention to the relationship between the two is important.

1. H₀₁: There is a relationship between the mentoring experience of a teacher with one or two years of teaching experience and the teacher's self-efficacy.
2. H₀₂: There is a relationship between the mentor/mentee relationship of a teacher with one or two years of teaching experience and a teacher's level of self-efficacy.
3. H₀₃: There is a relationship between the level of socioeconomic status of a teacher's school with one or two years of experience and a teacher's level of self-efficacy.

Procedures

Approval from the Institutional Review Board (IRB) was received from the University of Mississippi. After approval was received, the researcher emailed individuals within his professional contacts and superintendents based on a list provided by the Mississippi Department of Education, using the Letter to Administrators (see Appendix A). The researcher also received support from other educational leaders at the University of Mississippi to recruit school administrators and other educational leaders throughout the state of Mississippi to share the survey with their teachers with one or two years of teaching experience. The researcher also contacted schools of education in the state of Mississippi to share the survey instrument with teachers with one or two years of teaching experience working in the state of Mississippi. Educational leaders of non-traditional teacher education programs such as Teach for America (TFA), Mississippi Teacher Corps (MTC), Master of Arts in Teaching (MAT) programs, Mississippi Alternate Path to Quality Teachers (MAPQT), Teacher Mississippi Institute (TMI), and American Board Certification for Teacher Excellence (ABCTE) were recruited to share the survey with first and second-year teachers within their programs.

A letter was sent to educational leaders throughout the state of Mississippi asking for support to share the research instrument with teachers with one or two years of teaching

experience in the state of Mississippi. Two days later an email containing a cover letter and a link to the survey via Qualtrics was sent to school leaders to share with teachers with one or two years of teaching experience to complete the survey. After a week, a follow-up email was sent to educational leaders to share the survey with the survey population. The researcher monitored the response rate to determine if a third reminder should be sent to educational leaders. The third reminder was sent to leaders with access to specific groups. For example, if there was a low representation of Teach for America Teachers, the researcher sent reminders to Teach for America administrators asking for support to encourage teachers to complete the survey.

After the data was collected and prepared for analysis, the researcher used the Statistical Package for Social Sciences program to conduct a multiple regression analysis to determine if a teacher's self-efficacy can be predicted for a teacher based on a teacher's mentoring experience and mentor/mentee relationship. According to Hinkle et al. (2003), multiple regression is designed to provide a prediction score on the criteria variable from scores on multiple predictor variables. The criterion variable is teacher self-efficacy, and multiple predictor variables are mentoring experience and mentor/mentee relationship.

Statistical Tests and Data Analysis

This study was designed to identify any existing correlations between the mentoring experience of new teachers and teacher self-efficacy. According to Mukaka (2012), correlation is a term which refers to an association, connection, or a type of relationship, link, or correspondence. The intention of the study was to determine if a rich mentoring experience lead to a teacher having an increased level of teacher self-efficacy in relation to teachers who did not experience a rich mentoring experience. The factors of the mentoring experience were the independent variable and teacher self-efficacy is the dependent variable.

Summary

The possible relationship between a new teacher's mentoring experience and the teacher's sense of teacher self-efficacy was examined in this research. The purpose of this study was to determine if there is a correlation between the teacher mentoring experience and a teacher's sense of efficacy. Additional research is needed to determine if the mentoring experience will improve the chances a new teacher may stay at their current school and in the teaching profession. The need for research in the role new teacher mentoring plays in teacher self-efficacy was supported in previous chapters. Chapters I and II support the need for this study in the U.S. An overview of the research questions, materials, and procedures is presented.

CHAPTER IV
PRESENTATION OF RESULTS

Introduction

The purpose of this chapter is to present the findings and answer the research questions:

1. To what extent does a teacher's mentoring experience relate to teacher self-efficacy for teachers with one or two years of experience?
2. To what extent does the mentor/mentee relationship relate to teacher self-efficacy for teachers with one or two years of teaching experience?
3. To what extent does a school's socioeconomic makeup relate to teacher self-efficacy for teachers with one or two years of teaching experience?

To answer these questions, this research utilized the following three research hypotheses:

1. There is a relationship between the mentoring experience of a teacher with one or two years of teaching experience and the teacher's self-efficacy.
2. There is a relationship between the mentor/mentee relationship of a teacher with one or two years of teaching experience and a teacher's level of self-efficacy.
3. There is a relationship between the level of socioeconomic status of a teacher's school with one or two years of experience and a teacher's level of self-efficacy.

The purpose of this study was to identify effective factors to increase teacher self-efficacy because teacher self-efficacy has been identified as a factor in teacher retention and a reduction in teacher attrition (Callahan, 2016). The study was designed to investigate the relationship

between the mentoring experience of teachers with one or two years of teaching experience in the state of Mississippi and teacher self-efficacy. The sample includes both teachers with one or two years of teaching experience who have remained in the profession, and teachers who have left the profession. This study is also designed to identify the nature of relationships between teacher self-efficacy and the mentor/mentee relationship. Finally, the study was designed to identify any relationships between teacher self-efficacy and the socioeconomic status of schools in which teachers are assigned.

The independent variables for this study were the mentoring experience, the mentor/mentee relationship, and the socioeconomic status of the school for teachers with one or two years of teaching experience. The mentoring experience was measured by a series of questions from a study conducted by Desimone et al. (2013). The mentor/mentee relationship was defined by the Relational Health Index-Mentor scale. The socioeconomic status of the teacher's school was based on four classifications: School-Wide Title I school, Targeted Title I school, non-Title I school, and not sure. Teacher self-efficacy, the dependent variable, was measured by the TSES.

The population of the study was teachers with one or two years of teaching experience in the state of Mississippi who remain in the profession and those who have left the profession. Convenient Sampling was used to reach teachers with one or two years of teaching experience across the state of Mississippi. The researcher emailed every superintendent in the state to reach teachers with one or two years of teaching experience. Follow up emails were sent to superintendents and the researcher attempted to contact assistant superintendents from several school districts, especially large and diverse school districts to encourage further participants to complete the surveys. The researcher also contacted several agencies to reach teachers with one

or two years of teaching experience. The agencies included Teach for America; Mississippi Teacher Corp; Teach Mississippi Institute; several Master of Teaching programs; and several Schools of Education, for access to recent graduates. The researcher received 108 responses; however, only 61 surveys were used for the study. Of the 47 responses not used, most were because respondents did not complete the survey. A small number of responses were removed because some respondents reported not having a mentor but completed the survey as if they had a mentor.

Description of Participants

The sample consisted of 61 teachers for this study. Teachers ranged in age from 23 to 55 years ($M = 31.25$, $SD = 9.367$). Eighty-three percent of the sample were females, 14.8% were male, and 1.6% chose not to report a gender. Fifty-one percent of the participants were African American, 48% percent were Caucasian, and one percent identified as other. Thirty-eight percent of the participants were traditional route teachers, 36% of the participants received their certification via a Master of Teaching degree. Additionally, five percent of the teachers surveyed were Teach for America teachers, one percent of the participants were Mississippi Alternate Path to Quality Teachers, 12% of the teachers were Teach Mississippi Institute teachers, and eight percent were emergency route teachers.

Instruments

Data were compiled from a survey that combined the Relational Health Indices – Mentor (RHI-M) survey, the Teacher Sense of Self-Efficacy (TSES) short form, and questions to measure the teachers' mentoring experience from a study conducted by Desimone et al. (2013). The TSES short form is a survey designed to measure a teacher's sense of teacher self-efficacy. The survey has three sub-categories: Efficacy in Instructional Strategies, Efficacy in Student

Engagement, and Efficacy in Classroom Management. Table 1 provides descriptive statistics and Cronbach alpha for the TSES survey.

Table 1

Descriptive Statistics and Cronbach Alpha

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	α
Teacher Sense of Efficacy	61	85.95	13.126	.923
Relational Health Indices – Mentor	61	42.85	11.48	.961
Mentoring Experience – Content Focus	61	13.36	2.828	.908

The Cronbach alpha score for the TSES was .923. The Cronbach alpha score suggests there is a strong sense of internal validity. TSES has been internally consistent in previous studies (Tschannen-Moran & Hoy, 2001; Duffin et al., 2012) with a Cronbach alpha score of .96 and .97. The Cronbach alpha score for the RHI-M scale was .96 which indicates a strong sense of internal validity. In a previous study, the RHI-M had a Cronbach alpha score of .90 and .89 (Frey et al. 2006). The Cronbach alpha score for the mentoring experience, content focus section, was .908 which suggests a strong sense of internal validity. The Cronbach alpha score for content focus in the Desimone et al. (2013) study was .79.

The teacher mentoring experience was measured by using a series of questions from a study by Desimone et al. (2013). The participants were asked 13 questions about their mentoring experience. The questions were divided into three categories: content focus, mentor quality, and active learning. The questions were combined to generate a score to represent the mentoring experience. The following are a few of the questions used to measure the mentoring experience:

1. Are you and your mentor located in the same building?

2. Does your mentor have similar content experience?
3. How much of a focus was the content to teach during your meetings?
4. How much of a focus was how students learn during your meetings?
5. How much of a focus was analyzing student work during your meetings?

The RHI-M was used to measure the mentor/mentee relationship. The researcher gave participants ten questions about their relationship with their mentor. The researcher used a five-point Likert scale to rate each of the ten questions, 1 – Never, 2 – Seldom, 3 – Sometimes, 4 – Often, 5 – Always. The following are sample questions comprised the RHI-M survey:

1. I can be genuinely myself with my mentor.
2. My mentor's commitment to and involvement in our relationship exceeds that required by his/her social/professional role.
3. I feel as though I know myself better because of my mentor.
4. My mentor gives me emotional support and encouragement.
5. I try to emulate the values of my mentor (such as social, academic, religious, physical/athletic).
6. My mentor tries hard to understand my feelings and goals (academic, personal, or whatever is relevant). My relationship with my mentor inspires me to seek other relationships like this one.
7. I feel comfortable expressing my deepest concerns to my mentor.

The participants were given the option to identify the socioeconomic status of their school based on the school's Title I status. Participants chose between the following school classifications: School-wide Title I, Targeted Title I school, Non-Title I school, or not sure. Socioeconomic status of the school is a categorical variable.

Results

A multiple regression analysis was conducted on teacher self-efficacy based on the teacher mentoring experience and the mentor/mentee relationship for teachers with one or two years of teaching experience. Descriptive statistics are reported in Table 2. Teacher self-efficacy scores were normally distributed. Standardized residuals were also normally distributed.

Scatterplots were analyzed, and no curvilinear relationships between the criterion variable and the predictor variables or heteroscedascity were evident. There was a relationship between the mentoring experience, the mentor/mentee relationship and teacher self- efficacy score, $F(2, 58) = 4.99$, $p = .027$. A medium effect size was noted with approximately 15% ($R^2 = .147$) of the variance in teacher efficacy scores accounted for by the mentoring experience, and the mentor/mentee relationship. The mentor/mentee relationship was a predictor of teacher self-efficacy score, $p = .03$ (see Table 3). The $sr^2 = .08$ which means the mentor/mentee relationship uniquely accounts for approximately 8 percent of the variance. The mentor experience was not significant and uniquely accounted for 3 percent of the variance. Given the sample size of $n = 61$, statistical significance would be detected for small effect sizes, $R^2 > .14$.

Table 2

Descriptive Statistics

	<i>M</i>	<i>SD</i>	<i>n</i>	TSES	Mentor Ex.	Relationship
TSES	85.95	13.13	61	----	.266*	.343*
Mentor Experience	8.91	15.95	61	----	----	.300*
Mentor/Mentee Relationship	42.85	11.48	61	----	----	----

* Pearson correlations

Table 3*Mentoring Experience Descriptive Statistics*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>
One year of experience	26	7.25	13.54
Two years of experience	35	10.14	17.62
Total	61	8.91	15.95

Table 4*Multiple Regression Results for Teacher Self-Efficacy*

Predictor	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>P</i>	<i>sr</i> ²
Mentor Experience	.148	.105	.180	1.412	.16	.03
Mentor Relationship	.330	.145	.289	2.271*	.03	.08

**p* = .03

Table 3 indicates the number of teachers with one or two years of teaching experience (*n* = 61) completed the survey. There were 26 teachers with one year of teaching experience and 35 teachers with two years of teaching experience. The mentoring experience mean score for teachers with one year of experience was 7.25 (*SD* = 13.54). The mentoring experience mean score for teachers with two years of teaching experience was 10.14 (*SD* = 17.26). The total mean score for teachers with one and two years of teaching experience was 8.91 (*SD* = 15.95). According to Table 3, teachers with two years of teaching experience had a higher mentoring experience score than teachers with one year of teaching experience.

Table 5 represents the mean of the Relational Health Index – Mentor (RHI-M) scale for teachers with one or two years of teaching experience. The RHI-M scale is designed to measure

the mentor/mentee relationship. Table 5 provides the mean and standard deviation for the mentor/mentee experience for teachers with one or two years of teaching experience. The data are organized by teachers with one and two years of teaching experience and the total.

Table 5

Mentor/Mentee Relationship Descriptive Statistics

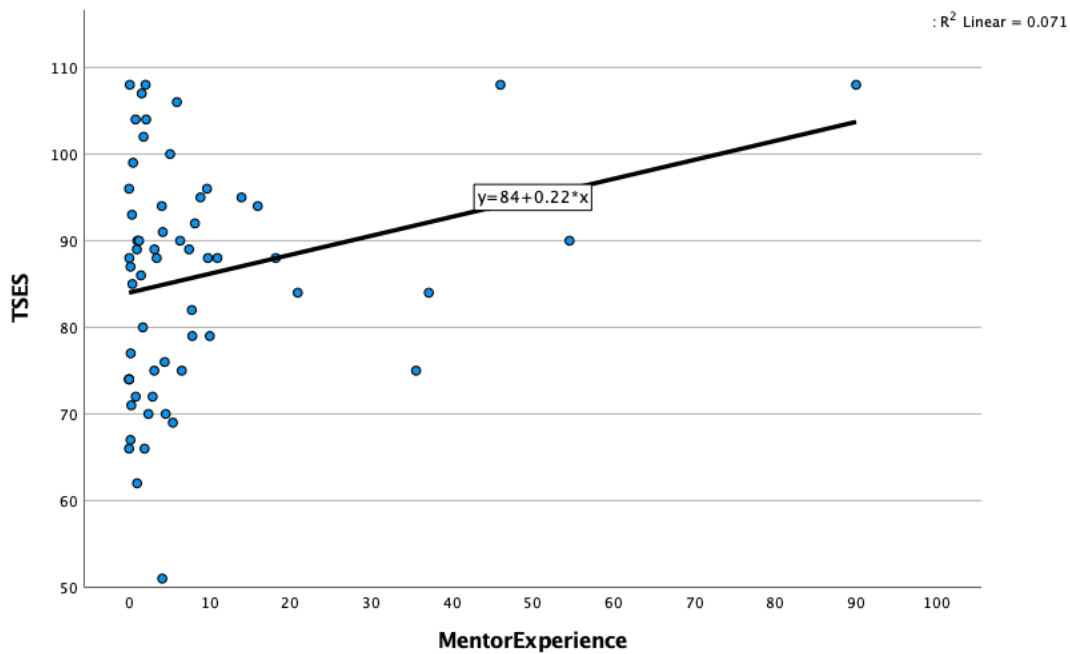
Variable	<i>n</i>	<i>M</i>	<i>SD</i>
One year of experience	26	42.08	12.12
Two years of experience	35	43.43	11.13
Total	61	42.85	15.95

Table 5 indicates the number of teachers with one or two years of teaching experience ($n = 61$) completed the survey. There were 26 teachers with one year of teaching experience and 35 teachers with two years of teaching experience. The mean Relational Health Index – M (RHI-M) score for teachers with one year of experience was 42.08 ($SD = 12.12$). The RHI-M mean score for teachers with two years of teaching experience was 43.43 ($SD = 11.13$). The total RHI-M mean score for teachers with one and two years of teaching experience was 42.85 ($SD = 11.48$). According to Table 5, teachers with one year of teaching experience had a higher RHI-M score than teachers with two years of teaching experience.

Figure 1 offers a visual representation of the relationship between teacher mentoring experience and teacher self-efficacy for teachers with one or two years of teaching experience. A trend line for the data is shown in the scatter plot.

Figure 1

Correlation Between the Mentoring Experience and Teacher Self-efficacy



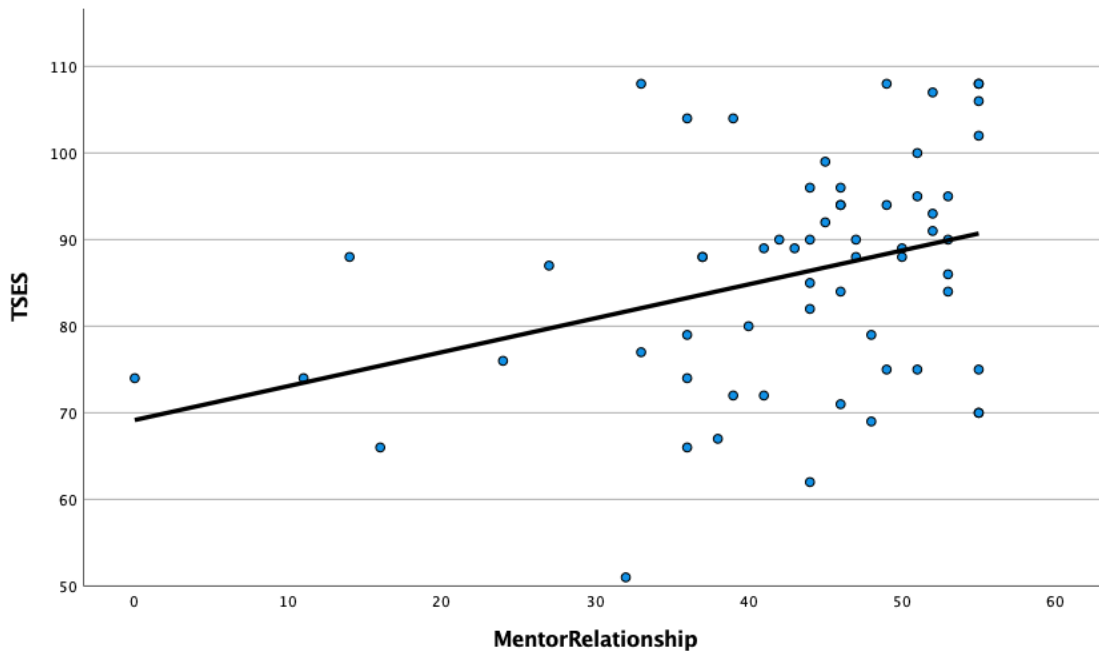
Note. This figure demonstrates the relationship between the mentoring experience for teachers with one and two years of teaching experience and teacher self-efficacy.

According to Figure 1, there is not a strong relationship between the mentoring experience and teacher self-efficacy. Additionally, Figure 1 shows examples of outliers in the data based on the mentoring experience. Based on Figure 1, there appears to be a few outliers, most of the outliers are found in the mentoring experience.

Figure 2 provides a visual representation for the mentor/mentee relationship and teacher self-efficacy for teachers with one or two years of teaching experience. The figure is a scatter plot of the two values and a trend line.

Figure 2

Correlation Between the Mentoring/Mentee Relationship and Teacher Self-efficacy



Note. This figure demonstrates the relationship between the mentor/mentee relationship score and the teacher self-efficacy score. The mentor/mentee relationship was measured by RHI-M instrument. The teacher self-efficacy score was measured by the TSES short form.

According to Figure 2, there is a positive relationship between the mentor/mentee relationship and teacher self-efficacy. There appears to be a few outliers with one being very strong. Most of the teachers surveyed appear to have scored above 30 on the RHI-M survey. Additionally, all but one teacher scored above 60 for teacher self-efficacy.

A one-way ANOVA was conducted to answer the following research question: To what extent does a school's socioeconomic makeup relate to teacher self-efficacy? The one-way ANOVA was conducted to explore group differences based on Teacher Self-Efficacy Scale

score. An alpha level of .05 was utilized. Descriptive statistics are in Table 1. All groups were normally distributed. Variances were homogeneous ($F[3, 57] = .527, p = .207$). Statistically significant differences were not evident among the socioeconomic status of schools ($F[3, 57] = .527, p = .667$). A small effect size was noted, ($\eta^2 = .027$), indicative of a moderate degree of practical significance. Given the sample size ($n = 61$), statistical significance would be detected in a small effect sizes, ($\eta^2 > .161$).

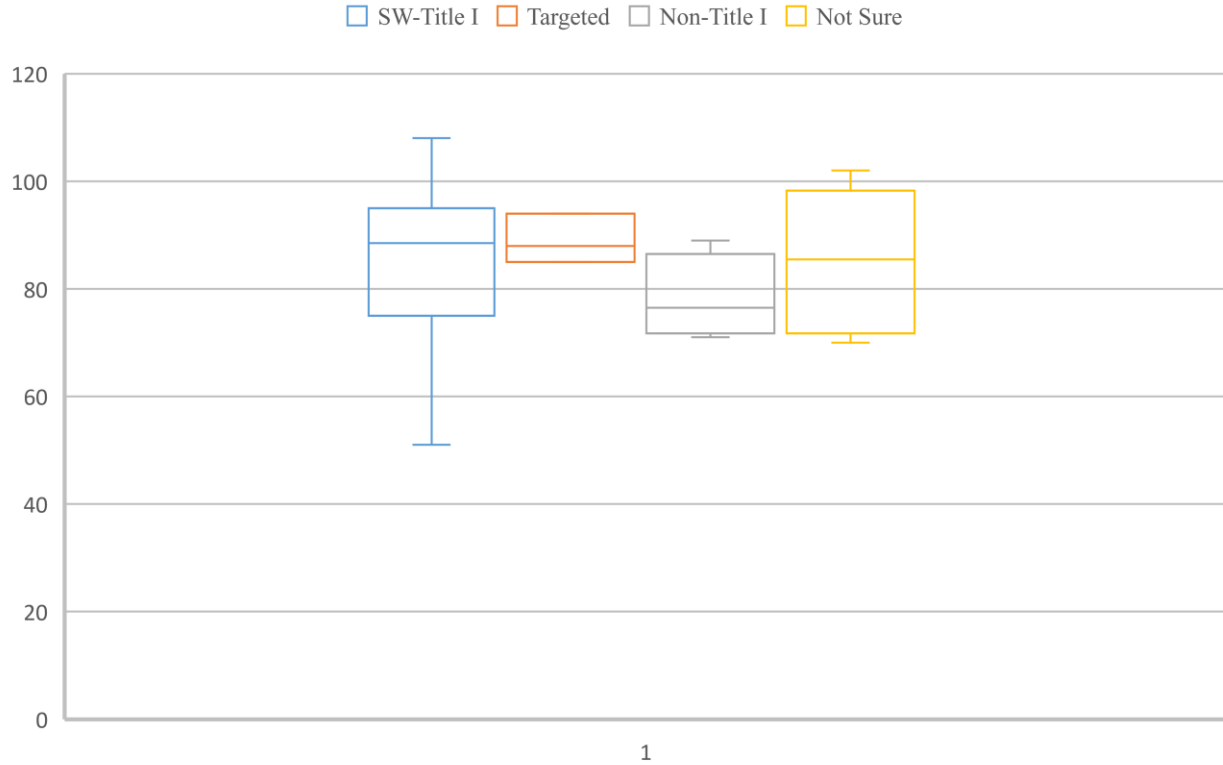
Table 6

Descriptive Statistics for School Socioeconomic Status and Teacher Self-Efficacy Scale Score

Group	<i>N</i>	<i>M</i>	<i>SD</i>
SW-Title I	46	86.48	13.910
Targeted	3	89.00	4.583
Non-Title I	4	78.25	7.890
Not Sure	8	85.63	12.660
Total	61	85.95	13.126

Figure 3

Mean Performance of Teacher Self-Efficacy Based on Socioeconomic Status



Note. Figure 3 provides a visual representation for the socioeconomic status of a school and teacher self-efficacy. The figure is a series of box and whisker plots.

According to Figure 3, the variation in teacher self-efficacy is greater for teachers at Schoolwide (SW) Title I schools. The variation for teachers in SW Title I schools was smaller for the top two quartiles than the third and fourth quartiles. Targeted Title I schools and Non-Title I schools have a small sample sizes, three and four respectively. The variation in data for teachers who were unsure about their school’s Title I status was similar among quartiles two and four. Additionally, the variation among the first and fourth quartile was very similar with very little variation.

Chapter Summary

The purpose of this chapter was to provide the analysis of the data for the research study. Data were compiled from teachers with one or two years of teaching experience during the first semester of the 2020-2021 school year. The following is the major finding for the study. The researcher found a statistically significant relationship between the mentor/mentee relationship for teachers with one or two years of teaching experience and teacher self-efficacy. The data did not indicate a statistically significant relationship between the mentor experience for teachers with one or two years of teaching experience and their sense of teacher self-efficacy. According to the data, the mentoring experience for teachers with one or two years of experience and teacher self-efficacy has a positive relationship; however, the relationship is not statistically significant.

Additionally, the socioeconomic status of a school for teachers with one or two years of teaching experience did not significantly impact the teacher self-efficacy score. According to the data, teachers from Targeted Title I schools had the highest sense of teacher self-efficacy. Teachers from School-Wide Title I schools had the second-highest level of teacher self-efficacy.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this research study was to determine what effect the mentoring experience, the mentor/mentee relationship, and the socioeconomic status of the teacher's school had on teacher self-efficacy for teachers with one or two years of teaching experience. A survey consisting of the Teacher Sense of Efficacy Scale, the Relational Health Indices – Mentor survey, and questions about the mentoring experience were used to analyze the research questions in the study. The data was collected during the fall semester of the 2020-2021 school year. This chapter provides a discussion and interpretation of the results of the research, conclusions of the study, limitations of the study, and implications of the results. This chapter also provides recommendations for school leaders along with recommendations for future research.

Research Questions

1. To what extent does a teacher's mentoring experience relate to teacher self-efficacy for first and second-year teachers?
2. To what extent does the mentor/mentee relationship relate to teacher self-efficacy for teachers with one or two years of teaching experience?
3. To what extent does a school's socioeconomic makeup relate to teacher self-efficacy for teachers with one or two years of teaching experience?

Research Design

The quantitative design incorporated survey data from three different surveys; the Teacher Sense of Efficacy Scale, the Relational Health Indices – Mentor survey, and questions about the mentoring experience (Desimone et al., 2013). Data was analyzed using a multiple regression to identify a significant relationship between the mentoring experience and teacher self-efficacy, and the relationship between the mentor/mentee relationship and teacher self-efficacy. A one-way ANOVA was conducted to determine if there was a significant relationship between the socioeconomic status of a school and teacher self-efficacy.

Summary of Results and Suggested Actions

The study centered on three topics that were discussed in the literature review on the problem of teacher attrition and teacher retention: new teacher mentoring, mentor/mentee relationships, and the socioeconomic status of schools. Research question one addressed the mentoring experience and teacher self-efficacy for teachers with one or two years of teaching experience. Research question two addressed the mentor/mentee relationship and teacher self-efficacy for teachers with one or two years of experience. Research question three addressed the relationship between the socioeconomic status of a school and the teacher self-efficacy for teachers with one or two years of teaching experience.

Research Question One

Nurturing teacher self-efficacy for new and novice teachers may result in a reduction of teacher stress, burnout, and intent to quit (Sass et al., 2011). Mentor-related experiences have proven to be significantly positively related to teacher self-efficacy and teachers participating in more mentor-related activities outside of required time with their mentor reported a positive change in teacher self-efficacy (LoCasale-Crouch et al., 2012). The author studied the

relationship between the mentoring experience and teacher self-efficacy for teachers with one or two years of experience. Unlike the LoCasale-Crouch et al. (2012) study, the researcher did not detect a significant relationship with the teacher self-efficacy and the mentoring experience. The mentoring experience in this study was measured by calculating the frequency of the mentor/mentee meetings, the duration of the meetings, and the content focus. A multiple regression was conducted with the mentoring experience and the mentor/mentee relationship serving as the independent variables and teacher self-efficacy as the dependent variable. Teacher self-efficacy was measured using the TSES instrument.

Research Question Two

The researcher found a significant relationship between teacher self-efficacy and the mentor/mentee relationship. The findings are from a multiple regression which included the mentor/mentee relationship and the mentoring experience as independent variables and teacher self-efficacy as the dependent variable. The mentor/mentee relationship generated levels of significance of $p < .05$.

The findings of this study are similar to those of previous research by Mitchell et al. (2009) who found teachers who have a high level of trust with their mentors have a higher level of personal teaching efficacy and low levels of trust in their mentor have lower levels of personal teacher efficacy. Additionally, the mentor/mentee relationship has been shown to have a significant relationship with the self-efficacy of beginning teachers (Henry, 2016). According to Henry (2016), the mentor/mentee relationship has a positive relationship with self-efficacy in classroom management, instructional strategies, and student engagement.

Research Question Three

There is no significant difference between the socioeconomic status of a school and the teacher self-efficacy of a teacher with one or two years of teaching experience. An ANOVA test was used to test the relationship between the socioeconomic status of a school and a teacher's self-efficacy. The results of the ANOVA test did not find any levels of significance between the socioeconomic status of the school and teacher self-efficacy for teachers with one or two years of experience at the $p < .05$. The results are similar to previous studies which found the socioeconomic status of a school and teacher self-efficacy are not related (Gresham, 2001). The researcher also found the data lacked adequate power and required more responders to increase the study's power. The study's respondents were overwhelmingly from School-Wide Title I schools with a very small number of respondents from the other types of schools. However, the number of School-Wide Title I participants (75%) is a reflection of the number of School-Wide Title I schools (71%) in the state of Mississippi. Table 6 in Chapter IV provides a summary of the number of respondents from each set of respondents based on socioeconomic status.

Discussion

The purpose of this study was to determine if the mentor/mentee relationship, the mentoring experience, and the socioeconomic status of a school have a significant impact on teacher self-efficacy. The results of the study found a significant positive relationship between the mentor/mentee relationship and teacher self-efficacy for teachers with one or two years of teaching experience. The study also found a positive relationship between the mentoring experience and teacher self-efficacy for teachers with one or two years of experience. The study did not find a relationship between the socioeconomic status of a school and the teacher self-efficacy of teachers with one or two years of experience.

Mentoring Experience

The mentoring experience and new teacher induction programs are interventions for school districts around the world to reduce teacher attrition and increase teacher retention. According to McCreight (2000), the lack of support during the first years of teaching is one of the core reasons teachers leave the teaching profession. Identifying strategies in the mentoring process that positively impact teacher self-efficacy can potentially help administrators on school and district levels to develop purposeful and meaningful mentoring and induction plans. The researcher did not find a statistical significance between teacher self-efficacy and the mentoring experience; however, a positive relationship between the two variables was identified. According to Colson et al. (2017), teachers with a higher sense of self-efficacy have been found to be more flexible in their teaching methods (Wiener, 2003), demonstrate a higher sense of commitment to teaching (Coladarci, 1992), and work longer with students who demonstrate behavior or learning disabilities (Webb & Ashton, 1986). Because the teacher mentoring experience can improve the self-efficacy of a teacher, it is suggested schools continue to be intentional with their mentoring and induction programs, as well as identifying opportunities to improve the experience whenever possible.

Mentor/Mentee Relationship

The data show the relationship between mentoring experience and teacher self-efficacy to be statistically significant. Partnering new and novice teachers with mentors who teach in the same grade or content has found positive results (Smith & Ingersoll, 2004; LoCasale-Crouch et al., 2012). When school leaders are developing their induction and new teacher mentor programs, it is imperative that school leaders take into account the mentor's ability to relate and connect with others. According to Lopez et al. (2004), more insight on the greatest potential

factors to influence teacher development and student outcomes is needed. A closer examination of the relationships between the mentor and mentee may help school leaders measure the effectiveness of their mentoring and induction programs. Smith and Ingersoll (2004) suggest intense induction programs based on time spent and a variety of professional development experiences increase the likelihood a new teacher stays in the field. Continuing the research on the teacher mentor/mentee relationship may provide more insight on the entire mentoring experience and why new teachers remain in the education profession.

School's Socioeconomic Status

The data did not show a statistical significance in the socioeconomic status of a school and the sense of teacher self-efficacy for teachers with one or two years of teaching experience. Additionally, the researcher was unable to identify a connection between the socioeconomic status of a teacher's school and their sense of self-efficacy as a teacher. The response rate was overwhelming from one category: School-Wide Title-I schools. Additionally, the number of responders based on the number of categories was low for a survey with four categories which resulted in the study lacking power for the socioeconomic status question. Because the researcher did not meet the minimum number of respondents, the one-way ANOVA designed to determine if the socioeconomic status of a school influenced teacher self-efficacy lacked power.

Limitations

The results of this research study reflected teachers with one or two years of teaching experience in Mississippi. One of the limitations of the study include the inability to reach more teachers with one or two years of teaching experience throughout the state of Mississippi. The study lacked enough power to effectively determine if a teacher's self-efficacy is influenced

based by socioeconomic status of the school. Specifically, the study did not have enough responders from non-Schoolwide Title I schools. The researcher took several measures to ensure the study had a diverse population. The researcher emailed every superintendent of a public school in the state. If emails were returned, the researcher found updated email addresses as well as emails of associate and assistant superintendents. When response rates were low, the researcher reached out to several agencies, including but not limited to Teach for America (TFA), Mississippi Teacher Corp, Teach Mississippi Institute, several Master of Teaching programs, and several Schools of Education for access to recent graduates. Additionally, a number of teachers did not know the economic status of their schools. If the teachers knew the school status, it may have impacted the findings on socioeconomic status and teacher self-efficacy. Finally, the means of the self-efficacy for teachers with one or two years of teaching experience based on the teacher certification route was not analyzed. Analyzing the teacher route may provide school, district, and state leaders insight into teacher self-efficacy for teachers with one or two years of experience based on the teacher certification route.

To increase the number of participants in the study, the researcher took several steps to increase participation. The researcher communicated with TFA and met several times with TFA representatives to explain the study and gain approval from the program administrators. Once approval was obtained from TFA administrators, the researcher created a video for TFA teachers due to Covid-19 restrictions to encourage participation in the program. The researcher explained the purpose of the study and how it may add to the existing body of research to help improve teacher retention through mentoring. The researcher-maintained communication with TFA administration to remind and encourage teachers to participate in the research study.

To increase the number of participants from non-Title I schools, the researcher contacted several districts on multiple occasions. If the superintendent from the district did not respond to the researcher's initial email, the researcher sent a follow-up email to the superintendent and the assistant superintendents. Several districts with diverse school populations responded to the second or third attempt. Some districts explained that they were not allowing research to be conducted in their district; some districts did not continue correspondence after the first response; and some districts were responsive and provided permission to contact school building administrators to survey their teachers. One suburban district that kept data on teacher retention and tracked retention data volunteered to send the survey directly to their teachers. The researcher was able to notice an increase in respondents after the district agreed to send the survey link directly to teachers from the assistant superintendent's office. Overall, most of the districts that responded to the researcher's request to survey their teachers were from districts that overwhelmingly served students from low socioeconomic backgrounds.

Implications

The research study measured the relationship between teacher self-efficacy of teachers with one or two years of teaching and the mentor/mentee relationship, the mentoring experience, and the socioeconomic status of the teacher's school. School administrators can use the findings from this research to improve teacher self-efficacy for new and novice teachers. Because teacher self-efficacy has a positive relationship with teacher retention, teacher behavior, teacher satisfaction, and the use of productive teaching strategies, school leaders should place an emphasis on developing the relationship between mentors and mentees.

Additionally, the positive relationship between teacher self-efficacy and the mentoring experience may inspire school administrators and state department level administrators to

develop policies and procedures to ensure new and novice teachers experience a quality mentoring experience. Developing policies and procedures such as mentor training, new teacher induction programs, utilizing interest inventories, or implementing team building activities to enhance the mentor/mentee relationship. For instance, if a school does not have a personable mentor in the same content area as a new teacher; a school may provide a new teacher with two mentors, an academic mentor and a social mentor. The academic mentor may be a teacher who can provide academic-based support for a new or novice teacher. The social mentor may be a teacher to help new and novice teachers get acclimated to the school or the community. Providing a mentor or mentors to provide academic and social support may help new and novice teachers adjust to the rigors of teaching and increase teacher retention. For school districts and schools that do not have a mentoring program or induction program for new and novice teachers, the author provides suggestions for school and district administrators.

Before assigning new and novice teachers a mentor, school administrators need to understand what to look for when identifying potential mentors on their staff. The practice of assigning new and novice teachers a mentor is not a new practice. Providing mentors with training and insight on their roles and responsibilities is a practice that is often left out or overlooked. District and school building administrators may improve the mentor/mentee experience and relationships if continuous training and expectations are provided for mentors and mentees. When identifying and training mentors, school administrators must be intentional in fostering positive relationships between mentors and mentees. Administrators must be careful when matching mentors and mentees to avoid negative experiences (Ambrosetti, 2010). According to Shwartz and Dori (2016), mentors and novice teachers view the mentoring experience through three lenses; technical, professional, affective. Through the affective lens,

mentees view their mentoring experience as positive because the mentee views their interaction with their mentor as a friendship and/or motivational (Shwartz & Dori, 2016). Additionally, trust and a caring approach will help develop a positive relationship (Hudson, 2013). Conversely, mentees view their mentoring experience as a negative experience if their mentor is critical or conveys disappointment (Shwartz & Dori, 2016). If mentors expect to prevent tension, mentors must find a way to be perceived as non-judgemental while serving the role of assessor and confidant (Hudson, 2013). Additionally, the lack of mentoring skills and personality mismatches are a major source of negative relationships between mentors and mentees.

Providing new and novice teachers with a mentor is not enough to mitigate the challenges new and novice teachers will face in their early years of teaching. Mentors assigned to new and novice teachers need to receive training and support. Without support and training, mentors may also struggle with providing new and novice teachers with quality support and feedback. The way a mentor communicates feedback may have a negative impact on the mentor/mentee relationship (Shwartz & Dori, 2016). According to Giebelhaus and Bowman (2002), mentor training equips mentors with a framework to provide effective and comprehensive feedback to young and developing professionals. Mentors benefit from professional learning focused on concrete practices such as co-planning, observing and debriefing, and analyzing student work (Stanulis et al., 2019). In addition to providing mentors with training on the theory of mentoring, mentors need continuous support in the practice of mentoring theory. Mentors need support to help navigate challenging situations with mentees and to discuss any evolving issues and concerns (Gardiner, 2009). Because the mentor/mentee relationship may have a significant impact on a teacher's sense of self-efficacy, mentors may need support to individualize the mentoring experience for new and novice teachers. According to Gardiner (2009), effective

mentoring programs provide mentors with comprehensive professional development which builds on the knowledge of mentoring and recognizing context, ongoing mentor support, and a forum for continuous support to tailor the needs of mentees.

Mentoring and Induction Program Suggestions

Effective mentoring and induction programs are a result of school administrators on the district and school level being committed and intentional in supporting new and novice teachers. School administrators must be committed to allocating funds, time, and resources to induction and mentoring programs. Money must be devoted to training school administrators and mentoring teachers on effective strategies to ensure programs are successful. Additionally, school leaders must also be intentional about dedicating time for professional development, providing time for mentors and mentees to meet and develop relationships throughout the school year, and dedicating time for mentors and mentees to meet throughout the school year to discuss classroom management, content, instructional strategies, and to provide support to adjust mentally to the rigors of being a new or novice teacher. Finally, the author suggests school leaders invest school resources into induction and mentoring programs by scheduling planning time for mentors and mentees to meet. Ideally, mentors and mentees would share planning time to discuss topics such as content, instructional strategies, classroom management as well as the social and emotional issues that are sure to arise for new and novice teachers.

According to Flynn and Nolan (2008), the mentor and mentee relationship is the core of a mentoring program. Mentor and mentee relationships are enhanced when trust, acceptance, and transparency are present (Gholam, 2018). Previous research suggests school leaders can support the mentor and mentee relationship by being intentional by implementing some of the following strategies: designing supportive environments (Gholam, 2018), setting goals for mentors

(Hudson & Hudson, 2016; Flynn & Nolan, 2008), mentor training (Hayes & Mahfouz, 2020; Flynn & Nolan, 2008), and a one-on-one relationship with intentional pairing (Hayes & Mahfouz, 2020; Gholam, 2018; Flynn & Nolan, 2008). Additionally, teacher attitudes may impact teacher mentor and mentee relationships (Henry, 2016) so monitoring the mentor/mentee relationship is important to the mentor/mentee experience and relationship. Supporting and promoting the mentor's self-efficacy can help create stronger mentor relationships (Prabhu, 2020). School administrators help improve the mentor and mentee relationship by using strategies that were found to be effective from previous research.

Understanding the shortcomings of mentoring and induction programs is just as important as identifying strategies that positively impact the mentor and mentee relationship. According to Flynn and Nolan (2008), failing to provide time for mentors and mentees to meet before the start of the school year, inadequate training for mentors, failure to recognize the importance of the mentor/mentee relationship, and failure to provide time for peer observations were all pitfalls of mentoring programs. Additionally, new and novice teachers in high-need areas may require more intensive support (Hudson & Hudson, 2016). As school and district leaders develop mentoring programs for new and novice teachers, avoiding the pitfalls and mistakes made by previous school leaders is important. Schools that experience staffing shortages because of low teacher retention rates should prioritize mentoring and induction programs as a means to retain teachers and reduce teacher shortages and turnover.

Recommendations for Future Research

The current research study investigated the impact the mentoring experience, the mentor/mentee relationship, and the socioeconomic status of school has on teacher self-efficacy for teachers with one or two years of teaching experience. The findings from this study suggest

the mentor/mentee relationship has a significantly positive effect on teacher self-efficacy. The study also suggests there is a positive relationship between the teacher mentoring experience and teacher self-efficacy. Further research measuring the impact the mentor/mentee experience and mentoring experiences have on teacher self-efficacy growth for teachers from year to year for the first three years of teaching experience is needed. Additionally, to understand the impact the socioeconomic makeup of a school has on teacher self-efficacy, a research study with a larger and more diverse population is needed.

Further research on mentor/mentee relationship and mentoring experience for new and novice teachers also needs to be conducted at the state, district, and school levels. Because the teacher mentor/mentee relationship has a significant impact on teacher self-efficacy, it may help school leaders to identify activities and strategies to improve the mentor/mentee relationship via the mentoring experience. Continued research focused on the mentor/mentee relationship and teacher self-efficacy is also suggested with a correlational study measuring the mentor/mentee relationship and the difference in teacher self-efficacy at the beginning of the year and at the end of the school year being paramount.

Conclusion

The education achievement gap between non-Asian minorities and ED students is a problem school districts throughout this country have attempted to close for decades. According to Carey (2014), schools should address underlying issues like teacher quality to reduce the academic achievement gap. Providing effective teachers in classrooms consisting mostly of minority students and ED students is a difficult task (Argon, 2016; Sutchter et al., 2016). A shortage of teachers working in schools heavily populated by high numbers of non-Asian minorities and ED students prevents schools and school districts from ensuring students receive

quality instruction by effective teachers (Sutcher et al., 2016). The shortage of teachers in education can be attributed to high levels of attrition and low levels of retention rates for young teachers, especially those serving non-Asian minorities and ED students (Carver-Thomas & Darling-Hammond, 2017). Identifying strategies to reduce teacher attrition and increase teacher retention may help schools and districts improve the quality of instruction for students who are not exposed to quality instruction. Because teacher self-efficacy has a negative relationship with teacher burnout, school leaders should attempt to find ways to increase teacher self-efficacy (Skaalvik & Skaalvik, 2010). Additionally, teacher self-efficacy has a positive impact the quality of instruction a teacher delivers. Identifying strategies to increase teacher self-efficacy may help increase teacher retention and improve the quality of education for minority and ED students.

Well organized induction and mentoring programs have a positive impact on teacher confidence and teacher self-efficacy (Yost, 2006). According to Yost (2006), the most positive aspect of an induction program can be the mentoring when new and novice teachers have the opportunity to meet and network. The research study was designed to explore the impact the mentoring experience and the mentor/mentee relationship has on teacher self-efficacy. Additionally, the study was also designed to explore the impact a school's socioeconomic status has on a teacher's sense of self-efficacy. The Teacher Sense of Efficacy Scale was used to measure teacher self-efficacy for the teachers in the study. The Relational Health Index-Mentor scale was used to measure the mentor/mentee relationship. The mentoring experience was measured using questions from another study (Desimone et al., 2013). A multiple regression analysis was conducted to measure the relationship between teacher self-efficacy and the mentor/mentee relationship. A multiple regression was also conducted to measure the

relationship between teacher self-efficacy and the mentoring experience. The researcher found a statically significant relationship between teacher self-efficacy of teachers with one or two years of experience and the mentor/mentee relationship. The researcher did not find a significant statistical relationship between teacher self-efficacy and the mentoring experience for teachers with one or two years of teaching experience. A one-way ANOVA was conducted to determine if the socioeconomic status of a teacher's school influences a teacher's self-efficacy. The researcher did not find a statistically significant difference between the socioeconomic status of the teacher's school and the teacher's self-efficacy.

Based on the findings from the study, the researcher recommends additional research be conducted to explore the mentor/mentee relationship and teacher self-efficacy; school-level and district-level administrators explore ways to ensure new and novice teachers have mentors who are able to develop positive relationships with their mentees; and school-level administrators monitor the relationship between there new and novice teachers and their mentors. Because of the limited use of the Relational Health Index – Mentor (RHM-M) instruments, the researcher also suggests additional research on the mentor/mentee relationship and the RHI-M instrument is explored.

List of References

- Aaronson, D., Barrow, L., & Sander, W. (2007). Teachers and student achievement in the Chicago public high schools. *Journal of Labor Economics*, 25(1), 95-135.
- Adams, G. (1996). Using a Cox regression model to examine voluntary teacher turnover. *The Journal of Experimental Education*, 64, 267-285.
- Alt, M. N., Kwon, J., & Henke, R. R. (1999). *Teachers on teaching: Results from the schools and staffing survey (NCES 1999-344)*. National Center for Education Statistics.
- Ambrosetti, A. (2010). Mentoring and learning to teach: What do pre-service teachers expect to learn from their mentor teachers? *International Journal of Learning*, 17(9), 117-132.
- Ambrosetti, A., & Dekkers, J. (2010). The interconnectedness of the roles of mentors and mentees in pre-service teacher education mentoring relationships. *Australian Journal of Teacher Education*, 35(6), 42-55.
- Andres, L. (2012). *Designing and doing survey research*. Sage.
- Aragon, S. (2016). *Teacher shortages: What we know. Teacher shortage series*. Education Commission of the States.
- Ashton, P., Buhr, D., & Crocker, L. (1984). Teachers' sense of efficacy: A self- or norm-referenced construct? *Florida Journal of Educational Research*, 26(1), 29-41.
- Bandeira de Mello, V., Rahman, T., Fox, M. A., & Ji, C. S. (2019). *Mapping state proficiency standards onto the NAEP scales: Results from the 2017 NAEP reading and mathematics assessments (NCES 2019-040)*. U.S. Department of

- Education. Institute of Education Sciences. NCES 2019-040. National Center for Education Statistics.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50, 248-287.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). Academic Press.
- Barnes, G., Crowe, E., & Schaefer, B. (2007). *The cost of teacher turnover in five school districts: A pilot study*. National Commission on Teaching and America's Future.
- Beauchamp, M., Crawford, K., & Jackson, B. (2018). Social cognitive theory and physical activity: Mechanisms of behavior change, critique, and legacy. *Psychology of Sport and Exercise*, <https://doi.org/10.1016/j.psychsport.2018.11.009>
- Billingsley, B. (2004). Special education teacher retention and attrition: A critical analysis of the research literature. *The Journal of Special Education*, 38(1), 39-55.
- Bland, P., Church, E., & Luo, M. (2014). Strategies for attracting and retaining teachers. *Administrative Issues Journal, Education Practices, and Research*, 4(1).
- Bobbit, S. A., Faupel, E., & Burns, S. (1991). *Characteristics of stayers, movers, and leavers: Results from the Teacher Follow-Up Survey: 1988-89*. National Center for Education Statistics.
- Bobek, B. L. (2002). Teacher resiliency: A key to career longevity. *Clearing House: A Journal of Educational Strategies, Issues, and Ideas*, 75(4), 202-205.
- Borman, G., & Dowling, N. (2008). Teacher attrition and retention: A meta-analytic and

- narrative review of research. *Review of Educational Research*, 78(3), 367-409.
- Borman, G. D., & Kimball, S. (2005). Teacher quality and educational equality: Do teachers with higher standards-based evaluation ratings close student achievement gaps? *Elementary School Journal*, 106(1), 3–20.
- Boyd, D., Lankford, H., Loeb, S., Ronfeldt, M., & Wyckoff, J. (2011). The role of teacher quality in retention and hiring: Using applications to transfer to uncover preferences of teachers and schools. *Journal of Policy Analysis and Management*, 30(1), 88-110.
- Brill, S., & McCartney, A. (2008). Stopping the revolving door: Increasing teacher retention. *Politics & Policy*, 36(5), 750-774.
- Britton, E., Raizen, S., Paine, L., & Huntley, M. A. (2000). More swimming, less sinking: Perspectives on teacher induction in the U.S. and abroad.
http://www.wested.org/online_pubs/teacherinduction/
- Brouwers, A., & Tomic, W. (2003). A test of the factorial validity of the Teacher Efficacy Scale. *Research in Education*, 69(1), 67-80.
- Callahan, J. (2016). Encouraging retention of new teachers through mentoring strategies. *Delta Kappa Gamma Bulletin*, 83(1), 6.
- Campbell, J. (1996). A comparison of teacher self-efficacy for pre and in-service teachers in Scotland and America. *Education*, 117(1), 2-11.
- Carey, R. L. (2014). A cultural analysis of the achievement gap discourse: Challenging the language and labels used in the work of school reform. *Urban Education*, 49(4), 440-468.
- Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it*. Learning Policy Institute.
- Cheung, H. Y. (2008). Teacher efficacy: A comparative study of Hong Kong and Shanghai

- primary in-service teachers. *Australian Educational Researcher*, 35(1), 103-123.
- Clotfelter, C., Ladd, H. F., Vigdor, J., & Wheeler, J. (2006). High-poverty schools and the distribution of teachers and principals. *North Carolina Law Review*, 85(5), 1345-1380.
- Cohen, N., & Arieli, T. (2011). Field research in conflict environments: Methodological challenges and snowball sampling. *Journal of Peace Research*, 48(4), 423-435.
- Coladarci, T. (1992). Teachers' sense of efficacy and commitment to teaching. *The Journal of Experimental Education*, 60(4), 323-337.
- Colbert, J. A., & Wolff, D. E. (1992). Surviving in urban schools: A collaborative model for a beginning teacher support system. *Journal of Teacher Education*, 43(3), 193-199.
- Colson, T., Sparks, K., Berridge, G., Frimming, R., & Willis, C. (2017). Pre-service teachers and self-efficacy: A study in contrast. *Discourse and Communication for Suitable Education*, 8(2), 66.
- Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educational leadership*, 60(8), 6-13.
- Darling-Hammond, L. (2014). What can PISA tell us about U.S. education policy? *New England Journal of Public Policy*, 26(4), <http://scholarworks.umb.edu/nejpp/vol26/iss1/4>
- de Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A., Branstetter, C., & Wang, X. (2019). *Status and Trends in the Education of Racial and Ethnic Groups 2018. NCES 2019-038*. National Center for Education Statistics.
- Dee, T. S. (2005). A teacher like me: Does race, ethnicity, or gender matter? *American Economic Review*, 95(2), 158-165.
- Dellinger, A. B., Bobbett, J. J., Olivier, D. F., & Ellett, C. D. (2008). Measuring teachers' self-efficacy beliefs: Development and use of the TEBS-Self. *Teaching and Teacher*

- Education*, 24(3), 751-766.
- Desimone, L., Hochberg, E., Porter, A., Polikoff, M., Schwartz, R., & Johnson, L. (2013). Formal and informal mentoring: Complementary, compensatory, or consistent? *Journal of Teacher Education*, 65(2), 88-110.
- Duffin, L., French, B., & Patrick, H. (2012). The Teachers' Sense of Efficacy Scale: Confirming the factor structure with beginning pre-service teachers. *Teaching and Teacher Education*, 28(6), 827-834.
- Duyar, I., Gumus, S., & Bellibas, M. S. (2013). Multilevel analysis of teacher work attitudes. *International Journal of Educational Management*, 27(7), 700-719.
- Etikan, I., Musa, S., & Alkassim, R., (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4.
- Farrokhi, F., & Mahmoudi-Hamidabad, A. (2012). Rethinking convenience sampling: Defining quality criteria. *Theory & Practice in Language Studies*, 2(4), 784-792.
- Ferguson, R. F. (1998). Can schools narrow the Black-White test score gap? In C. Jencks & M. Phillips (Eds.), *The Black-White test score gap* (pp. 318–374). Brookings Institution.
- Fisher, M. H. (2011). Factors influencing stress, burnout, and retention of secondary teachers. *Current Issues in Education*, 14(1), 1-37.
- Flynn, G., & Nolan, B. (2008). The rise and fall of a successful mentor program: What lessons can be learned? *The Clearing House: A Journal of Educational Strategies, Issues, and Ideas*; 81(4), 173-179.
- Fowler, F. (2014). *Survey research methods*. Sage.
- Frey, L. L., Beesley, D., & Newman, J. L. (2005). The relational health indices: Reanalysis of a

- measure of relational quality. *Measurement and Evaluation in Counseling and Development*, 38(3), 153-163.
- Frey, L. L., Beesley, D., & Miller, M. R. (2006). Relational health, attachment, and psychological distress in college women and men. *Psychology of Women Quarterly*, 30(3), 303-311.
- Garcia, E., & Weiss, E. (2019). The teacher shortage is real, large and growing, and worse than we thought. The first report in "The perfect storm in the teacher labor market" Series. *Economic Policy Institute*.
- Gardiner, W. (2009). Rudderless as mentors: The challenge of teachers as mentors. *Action in Teacher Education*, 30(4), 56-66.
- Gavora, P. (2010). Slovak pre-service teacher self-efficacy: Theoretical and research considerations. *The New Educational Review*, 21(2), 17-30.
- Geiger, T., & Pivovarova, M. (2018). The effects of working conditions on teacher retention. *Teachers and Teaching*, 24(6), 604-625.
- Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569.
- Giebelhaus, C. R., & Bowman, C. L. (2002). Teaching mentors: Is it worth the effort? *The Journal of Educational Research*, 95(4), 246-254.
- Gholam, A. (2018). A mentoring experience: From the perspective of a novice teacher. *International Journal of Progressive Education*, 14(2), 1-12.
- Glazer, J. (2018). Learning from those who no longer teach: Viewing teacher attrition through a resistance lens. *Teaching and Teacher Education*, 74, 62-71.

- Goddard, R. D., Hoy, W. K., & Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 30(2), 479-507.
- Gonzalez, L., Brown, M. S., & Slate, J. R. (2008). Teachers who left the teaching profession: A qualitative understanding. *The Qualitative Report*, 13(1), 1-11.
- Graham, P., Hudson-Ross, S., Adkins, C., McWhorter, P., & Stewart, J. (1999). *Teacher/mentor: A dialogue for collaborative learning*. Teachers College Press.
- Gresham, D. E. (2001). *The relationships between teacher self-efficacy beliefs, teacher job satisfaction, socioeconomic status and student academic success*. The College of William and Mary.
- Griffin, C. C., Winn, J. A., Otis-Wilborn, A., & Kilgore, K. L. (2003). *New teacher induction in special education*. (COPSSE Document Number RS-5). University of Florida, Center on Personnel Studies in Special Education.
- Guarino, C. M., Santibanez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research*, 76, 173-208.
- Guin, K. (2004). The effects of chronic teacher turnover in urban elementary schools. *Education Policy Analysis Archives*, 12(42), 1-25.
- Guo, Y., Piasta, S. B., Justice, L. M., & Kaderavek, J. N. (2010). Relations among preschool teachers' self-efficacy, classroom quality, and children's language and literacy gains. *Teaching and Teacher Education*, 26(4), 1094-1103.
- Harris, D., & Sass, T. (2011). Teacher training, teacher quality, and student achievement. *Journal of Public Economics*, 95(7), 798-812.

- Hayes, S. D., & Mahfouz, J. (2020). Principalship and mentoring: A review of perspectives, evidence, and literature 1999–2019. *Research in Educational Administration and Leadership*, 5(3), 722-751.
- Heneman III, H. G., Kimball, S., & Milanowski, A. (2006). *The teacher sense of efficacy scale: Validation evidence and behavioral prediction*. WCER Working Paper No. 2006-7. Wisconsin Center for Education Research (NJ1).
- Henry, S. L. (2016). *An evaluation of mentoring, self-efficacy, and teacher retention in an induction program* (Doctoral dissertation, Walden University).
- Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavioral sciences*. Houghton Mifflin.
- Hopkins, M., & Spillane, J. P. (2014). Schoolhouse teacher educators: Structuring beginning teachers' opportunities to learn about instruction. *Journal of Teacher Education*, 65(4), 327-339.
- Howe, E. R. (2006). Exemplary teacher induction: An international review. *Educational Philosophy and Theory*, 38(3), 287-297.
- Hoy, A. W. (2000). Changes in teacher efficacy during the early years of teaching. In *annual meeting of the American Educational Research Association, New Orleans, Louisiana*.
- Huang, F. L., & Moon, T. R. (2009). Is experience the best teacher? A multilevel analysis of teacher characteristics and student achievement in low performing schools. *Educational Assessment, Evaluation and Accountability*, 21(3), 209-234.
- Hudson, P. (2013). Mentoring as professional development growth for both mentor and mentee. *Professional Development in Education*, 39(5), 771-783.

- Hudson, P., & Hudson, S. (2016). Mentoring beginning teachers and goal setting. *Australian Journal of Teacher Education*, 41(10), 48-62.
- Hughes, G. (2012). Teacher retention: Teacher characteristics, school characteristics, organizational characteristics, and teacher efficacy. *The Journal of Educational Research*, 105(4), 245-255.
- Ingersoll, R. (2001a). Teacher turnover and teacher shortages: An organizational analysis. *American Education Research Journal*, 38(3), 499–534.
- Ingersoll, R. (2001b, Fall). Teacher turnover, teacher shortages, and the organization of schools. *CPRE Research Reports*. https://repository.upenn.edu/cpre_researchreports/12
- Ingersoll, R., Merrill, L., & May, H. (2012). Retaining teachers: How preparation matters. *Educational leadership*, 69(8), 30-34.
- Ingersoll, R., Merrill, L., & May, H. (2014). Retaining teachers: How preparation matters. *Educational Leadership*, 69(8), 30-34.
- Ingersoll, R. M., Merrill, E., Stuckey, D., & Collins, G. (2018). *Seven trends: The transformation of the teaching force*. Consortium for Policy Research in Education.
- Ingersoll, R. M., & Perda, D. (2010). Is the supply of mathematics and science teachers sufficient? *American Educational Research Journal*, 43(3), 563-594.
- Ingersoll, R. M., & Smith, T. M. (2003). The wrong solution to the teacher shortage. *Educational Leadership*, 60(8), 30-33.
- Ingersoll, R., & Smith, T. M. (2004). Do teacher induction and mentoring matter? *NAASP Bulletin*, 88(638), 28-40.
- Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a “sense of success”: New teachers explain their career decisions. *American Educational Research Journal*, 40(3), 581-617.

- Kain, J. F., & Singleton, K. (1996). Equality of educational opportunity revisited. *New England Economic Review*, (Special issue), 87-111.
- Kim, Y., & Baylor, A. (2006). A social-cognitive framework for pedagogical agents as learning companions. *Educational Technology Research and Development*, 54(6), 569-590.
- Kini, T., & Podolsky, A. (2016). *Does teaching experience increase teacher effectiveness? A review of the research*. Learning Policy Institute.
- Kirby, S. N., Berends, M., & Naftel, S. (1999). Supply and demand of minority teachers in Texas: Problems and prospects. *Educational Evaluation and Policy Analysis*, 21(1), 47-66.
- Kirby, S. N., & Grissmer, D. W. (1991). Sources of teacher supply: Some new evidence from Indiana. *Educational Evaluation and Policy Analysis*, 13(3), 256–268.
- Kirby, S. N., & Grissmer, D. W. (1993). *Teacher attrition: Theory, evidence, and suggested policy options*. RAND.
- Kirchherr, J., & Charles, K. (2018). Enhancing the sample diversity of snowball samples: Recommendations from a research project on anti-dam movements in Southeast Asia. *PloS one*, 13(8), e0201710.
- Klassen, R., Bong, M., Usher, E., Chong, W., Huan, V., Wong, I., & Georgiou, T. (2009). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology*, 34(1), 67-76.
- Landers, R. N., & Behrend, T. S. (2015). An inconvenient truth: Arbitrary distinctions between organizational, Mechanical Turk, and other convenience samples. *Industrial and Organizational Psychology*, 8(2), 142-164.

- Learning Policy Institute. (2016). *Addressing the teacher shortage: What districts can do* (fact sheet). Learning Policy Institute.
- Levy, A. J., Joy, L., Ellis, P., Jablonski, E., & Karelitz, T. M. (2012). Estimating teacher turnover costs: A case study. *Journal of Education Finance*, 38, 102-129.
- Liang, B, Tracy, A. J., Taylor, C. A., & Williams, L. M. (2002). Mentoring college-age women: A relational approach. *American Journal of Community Psychology*, 30(2), 271-288.
- Liang, B, Tracy, A. J., Taylor, C. A., Williams, L. M. Jordan, J. V., & Miller, J. B. (2002). The relational health indices. *Psychology of Women Quarterly*, 26(1), 25-35.
- LoCasale-Crouch, J., Davis, E., Wiens, P., & Pianta, R. (2012). The role of the mentor in supporting new teachers: Associations with self-efficacy, reflection, and quality. *Mentoring & Tutoring: Partnership in Learning*, 20(3), 303-323.
- Loeb, S., Ronfeldt, M., & Wyckoff, J. (2012). How teacher turnover harms student achievement. *American Educational Research Journal*, 50(1), 4-36.
- Lopez, A., Lash, A., Schaffner, M., Shields, P., & Wagner, M. (2004). *Review of research on the impact of beginning teacher induction on teacher quality and retention*. SRI International.
- Malinen, O. P., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., & Tlale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education*, 33, 34-44.
- Malloy, W. W., & Allen, T. (2007). Teacher retention in a teacher resiliency-building rural school. *The Rural Educator*, 28(2) 19-24.
- McCreight, C. (2000). *Teacher attrition, shortage, and strategies for teacher retention*. Texas A&M University, Department of Professional Studies.

- Mitchell, R., Celano, S., & Tarter, C. (2009). Teacher trust of mentor: Scale development. *In annual meeting of the University Council for Educational Administration conference, Anaheim, California.*
- Moore-Johnson, S., & Birkeland, S. E. (2003). Pursuing a “sense of success”: New teachers explain their career decision. *American Educational Research Journal, 40*(3), 581-617.
- Mukaka, M. M. (2012). A guide to appropriate use of correlation coefficient in medical research. *Malawi Medical Journal, 24*(3), 69-71.
- Munson, M. R., & McMillen, J. C. (2009). Natural mentoring and psychosocial outcomes among older youth transitioning from foster care. *Children and Youth Services Review, 31*(1), 104-111.
- Newman, I., Ridenour, C., Weis, D. M., & McNeil, K. (1997). Theses and dissertations: A guide to writing in social and physical sciences. Rowman & Littlefield.
- Nie, Y., Lau, S., & Liau, A. K. (2012). The teacher efficacy scale: A reliability and validity study. *The Asia Pacific Education Researcher, 21*(1), 414-421.
- OECD. (2016). *PISA 2015 Assessment and analytical framework: Science, reading, mathematics and financial literacy*. OECD Publishing.
- Peske, H. G., & Haycock, K. (2006). *Teaching inequality: How poor and minority students are shortchanged on teacher quality*. Education Trust.
- Podgursky, M., Monroe, R., & Watson, D. (2004). The academic quality of public school teachers: An analysis of entry and exit behavior. *Economics of Education Review, 23*(5), 507-518
- Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators*. Learning Policy Institute.

- Prabhu, N. (2020). *Do mentor-mentee self-reported relationship quality measures differ or overlap from observed measures?* (Doctoral dissertation, Colorado State University).
- Reardon, S. (2013). The widening income achievement gap. *Educational Leadership*, 70(8), 10-16.
- Riggs, I. M., & Enochs, L. G. (1990). Toward the development of an elementary teacher's science teaching efficacy belief instrument. *Science Education*, 74(6), 625-637.
- Rivkin, H. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*. 73(2), 417-458.
- Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Association*, 50(1), 4-36.
- Ross, J. A. (1994). The impact of an inservice to promote cooperative learning on the stability of teacher efficacy. *Teaching & Teacher Education*, 10(4), 381-394.
- Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *Journal of Educational Research*, 101(1), 50–60.
- Rotter, J. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 609.
- Ruhland, S. K. (2001). Factors that influence turnover and retention of Minnesota's technical college teachers. *Journal of Vocational Education Research*, 26(1), 56-76.
- Sass, D. A., Seal, A. K., & Martin, N. K. (2011). Predicting teacher retention using stress and support variables. *Journal of Educational Administration* 49(2), 200–215.
- Scherer, R., Jansen, M., Nilsen, T., Areepattamannil, S., & Marsh, H. (2016). The quest for comparability: Studying the invariance of the Teachers' Sense of Self-Efficacy (TSES) measure across countries. *PLoS one* 11(3), e0150829.

- Sellers, K. B. (2011). *The effect of teacher retention on student achievement in third grade reading/language arts*. The University of Southern Mississippi.
- Shwartz, G., & Dori, Y. J. (2016). Looking through the eyes of mentors and novice teachers: Perceptions regarding mentoring experiences. *Procedia-Social and Behavioral Sciences*, 228, 149-153.
- Sirin, S. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453.
- Skaalvik, E., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059-1069.
- Slattery, S. M., & Goodman, L. A. (2009). Secondary traumatic stress among domestic violence advocates: Workplace risk and protective factors. *Violence against women*, 15(11), 1358-1379.
- Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, 41(3), 681-714.
- Stanulis, R. N., Wexler, L. J., Pylman, S., Guenther, A., Farver, S., Ward, A., ... & White, K. (2019). Mentoring as more than “cheerleading”: Looking at educative mentoring practices through mentors’ eyes. *Journal of Teacher Education*, 70(5), 567-580.
- Stigler, J. W., & Hiebert, J. (1999). *The teaching gap*. Free Press.
- Stigler, J. W., & Stevenson, H. W. (1991). How Asian teachers polish each lesson to perfection. *American Educator*, 15(1), 43-47.
- 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.

- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53-55.
- Tippens, A., Ricketts, J. C., Morgan, A. C., Navarro, M., & Flanders, F. B. (2013). Factors related to teachers' intention to leave the classroom early. *Journal of Agricultural Education, 54*(4), 58-72.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805.
- Tschannen-Morean, M., Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.
- Tucker, M. (2016). *9 building blocks for a world-class education system*. National Center on Education and the Economy.
- Ventura, M., Salanova, M., & Llorens, S. (2015). Professional self-efficacy as a predictor of burnout and engagement: The role of challenge and hinderance demands. *The Journal of Psychology, 149*(3), 277-302.
- Watlington, E., Shockley, R., Guglielmino, P., & Felsher, R. (2010). The high cost of leaving: An analysis of the cost of teacher turnover. *Journal of Education Finance, 36*(1), 22-37.
- Watson, J. C., Harper, S., Ratliff, L., & Singleton, S. (2010). Holistic wellness and perceived stress: Predicting job satisfaction among beginning teachers. *Research in the Schools, 17*(1), 30-38.
- Wayne, A. J. (2000). Teacher supply and demand: Surprises from primary research. *Education Policy Analysis Archives, 8*(47), 1-8.
- Webb, R., & Ashton, P. (1986). Teacher motivation and the conditions of teaching: A call for ecological reform. *Journal of Thought, 21*(2), 43-60.

- Weiner, L. (2003). Why is classroom management so vexing to urban teachers? *Theory into Practice*, 42(4), 305-312.
- Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archive*, 10(12), <http://epaa.asu.edu/epaa/v10n12/>
- Wexler, N. (2019, March 17). The achievement gap hasn't budged in 50 years. Now what? *Forbes*. <https://www.forbes.com/sites/nataliewexler/2019/03/17/the-achievement-gap-hasnt-budged-in-50-years-now-what/#2b9f0aa54d90>
- Wilson, C., Woolfson, L., Durkin, K., & Elliot, M. (2016). The impact of social cognitive and personality factors on teachers reported inclusive behaviour. *British Journal of Educational Psychology* 86(3), 461-480.
- Wood, R., & Bandura A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, 14(3), 361-384.
- Wynn, S. R., Carboni, L. W., & Patall, E. A. (2007). Beginning teachers' perceptions of mentoring, climate, and leadership: Promoting retention through a learning communities perspective. *Leadership and Policy in Schools*, 6(3), 209-229.
- Yost, D. (2006). Reflection and self-efficacy: Enhancing the retention of qualified teachers from a teacher education perspective. *Teacher Education Quarterly*, 33(4), 59-76.
- Zhang, M., Ding, X., & Xu, J. (2016). *Developing Shanghai's teachers*. National Center on Education and the Economy.

Appendices

Appendix A: Letter to Administrators

Date

Dear School Leader:

My name is Ezzard Beane and I am a doctoral student at the University of Mississippi. For my dissertation study, I am examining the impact of mentoring for first and second-year teachers have on teacher self-efficacy and teacher retention. Because you are a school leader and you have direct access to first and second-year teachers, I am inviting you to help recruit first and second-year teachers to participate in this research study by completing the attached surveys.

The following questionnaire will require approximately 10 minutes to complete. There is no compensation for responding nor is there any known risk. In order to ensure that all information will remain confidential, teachers will not be asked to include his/her name. Copies of the project will be provided to my University of Mississippi dissertation committee. If you choose to help with the research topic, please ask your first and second-year teachers to answer all questions as honestly as possible and complete the questionnaires promptly. Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for taking the time to assist me in my educational endeavors. The data collected will provide useful information regarding new teachers, their mentor/mentee relationship, and teacher self-efficacy. If you would like a summary copy of this study please email me for further information.

If you require additional information or have questions, please contact me at the number listed below. If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to Dr. Douglas Davis, my dissertation chair with the University of Mississippi at drdavis@olemiss.edu.

Sincerely,

Ezzard Beane
662.809.1005
ecbeane@go.olemiss.edu

Dr. Douglas Davis
662.915.1459
drdavis@olemiss.edu

Appendix B: Participant Letter #1

Date

Dear Participant:

My name is Ezzard Beane and I am a doctoral student at the University of Mississippi. For my dissertation study, I am examining the impact of mentoring for first and second-year teachers have on teacher self-efficacy and teacher retention. Because you are a first or second-year teacher I am inviting you to participate in this research study by completing the attached survey.

The following questionnaire will require approximately 10 minutes to complete. There is no compensation for responding nor is there any known risk. In order to ensure that all information will remain confidential, you will not be asked to include your name. Copies of the project will be provided to my University of Mississippi dissertation committee. If you choose to help with the research topic, please answer all questions as honestly as possible and complete the questionnaires promptly. Participation is strictly voluntary and you may refuse to participate at any time.

If you require additional information or have questions, please contact me at the number listed below. If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to Dr. Douglas Davis, my dissertation chair with the University of Mississippi at drdavis@olemiss.edu.

Sincerely,

Ezzard Beane
662.809.1005
ecbeane@go.olemiss.edu

Dr. Douglas Davis
662.915.1459
drdavis@olemiss.edu

Appendix C: Participant Letter #2

Date

Dear Participant:

Two weeks ago, I requested your participation in a new study about your mentoring experience, your relationship with your mentor, and your personal beliefs about your teaching efficacy. This is an original study to study whether the new teacher mentoring experience and the mentor/mentee relationship has an impact on a teacher's efficacy. Your response is very important to the overall value of the study.

If you have already completed and submitted the survey, please accept my sincere thanks. If not, I ask that you take a few minutes now to do so.

If you have any questions or concerns about the survey, please feel free to call me at (662)809-1005, or contact me by email at ecbeane@go.olemiss.edu and I will ensure that your questions are answered.

Your assistance is very much appreciated.

Sincerely,

Ezzard Beane

Appendix D: Survey Instrument

Are you a first or second year teacher?

- First-year teacher
- Second-year teacher

Which description best describes the economic make-up of your school?

- I work a school-wide Title I school, at least 40% of our students qualify for free and reduced lunch.
- I work at a targeted assistance Title I school, federal funds are used to provide services to selected students with needs.
- I do not work at a Title I school.
- I don't know if my school is a Title I school or not.

Which description best describes your mentor?

- I have a formal mentor assigned by school leaders.
- I have an informal mentor which developed organically.
- I do not have a formal or informal mentor.

What grade do you teach?

- Kindergarten...
- ...Twelfth Grade
- Multiple elementary grades
- Multiple middle school grades
- Multiple high school grades

What subject do you teach?

- ELA
- Mathematics
- Science
- Social Studies
- Special Education – Inclusion
- Special Education – Self Contained
- CTE
- Other

What is your age? _____

What is your teacher certification route?

- Traditional Certification – (Bachelor's degree in education)
- Master of Arts in Teaching
- Teach for America
- Mississippi Teacher Corp
- MAPQT
- TMI
- ABCTE
- Emergency Certificate

What is your race or ethnicity?

- African American
- Asian

- Caucasian
- Hispanic/Latin
- Native American
- Pacific Islander
- Mixed Race
- Other

What is your gender?

- Male
- Female
- Prefer not to answer

Mentoring relationship

1 - Never, 2 – Seldom, 3 – Sometimes, 4 – Often, 5 – Always

1- I can be genuinely myself with my mentor.	1	2	3	4	5
2- I believe my mentor values me as a whole person	1	2	3	4	5
3- My mentor’s commitment to and involvement in our relationship exceeds that required by his/her social/professional role.	1	2	3	4	5
4- My mentor shares stories about his/her own experiences with me in a way that enhances my life.	1	2	3	4	5
5- I feel as though I know myself better because of my mentor.	1	2	3	4	5
6- My mentor shares stories about his/her own experiences with me in a way that enhances my life.	1	2	3	4	5
7- I try to emulate the values of my mentor (such as social, academic, religious, physical/athletic).	1	2	3	4	5
8- I feel uplifted and energized by interactions with my	1	2	3	4	5

mentor.

9- My mentor tries hard to understand my feelings and goals 1 2 3 4 5
(academic, personal or whatever is relevant).

10- My relationship with my mentor inspires me to seek other 1 2 3 4 5
relationships like this one.

11- I feel comfortable expressing my deepest concerns to my 1 2 3 4 5
mentor.

Teachers' Sense of Efficacy Scale (short form)

1 – Nothing, 2, 3, Very Little, 4, 5 – Some Influence, 6, 7 – Quite A Bit, 8, 9 – A Great Deal

1. How much can you do to control disruptive behavior in 1 2 3 4 5 6 7 8 9
the classroom?

2. How much can you do to motivate students who show low 1 2 3 4 5 6 7 8 9
interest in school work?

3. How much can you do to get students to believe they can 1 2 3 4 5 6 7 8 9
do well in school work?

4. How much can you do to help your students value 1 2 3 4 5 6 7 8 9
learning?

5. To what extent can you craft good questions for your 1 2 3 4 5 6 7 8 9
students?

6. How much can you do to get children to follow classroom 1 2 3 4 5 6 7 8 9
rules?

7. How much can you do to calm a student who is disruptive or noisy? 1 2 3 4 5 6 7 8 9
8. How well can you establish a classroom management system with each group of students? 1 2 3 4 5 6 7 8 9
9. How much can you use a variety of assessment strategies? 1 2 3 4 5 6 7 8 9
10. To what extent can you provide an alternative explanation or example when students are confused? 1 2 3 4 5 6 7 8 9
11. How much can you assist families in helping their children do well in school? 1 2 3 4 5 6 7 8 9
12. How well can you implement alternative strategies in your classroom? 1 2 3 4 5 6 7 8 9

Efficacy in Student Engagement: Items 2, 3, 4, 11
 Efficacy in Instructional Strategies Items 5, 9, 10, 12
 Efficacy in Classroom Management Items 1, 6, 7, 8

Mentoring Experience Questions

- Are you and your mentor located in the same building?
 Yes
 No
- Do you have time during the school day to meet with your mentor?
 Yes
 No
- Does your mentor have similar content experience?
 Yes
 No
- How do you rate your mentor's ability to mentor?
 Not good
 Adequate/Average
 Good
 Very Good
- Knowledge of Teaching
- How much of a focus was assessment/testing during your meetings?
 No focus

Minor focus

Major focus

How much of a focus was lesson planning during your meetings?

No focus

Minor focus

Major focus

How much of a focus was the content to teach during your meetings?

No focus

Minor focus

Major focus

How much of a focus was pacing instruction during your meetings?

No focus

Minor focus

Major focus

How much of a focus was working with low achieving students during your meetings?

No focus

Minor focus

Major focus

Knowledge of Content

How much of a focus was how students learn during your meetings?

No focus

Minor focus

Major focus

How much of a focus was deepening content knowledge during your meetings?

No focus

Minor focus

Major focus

How much of a focus was individualizing instruction during your meetings?

No focus

Minor focus

Major focus

How much of a focus was analyzing student work during your meetings?

No focus

Minor focus

Major focus

VITA

Ezzard C. Beane Jr. was born on the Fort Hood Army Base in Killeen, Texas on November 15, 1973. He attended elementary school in Roanoke, Virginia and Oklahoma City, Oklahoma. He graduated from O'Bannon High School in Greenville, Mississippi in May 1991. The following June he entered the U.S. Navy as a Gas Turbine Electrician. He was honorably discharged in December 1994 and entered Mississippi Valley State University and in December 1998 received a degree of Bachelor of Science in Elementary Education. He also received a Master of Education Degree in Educational Administration and Literacy Education in 2001 and 2013 respectively. He served as a teacher and school administrator in the Leflore County School District in Greenwood, MS and as an administrator in the Water Valley and Grenada Districts in Mississippi.