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Mentorship Program Components That Influence Beginning Teacher Retention

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by

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Abstract

This study investigates the relationship between new teachers' retention in the first five years of teaching and mentorship support given to teachers. The teacher shortage in the United States is a documented problem and continues to grow. The inability of the education system to attract and retain quality teachers is a significant problem in the current teacher shortage. As schools deal with unfilled teaching positions, teachers are overworked trying to fill these positions, and students receive lower quality education from teachers who have not received sufficient preparation. This study analyzed the effects that mentoring, including time spent with mentor and subject area of mentor, has on novice teachers. This research used a quantitative analysis of data obtained from the National Teacher and Principal Survey (NTPS). The analysis of the data showed that novice teachers' intention to stay in the field of education increases as the time spent with a mentor increases. Teachers' intention to stay in education also increased when the assigned mentor shared the same subject areas as the mentee. The data used was from 2015-2016 NTPS, which is a limitation, because the 2021-2022 data was not available. Another study using the 2021-2022 NTPS data is recommended for further research. Content-similar mentors who meet weekly with new teachers will help to reduce new teachers' attrition, which in turn will reduce the current teacher shortage and improve students' achievement.

I would like to dedicate this research to Bethel University student teachers and beginning teachers. May we as experienced educators take the time to guide, mentor, and uphold you as you begin your amazing experience as a teacher.

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Table of Contents

List of Tables

Chapter 1: Introduction

Picture a second-grade girl about to start classes at a local elementary school, just seven or eight years old. She is filled with anticipation and a hunger to learn. She dreams of a teacher who will see and know her, a teacher who will inspire her and share her joy of learning. She learns two of her best friends are in her second-grade classroom. Could this year get any better? She meets the new teacher and is confident this teacher is her favorite. The new teacher is energetic and fun. As the school year begins, the teacher appears frustrated with the second-graders and is often upset. The teacher struggles with classroom management and organization. Within a few weeks, the second-grader learns her first teacher will leave, and she will have a different teacher. She tries again with this new teacher, anticipating a fresh start. But again, this teacher leaves after a few weeks. Each time the second grader gets to know a teacher and feels connected, they leave and someone new comes into the classroom to try again. By the time this little girl meets the fourth or fifth new teacher, her anticipation and hunger to learn is gone, and so is her trust and excitement for the next teacher.

Now, imagine a new graduate from a university teacher preparation program filled with excitement and enthusiasm to begin a new career as an elementary teacher. She dreams of relationships with students and the impact she will have on their lives. The new graduate is hired for a job as a second-grade teacher in a school in January. She begins to build community with the students and inspires them to grow and learn. She discovers seven teachers have come and gone in her classroom in the four months prior to her start. This means seven teachers started to build relationships with the students, started to inspire students, started to impact lives, and left. She wonders how she will start. Will students accept another new teacher and another new set of procedures and routines? Will she be the one who will stay?

Although this scenario may seem extreme, it is actually a true story that was recounted by a former student teacher and shared with this researcher. Schools report a record number of shortages in teacher and paraprofessional positions, as well as in all areas of staff necessary for an educational setting (Alliance for Excellent Education, 2014). Without a concerted effort to reduce teachers' attrition, the education profession will continue to struggle to fill teacher vacancies. The teacher shortage in the United States is growing quickly and affects teachers, students, families, and the United States as a whole.

Teachers in the United States leave the education profession at an alarming rate (Drexler, 2006; Dupriez et al., 2016; Hope, 1999; Kelly et al., 2019; Kidd et al., 2015; Minnesota Profession Educators Licensing and Standards Board, 2021; Reitman & Karge, 2019; Ronfeldt et al., 2013; Toombs & Ramsey, 2020; Wong, 2004). In fact, 30%-50% of new teachers leave education in their first five years (Hope, 1999; Kelly et al., 2019; Minnesota Profession Educators Licensing and Standards Board, 2021; Reitman & Karge, 2019; Ronfeldt et al., 2013; Wong, 2004). In the United States, 11% of teachers leave the profession in their first year and 39% leave over their first five years (Dupriez et al., 2016). As a result, there are not enough qualified teachers retained in the education profession nationwide to fill the current demand for teachers in the education field.

Statement of the Problem

The teacher shortage in the United States has been a documented problem since the early 2000s and continues to grow. A significant problem in the teacher shortage is the inability of the education system to attract and retain quality teachers. A lack of respect and appreciation of the education profession adds to the problem. The teacher shortage in the United States is a crisis, and teachers' attrition exacerbates this issue (Darling-Hammond et al., 2002; Wong, 2004).

Teachers leave the classroom to the detriment of our education system which affects students, schools, and the nation (Alliance for Excellent Education, 2014). Students receive lower quality instruction from teachers with less experience in the classroom (Henry et al., 2011; Toombs & Ramsey, 2020). In turn, students produce lower academic achievement scores (DeAngelis et al., 2013; Ronfeldt et al., 2013). Lower achievement scores, due to less experienced teachers and a teacher shortage, contribute to less student success in the nation and the world. Lower achievement scores affect the United States' potential economy as well as the Gross Domestic Product (GDP) by as much as $1 trillion (The Annie E. Casey Foundation, 2010). Teacher attrition negatively affects all.

Compared to global competitors, America's proficiency in reading is poor (Organization for Economic Co-operation and Development, 2018). Reading proficiency measures contextual understanding, the ability to reflect on written texts in order to achieve goals, and the development of knowledge and potential. Millions of American children arrive at fourth grade without the ability to read proficiently (The Annie E. Casey Foundation, 2020). According to The Organization for Economic Co-operation and Development (OECD, 2018), the United States ranked only seventh in nations for reading proficiency in 2018. Lower proficiency levels create an achievement gap that affects the economy. These effects are detrimental to students, schools, and the nation as a whole.

As the school age population grows, the education profession struggles to retain teachers. A nationwide teacher shortage of approximately 64,000 teachers in the 2015-16 school year grew to 112,000 teachers by 2017-2018, an increased shortage of 75% (Sutcher et al., 2019). As of 2020, approximately 60 million children in the United States were enrolled in non-postsecondary schools (NCES, 2020). The majority of these students were enrolled in public elementary and

secondary schools. About nine million students were enrolled in public charter schools and private schools, with about two-thirds in public charter schools and one-third in private schools. The large number of students in schools and the increased shortage of teachers reveal prevalent and ongoing need for teachers.

As more and more teachers leave the education profession, the United States's teacher force has fewer years of experience. In the 2017-2018 school year there were 3.3 million public school teachers, 205,600 public charter school teachers, and 509,200 private school teachers. Of these teachers, 9% had less than three years of experience in the classroom (National Center for Educational Statistics [NCES], 2020). Less than 50% of the teacher workforce have 10-20 years of experience in the classroom (NCES, 2020).

Not only do new teachers leave the education profession at a devastatingly high rate, fewer college students choose the education profession. Between 2009 and 2014 teacher preparation enrollments dropped by 35% and teacher preparation graduates dropped by 23% (Sutcher et al., 2019). Teacher preparation colleges face a decline in enrollment, difficulty with recruitment, and increase in new teachers' attrition rates (American Association of Colleges for Teacher Education [AACTE], 2018). The lack of new teachers to the education field is increased by a significant long-term decline in undergraduate interest in education as a field of study. This decline adds to the current teacher shortage in the United States.

In Minnesota, 51.32% of teachers who hold a tier three or four professional license are not active classroom teachers (Minnesota Profession Educators Licensing and Standards Board, 2021). These licensed teachers work in other areas of education, such as administration, or have left the education field entirely. If these licensed teachers worked in an education classroom, the current teacher shortage would not exist. There are enough licensed teachers to fill the teacher

demand but not enough licensed teachers who want to work in the classroom.

According to the 2021 Supply and Demand of Teachers in Minnesota, 27% of districts surveyed had one or more teaching positions unfilled for the 2019-2020 school year (Minnesota Professional Educator Licensing and Standards Board, 2021). These positions range from classroom teachers to area specialists to special education teachers. Students in the areas where teaching positions were vacant were without a teacher during the 2019-2020 school year. This does not include the substitute teacher shortage faced by Minnesota. Numerous schools and districts are unable to find substitute teachers to cover the daily absences of teachers. When this occurs, schools fill the absences in a few ways: 1) move a licensed specialist teacher or administrator into the classroom in need, 2) have teachers surrender their preparation times to monitor the classroom with a teacher absence, or 3) divide students between the same grade level classrooms and increase the number of students per classroom. With teacher positions left unfilled, the results do not lead to high students' achievement.

The student population of the Twin Cities Metropolitan area has increased by 12,060 from the 2015-16 school year to the 2017-18 school year (Wilder Research, 2019). The Twin Cities Metropolitan Area is a seven-county metropolitan area most populated in the state of Minnesota. In the state of Minnesota, new teachers leave the teaching profession within the first five years of teaching at a rate of 33% per year (Liuzzi, 2021). One-third of new teachers who begin teaching in Minnesota do not continue past their fifth year of teaching. New teachers' attrition rates have a major effect on Minnesota school districts: 70% of Minnesota school districts say they are impacted by the teacher shortage and 84% of districts report lower availability of teachers than just five years earlier (Alliance for Excellent Education, 2014). As the student population increases and the teacher supply decreases, the teacher shortage becomes

a major issue for the Twin Cities Area, across the nation and the world.

Teacher attrition does not only affect students and schools in the area of achievement scores. The cost of early career teachers leaving the field of education is high in areas of money and teacher morale (DeAngelis et al., 2013; Drexler, 2006; Kelly et al., 2019; Reitman et al., 2019). To counteract the teacher shortage, districts must work to recruit and educate new teachers, incur the expense to hire and orientate new employees, and provide professional development (Kidd et al., 2015). It is estimated teacher attrition costs the United States, annually, up to seven billion dollars in turnover costs (Hayes et al., 2014; Reitman & Karge, 2019). In Minnesota, it is estimated the cost of teacher turnover in 2008-2009 was between $18,706,847 to $40,717,928 (Hayes et al., 2014). Stakeholders such as students, parents, districts, and taxpayers are affected by the attrition rate.

Teachers' experience matters for students' achievement. Therefore, teacher attrition damages students' achievement (Henry et al., 2011). Up to 50% of teachers leave the profession in the first five years of teaching. This causes the amount of experience teachers have in the education field to go down which affects students' achievement. The ultimate goal of any school is the success and achievement of their students. Improved students' achievement is greatly affected by the quality of the teacher (Cespedes et al., 2019; DeAngelis et al., 2013; Drexler, 2006; Henry et al., 2011; Ingersoll et al., 2011; Ronfeldt et al., 2013; Wong, 2004). The number of years of experience teachers have in the classroom influences their quality. There is a substantial increase in teaching effectiveness between the first and second year of teaching (Henry et al., 2011). On average, it takes three to seven years in the classroom for teachers to become highly skilled (Alliance for Excellent Education, 2014). Once teachers are highly trained, it is desirable to keep them in the classroom. When teachers leave the profession in their

first five years, they do not spend enough time in the education field to become highly skilled professionals that impact students' achievement in the classroom.

High levels of teacher attrition negatively impact schools in areas of routines, management, and organizational culture. Staff satisfaction is damaged when large numbers of teachers leave the education profession (Elyashiv, 2019). High teacher turnover rates are detrimental to the goal of a positive school community and culture. As schools deal with the teacher shortage, teacher turnover, and less stability in faculty, the school culture and community are negatively affected (Ronfeldt et al., 2013; Toombs & Ramsey, 2020). Teachers stay where they feel successful. New teachers stay where they experience support and participation in a cooperative team (Alliance for Excellent Education, 2014; Drexler, 2006; Toombs & Ramsey, 2020). It is beneficial for principals, schools, students, and families to have stable teachers who continue in the education profession. When teachers leave schools, it affects the morale and community of the school. Previously held relationships in the school are altered or severed. Teacher and principal turnover negatively affect staff collegiality, community, and trust (Ronfeldt et al., 2013). Persistent turnover contributes to a school's continuous need to start over in community building rather than continual, steady progress. Positive relationships and work with other teachers are vital to early career teachers for their satisfaction in the job and for retention in the profession (Kelly et al., 2019). Collegiality has a positive effect on the overall school culture. When teachers leave the education field at alarming rates, it is hard to form relationships and build unity (Ronfeldt et al., 2013). Teacher attrition negatively impacts school communities and culture.

There is a substantial impact on schools' resources when teachers' attrition is high. Time is spent by administrators to recruit and hire new teachers to fill empty positions. Administrative

time could be spent in other more effective ways that might benefit the school system. Teachers who remain in the school are responsible to fill the gaps left by attrition and not yet filled by new hires. The extra work and responsibility lead to lower school morale (Ronfeldt et al., 2013). These resources of administrative time and money could potentially be spent on ways to improve mentorship programs and working conditions.

In the United States, dynamic, comprehensive, and effective mentorship and induction programs are available for new teachers (Drexler, 2006). In 1999-2000, 83% of beginning public school teachers participated in some form of induction program, which was up from 51% in 1990-1991 (DeAngelis et al., 2013). Some induction programs match teachers with random mentors. These mentors do not necessarily have experience in the subject area of the new teacher. New teachers in middle and high school are more likely than elementary new teachers to have a mismatch between the mentor and the mentee's subject area (Smith, 2007). In successful mentoring relationships, mentors and mentees are matched on work experience, personality, grade level, and subject area (Serpell, 2000). Beginning teachers who were provided with mentors from the same subject field and who participated in collective induction activities were more likely to stay at their school and less likely to leave the education field (Ingersoll & Smith, 2004). Less than one percent of beginning teachers are involved in effective comprehensive training programs where they have an opportunity to work in learning communities, observe master teachers, be observed while teaching, reflect on teaching practices, and build community with other starting teachers (Reitman et al., 2019).

Along with a lack of mentoring and induction programs for beginning teachers, new teachers find themselves with classroom challenges, extra duties, and an overload of committee responsibilities (Drexler, 2006). First year teaching positions are overwhelming, and a lack of

induction and mentoring to support novice educators can make it difficult for new teachers to stay in the education field. All teachers need support from the school community, education profession, and administrators to help them remain in the classroom (Reitman et al., 2019).

The COVID-19 pandemic added to an already complex reality of a teacher shortage in the education system. Remote learning, concerns about increased learning losses and achievement gaps, and questions about student and teacher mental health needs lead to both increased teacher demand and decreased teacher supply (Lachlan et al., 2020). As teachers continue to work with students after the COVID-19 pandemic, there may be more issues brought to the forefront. These challenges add to the difficulty of early career teachers' retention.

The attrition rate of new teachers negatively affects the nation. As teachers have less and less experience in the classroom, students may receive a lower quality education (Henry et al., 2011). The education profession loses teachers and the morale of the profession, which in turn may lower the respect and admiration parents and students have for the teaching profession (Ronfeldt et al., 2013). The United States as a whole loses the costly resource of highly educated teaching professionals who can impact and make a difference in students' lives and their potential in society and globally.

Purpose of the Study

The purpose of this study was to analyze the relationship between new teacher retention in the first five years of teaching and mentorship support given to new teachers. Data shows an extreme teacher shortage in the Twin Cities metropolitan area now and a larger issue coming in the future.

Research Questions

Three research questions were used to frame this study.

RQ1: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon having a mentor during the first year of teaching?

RQ2: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon the amount of time spent with a mentor during the first year of teaching?

RQ3: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon whether their mentor teacher instructs in the same subject area?

Hypotheses

Three hypotheses with both a null and an alternative hypothesis were used to frame this study.

Ho1: There is no difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching.

Ha1: There is a significant difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching. New teachers who have a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.

Ho2: There is no difference between teachers' intention to stay in education based upon the amount of time spent with their mentor.

Ha2: There is a significant difference between teachers' intention to stay in education based upon the amount of time spent with their mentor. New teachers who spend more time with a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.

Ho3: There is no difference between teachers' intention to stay in education based upon

whether their mentor teacher instructs in the same subject area.

Ha3: There is a significant difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. New teachers who have a mentor in the same subject area during their first year of teaching will be more likely to stay in teaching as long as they are able.

Significance of the Study

The importance of the study of mentorship and teacher attrition is widespread and impactful to many areas. Prior to 2021, the state of Minnesota did not require districts to provide a mentorship program or any other induction support for new teachers. Past state statutes indicated local districts may implement mentorship programs with the use of local funds (National Council on Teacher Quality, 2008). In 2021, in the state of Minnesota, mentorship became a requirement for all Minnesota school districts through Minnesota State Statute 122A.70: "Teacher mentoring, induction, and retention programs. (a) School districts must develop teacher mentoring programs for teachers new to the profession or district (Minnesota Statutes, 2021)." Local districts must design and implement mentorship programs using local school funds or grants (Minnesota Statutes, 2021). Minnesota State Statute 122A.41 subdivision three states

> Mentoring for probationary teachers. A board and an exclusive representative of the teachers in the district must develop a probationary teacher peer review process through joint agreement that is consistent with subdivision five. The process may include having trained observers serve as mentors or coaches or having teachers participate in professional learning communities

(Minnesota Statutes, 2021, p. 2).

Comprehensive teacher induction with mentoring and the amount of support received by new teachers affects retention (Ingersoll & Strong, 2011). The Minnesota Department of Education (MDE) announced the development of a partnership with the New Teacher Center (NTC) to design a statewide mentorship and induction model to support new teachers. The framework of this mentorship and induction model includes retention of teachers, culturally inclusive practices, evidence-based practices, flexibility for diverse settings and districts, and compliance with Minnesota Statute 122A.70 (Minnesota Statutes, 2021). This study may guide Minnesota educators as they develop and fine tune their mentorship programs.

Mentorship, in general, is about shared experiences, hardships, and knowledge to help others to grow and advance. Mentors are often the ones who support their mentees when they experience challenges (Marino, 2021). Studies demonstrate mentorship can have a positive effect on academic performance, professional development, positive self-image, psychological well-being, and emotional adjustment (Crisp & Cruz, 2009; Eby et al., 2008). Due to the fact mentorship is used in almost every area of life, from the workplace to personal growth, the study of teachers' retention and mentorship is significant to many, both inside and outside of the education field.

Inside the field of education, this study is significant to principals and administrators as they lead new teachers in induction and mentorship programs. School boards approve funds from the district budget with recommendations from the superintendent and often in consultation with the director of finance or business. Teams of administrative leaders allocate the funds for district induction and mentorship programs. The policies and procedures for the program are typically defined and implemented by other faculty, often including the director of teaching and learning

or other staff member who leads professional development initiatives in the district. It is beneficial for principals and administrators to know the most effective programs that retain teachers and improve student learning.

Mentor teachers in schools develop relationships with new teachers and can help shape and benefit the overall school community. Teachers and staff who are not mentors benefit from the effects of a more positive school culture. A more positive school culture due to mentorship relationships helps teachers, students, administrators, and even families thrive (Wong, 2004). Teachers remain with a district when they feel supported by the administration, have strong bonds with colleagues, and collaborate with a sense of purpose or vision (Wong, 2004). The benefits of a cohesive teaching faculty will likely weaken when there is a high rate of teachers' attrition (Drexler, 2006). Increased relationships between teachers may benefit the school community as a whole.

Students receive effective instruction from teachers who have more experience in the classroom. On average, teachers substantially increase their effectiveness between their first and second years of teaching (Henry et al., 2011). The growth in years of teaching experience influences teachers' effectiveness which in turn increases students' achievement. The increase in teachers' effectiveness may also benefit parents. Teachers with more experience in the classroom advocate more effectively for children’s educational needs. More experience in the classroom for teachers will increase effective instruction.

This study is significant to higher education as professors and advisors prepare students for teaching in the classroom. Teacher preparation programs are designed to educate and coach students who hope to gain a teacher license. In teacher preparation universities, professors guide students in best practice in teaching with courses that teach students theories and philosophies of

education. To apply the education theory and philosophy, students spend time in classroom field experiences. Professors and advisors may then benefit from information on mentorship and growth in new teachers.

Field experiences are vital to student teachers as they apply what they have learned to classroom practice. Cooperating teachers and university supervisors play important roles in the development of student teachers. Relationships are made with cooperating teachers in classrooms that develop into mentorship relationships for student teachers and beginning educators. These relationships are important to student teachers as they begin to develop in their identity as educators. Teacher preparation programs include both professors and cooperating teachers to guide students towards confidence and self-efficacy as they begin their teaching career. Time in the education field brings more experience and exposure for student teachers to combine what they have learned with practice and actionable feedback.

As students work with professors, it is important to note professors and mentors are often not the same. A professor is a professional who teaches students in the higher education setting and conducts research to advance knowledge in their field of study. Professors develop curriculum that meets department, university, and state standards. They develop lessons, instructional activities and assignments that help students learn pedagogy, practice instruction, and reflect on what they have learned. Students' progress is assessed through observation, discussions, simulated practices, papers, assessments and/or through other checks for understanding. In most cases, instructors are not in the classroom to observe the students as they apply what they have learned to the practice of teaching. As the students experience time in the classroom, they convey their observations to their professors from their viewpoints.

Along with professors in a university program, students also encounter academic

advisors. The role of an academic advisor is to assist students in their educational and career growth. Academic advisors develop academic plans that are compatible with student goals. In higher education, an advisor typically helps students choose the appropriate courses to take to graduate and guides them in their education and career decisions. Many times a professor also has the role of an academic advisor for students, however there may be differences. There may be an assumption that professors and academic advisors with advanced degrees innately know how to be a mentor. Misconceptions can be passed on to students who often misinterpret the role of a mentor as that of an advisor or professor. A mentor is different from an advisor and a professor. In a teacher preparation program, all four positions, professor, academic advisor, university supervisor, and mentor, can be integral to students' and new teachers' experiences. Ray and Kafka (2014) showed one in four college graduates report not having had any professor who cared about them, and fewer than one in four reports having had a mentor. This shows that just because a student has a professor and an academic advisor, it doesn't mean they have a mentor. Based on the recommendations of this study, instructors and advisors may guide students to look for mentors and inform how often they should meet for mentorship to be most effective. Higher education advisors may be able to advocate for beginning teachers as they start their educational career by helping them prepare for the school culture and organization. New teachers experience the enculturation process as they gradually learn and assimilate to the characteristics and norms of a new school culture or group (Drexler, 2006). Guidance from a higher education leader, whether a mentor, professor, or advisor, can be beneficial in this transition.

This study affects the instruction and supervision of student teachers. University supervisors continually learn about best practice in student teacher supervision and how to advise students on the art of teaching for maximum benefits to the student. Student teaching supervisors

can influence a student teachers' entrance into the education profession. New teachers often comment that student teaching had the greatest influence on their development as teachers (Alger & Kopcha, 2009). Supervisors can help student teachers come to understand their role as future educators. The role of a student teaching supervisor is to observe, guide, and reflect with the student teacher as they grow in their experiences as a beginning teacher. As students experience student teaching, they have the opportunity to experience the role of teaching while they put theory and practice into action in the classroom, work on reflective practice, and gain a sense of belonging to the education community (Alger & Kopcha, 2009). Student teaching supervision is an integral part of this process.

Student teaching supervisors have the unique position to help pre-service teachers develop self-efficacy in their teaching. Through reflective conversations, supervisors may help to develop student teachers' sense of self efficacy as teachers and their teacher identity. Supervisors have typically viewed their primary role as to provide emotional and administrative support with some constructive criticism through comments, explanations, and suggestions (Long et al., 2013). To increase the effectiveness of supervision, supervisors may discuss student teachers' current beliefs and practices to identify their vision of teaching. These discussions may challenge student teachers to examine their view of teaching and develop a more dynamic vision of who they may become as a teaching professional. Supervisors may pose open-ended questions and press the students to provide reasons for their teaching decisions. These conversations can help supervisors move beyond supportive and evaluative roles to challenge a student's teaching beliefs (Long et al., 2013). Student teaching supervisors for the student teacher may have a special relationship and opportunity to speak into the educational self-efficacy of the teacher. The advice a student teaching supervisor may share with their student teacher can influence teachers'

self-efficacy and the ability to be reflective on student learning and their own learning. This ability to help develop teachers' self-efficacy in student teachers may be pivotal in the retention rates of beginning teachers.

This study has multiple implications for not just practice, but also for policy. Teacher attrition and mentorship is impactful to state and federal legislation. Currently, 27 states require some forms of induction or mentorship support for new teachers (Alliance for Excellent Education, 2018). As legislators make changes to state statutes about mentorship and induction of new teachers, this study may help to provide an understanding of the characteristics of induction and mentorship programs for educators. Legislatures may also be guided by this study in their decisions for how funds of school districts are used for induction and mentorship programs.

Other fields that utilize mentorship may find significance in this study as they look at the most effective way to design their mentorship programs. Mentorship can work well in areas such as nursing, social work, and other fields or professions that require state licensure. These fields may utilize mentorship programs and might find it beneficial to learn the best practices of mentorship programs. The current study also has implications for fields that hire and onboard new employees. New employees need to be introduced to the organizational culture they will enter. A mentorship program for new employees may be beneficial in job satisfaction and employee retention. Mentorship can have a positive effect on self-image, psychological well-being and emotional adjustment (Crisp & Cruz, 2009; Eby et al., 2008). Many churches and religious organizations utilize mentorship programs for their congregations to develop a sense of community and spiritual growth. These church mentorship programs can benefit from the knowledge of best practice in mentorship programs. Mentorship is beneficial to many areas, not

just the field of education.

Definition of Terms

Pre-Service Teacher

A pre-service teacher is an unlicensed person admitted to an educator preparation program that is approved by a state's board of teaching and offered by an institution of higher education. Pre-service teachers can be traditional undergraduates or students who are planning for a second career in education. These students study content and pedagogy in courses within their field of education as they prepare to complete their student teaching. Upon satisfactory completion of student teaching they are recommended to a state's board of teaching for a teaching license.

Induction Programs

Induction is a systemwide, coherent, comprehensive training and support process that continues for two or three years and becomes part of the lifelong professional development of a district to keep teachers teaching and improving their effectiveness (Wong, 2004). Induction is organized by a school district to train, support, and retain new teachers and progress them into a lifelong learning program (Drexler, 2006; Wong, 2004).

Belongingness

The need to belong is fulfilled through the acceptance of others and mutuality. Belongingness plays an important role in making mentoring relationships powerful for individual growth and development (Allen & Eby, 2008). There are two main features associated with the need to belong. First, individuals need frequent interaction with the other person that is positive and affective in nature. Second, the person must believe the relationship is marked by ongoing affective concern. Thus, for belongingness to occur, a mentee must believe a mentor cares about

their well-being, feels affection towards them, and works to continue in relationship with the mentee (Allen & Eby, 2008).

Mentor

In this study, there is a distinction between a mentor and an educative mentor. A mentor is someone who is assigned to another person as a guide and wise counsel. This is the intent of the position of mentor. In reality, a mentor can be many things from a trusted friend who guides a person through job and life situations to a person who is assigned to meet with a mentee as part of a job requirement or additional assignment.

Educative Mentor

The core principles of an educative mentor include ”cultivating a disposition of inquiry, focusing attention on student thinking and understanding, and fostering disciplined talk about problems of practice” (Feiman-Nemser, 2001, p. 28). Educative mentoring involves one on one, close to the classroom work on teaching between a more experienced and a less experienced teacher with the goal of growth in the early career teacher’s practice (Fieman-Nemser, 2016).

Teacher attrition

Teacher attrition is the rate at which new teachers leave the education profession long before retirement (Ingersoll & Strong, 2011). Early career teacher attrition is defined as teachers who have obtained a teaching position in a primary or secondary school after graduation and have stopped teaching within five years (Weldon, 2018). Exit attrition, defined as educators who leave the education profession completely, has the most serious outcome because it reduces the overall teacher workforce and teachers' effectiveness in students' achievement (Vittek, 2015).

Teacher retention

Teacher retention is the proportion of teachers, in one year, who are still teaching in the

same school the next year. Absolute retention is defined as teachers who stay in the same position as the previous year. If an educator stays in the education field, but takes a different position, it is defined as a transfer to another teaching position, or partial retention (Vittek, 2015).

Self-Efficacy

Self-efficacy is the confidence, or the belief, that an individual can make change happen. The concept of self-efficacy is rooted in Bandura's social cognitive theory. Self-efficacy is the belief one can "successfully execute the behavior required to produce outcomes" (p. 193) even in adverse situations (Bandura, 1977). Self-efficacy focuses on the ability to perform a task. A person's perception of success and failure is linked with their perception of self-efficacy. Individuals with a strong sense of efficacy typically possess characteristics of resiliency, perseverance, and motivation (Pearman, et al., 2021). This influences motivation and the ability to set goals. The amount teachers invest in their teaching and how resilient they are in difficult situations is directly related to teachers' level of self-efficacy. Views of self-efficacy appear to form fairly early in an education career and are relatively difficult to change thereafter. Thus, research argues it is important to develop teachers' knowledge and skills early in their career. Teachers' sense of preparedness and self-efficacy seems related to how they feel about teaching and their plans to stay in the profession (Darling-Hammond, et al., 2002).

Organization of the Remainder of the Study

Chapter 1 is focused on the introduction, problem statement, and the significance of mentorship and induction programs in the current context of education. This investigation examined the relationship between a new teacher's intention to stay in the classroom and mentorship and induction programs provided by a school district. The review of the mentorship and induction programs looked at the amount of time a new teacher spends with a mentor and if

the mentor has experience in the new teacher's subject area. Chapter 2 includes the review of literature and research related to the history of induction and mentorship, induction and mentorship programs in school districts, successful induction programs, benefits of induction and mentorship programs, mentorship in induction programs and education, and new teacher attrition in education. The theoretical framework of mentorship and induction are also addressed. Chapter 3 centers on the methodological design of the study, research questions, hypotheses, and instruments for the investigation. Chapter 3 also describes the sample, data collection procedures, and data analyses that will be utilized in this study as well as the limitations of the planned methodology and ethical considerations. Chapter 4 outlines the results of the study with data analysis of new teacher attrition and mentorship. Chapter 5 focuses on the research and implications for future research and leadership practice. The results of this investigation will hopefully help shed some light on the relationship between mentorship, induction programs, and teacher attrition. This in turn may set the stage for the betterment of positive workplaces and ultimately growth students' achievement.

Chapter 2: Literature Review

The teacher shortage in the United States is a reality. Nationally, from 2007 to 2016, enrollment in teacher preparation programs dropped 33% (Will, 2019). For the first time in 50 years, the Phi Delta Kappa's annual poll of the public's attitudes towards public schools revealed a majority of parents said they did not want their children to become teachers (Phi Delta Kappa, 2018). Over 40% of new teachers leave the profession within their first five years (NEA, 2017). Fewer students decide to pursue a teaching career, and a large percentage of those who do become teachers leave the education profession early in their careers. The future impact on the education of children could be significant, as teacher vacancies are left unfilled or filled with less qualified teachers (Carver-Thomas & Darling-Hammond, 2017).

Why do some teachers stay in the classroom? Teachers remain in schools, typically, if teaching continues to be the most attractive option. Conditions that may influence teachers' decision to remain at their current school are teacher characteristics, school characteristics, and organizational characteristics (Ingersoll & May, 2012). The reasons given by teachers for not leaving the teaching profession were influenced by both intrinsic and extrinsic variables. Self-efficacy in teaching and working with students were the top intrinsic reasons teachers stated for staying in the classroom (Perrachione et al., 2008). The top extrinsic reasons for staying in the classroom stated by teachers were school schedule, time off, and retirement (Perrachione et al., 2008). Many teachers find the school hours, schedule, and time off helpful when they have families and other commitments. Teachers in Minnesota work with the Teacher Retirement Association (TRA), a pension plan that serves Minnesota public education professionals to help them invest their money for retirement. TRA is a defined-benefit pension plan, a type of pension plan in which an employer promises a specified pension payment, lump-sum, or combination on

retirement depending on an employee's history of earning, tenure of service, and age, rather than depending directly on individual investment returns. These intrinsic and extrinsic benefits are helpful to retain teachers in the teaching profession.

Teaching candidates need a clear-eyed view of the teaching profession. They need to begin to develop their self-efficacy in teaching and their teaching identities prior to student teaching and their first year in the classroom (Valtierra & Michalec, 2017). To keep beginning teachers in the profession of education and not lose them, it is important researchers look for key components that affect the longevity of teachers in the education profession.

General satisfaction with a teaching job strongly predicts intentions of new teachers to stay in the classroom (Kelly et al., 2019). Job satisfaction may be a difficult characteristic to define. Eighty-two percent of beginning teachers agree that they enjoy helping students learn (Kidd et al., 2015). In general, most early teachers go into the teaching profession because they enjoy helping students learn. There are many other reasons educators choose to stay in the classroom. They range from external conditions such as community support, teacher preparation, and retirement incentives to internal conditions such as the environment at work, job security, and collegiality with other teachers (Inman & Marlon, 2004).

Teacher preparation programs are one external factor that beginning teachers cite in their intentions to stay in the classroom (Kelly et al., 2019). Kelly et al. stated the perceived quality of the teacher preparation program is an important factor in new teachers' retention. If an early career teacher has a positive perception of their teacher preparation program, they are more likely to stay in the education profession. This is the subjective perception of the early career teacher and their teacher preparation program and so it may be hard to quantify.

When early teachers perceive they have the external support of the community, parents,

and administration, they are more likely to stay in their teaching position. In the area of early teachers' retention, the issue of salary is not the most important external factor when compared with other factors such as the teaching workload, students' achievement, community and administrative support, and relationships with stakeholders (Kelly et al., 2019).

Internal job conditions also affect teachers' retention. School leadership is highly predictive of teachers' retention (Kelly et al., 2019). The higher the teachers perceived the quality of school leadership, the less likely they were to leave their school or have plans to leave their school (Whipp & Geromine, 2017). Teachers tend to continue to teach in schools and school districts where they sense they have support from administrators and colleagues (Kelly et al., 2019). When students show gains in achievement, early career teachers are more likely to continue in their position (Whipp & Geromine, 2017). These improvements in achievement also involve less conflictive behavior and more engagement with students (Kelly et. al., 2019). Gains in students' achievement and student behavior influence the longevity of teachers.

Conditions in the workplace are also a factor in teachers' retention (Kelly et. al., 2019). When teachers have a reduced number of working hours, the ability to participate in decision-making, opportunities for career advancement, and collegial relationships, the retention of teachers increases. Finally, when early career teachers have access to mentors and professional networks such as induction programs and professional learning communities, they are more likely to choose to stay in their current positions (Kelly et. al., 2019).

History of Induction and Mentorship

Mentorship has a long and powerful history. The origin of the word *mentor* has its roots in the story of Homer’s Odyssey. Mentor was a wise friend of Odysseus, a Greek king. Mentor was entrusted to educate Odysseus’ son, Telemachus, to be his guide and companion (Allen &

Eby, 2007; Vierstraete, 2005). Other historical figures as mentors include Socrates and Plato, who were paired as mentor and mentee. Plato went on to mentor Aristotle. Mentorship has been found in almost every profession, including literature, politics, music, the arts, and entertainment. Three definitive facts are known about mentorship: 1) mentorship is everywhere, 2) mentorship is a known concept, and 3) mentorship is believed to work (Allen & Eby, 2007).

The Industrial Revolution utilized workers trained as apprentices to learn new careers. Mentorship and apprenticeship were common in newly industrialized countries. Mentorship in education began at this time with teachers new to the education field who served as apprentices or pupil teachers in the school setting (Vierstraete, 2005). School oversight, teacher qualifications, and preparation in the United States became more organized by the mid-1850s (Kolodny, & Breitborde, 2022). Novice teachers, who had no training or experience in teaching, were expected to imitate master teachers in areas of style and methods. These teacher preparation schools, called Normal Schools, were one to two years in length. According to Kolodny and Breitborde (2022), the prominent educator, Horace Mann, believed oversight of teacher preparation programs was needed to help with the consistency and quality of teacher education. Normal School, as a form of teacher training, lasted until about the mid-1920s, when formal education programs were required in colleges of education (Kolodny & Breitborde, 2022; Vierstraete, 2005). Formal teacher education programs became the usual route for teacher certification by the mid-1950s.

As early as the 1950s, educators called for improvements in teacher preparation to ease the difficulty for novice teachers who enter the education profession. Due to the call for these improvements, teacher mentorship programs grew in popularity. Grants were distributed by the Ford Foundation in the late 1950s to help facilitate improvements in teacher preparation

programs (Kolodny & Breitborde, 2022; Serpell, 2000; Vierstraete, 2005). These grants were designed to develop an internship year, or fifth year, in teacher education to integrate educational theory and practice. The intent of these grants was to help reduce new teachers' instructional loads, provide assistance through mentorship and curriculum guidance, supply new teachers with less challenging classrooms, and help prevent culture shock (Serpell, 2000).

The terminology of induction was first referenced in the 1960s (Serpell, 2000). Since the 1970s, researchers have called for new teacher induction programs. During this time, researchers began to codify effectiveness as it related to teaching, which brought about a new and more complex idea of induction. In the early 1980s, induction, also known as teacher support, was minimal. At the best of induction, a new teacher was assigned a mentor. At the worst, a new teacher was expected to perform as a veteran teacher without any support (Reitman et al., 2019). In the mid-to-late 1980s, construction and implementation of induction programs was beginning to gain traction. Pilot programs began to develop across the United States. By 1992, 46 states had beginning teacher evaluation programs or requirements (Serpell, 2000). Interest in induction continued to grow in the mid-1990s, but school districts struggled to keep up with the cost of these programs. A number of programs ended due to budgetary concerns. In 1990-1991, 51% of beginning public school teachers reported they attended some form of teacher induction. In 1999-2000, 83% of beginning teachers reported they had participated in an induction program (DeAngelis et al., 2013; Ingersoll & Strong, 2011). As of 2012, 27 states reported statutes that required new teachers to attend some form of teacher induction training and 17 of those states provided financial assistance (DeAngelis et al., 2013).

New teachers face similar kinds of difficulties in their first three years of teaching and require the most professional development of any time in teachers’ careers (Toombs & Ramsey,

2020). Moir (2007) identified five phases of development first-year teachers go through as they enter the field of education. These phases are not identical for each teacher; however, most first-year teachers experience the emotions described in each stage.

Anticipation is the first phase Moir (2007) identified. Early career teachers often romanticize the role of teaching. New teachers often idealize what it will be like to teach in their first classroom. They feel excitement and anticipation as they move through student teaching, the interview and hiring process, and into their first few weeks of teaching.

Survival is the second phase of Moir's (2007) teacher stages of development. Many times first year teachers are caught by surprise at the speed of teaching and learning and struggle to keep up with the expectations. They may have little time to reflect on their growth and spend much of their time in lesson planning, learning the flow of the classroom, and assessing student learning and growth (Moir, 2007). With the expectation the workload will ease with time, the first year teachers typically stay energetic and committed to their goal during the survival phase.

Disillusionment is the third phase (Moir, 2007). After several months into the first year of teaching, new teachers begin to realize the workload that was felt in the survival phase may last longer than expected. During the disillusionment phase, first year teachers may begin to question the choice of teaching as a career. Often this time of questions may lead to lack of sleep, illness, and stress. The disillusionment phase also may occur around the time of teacher conferences, principal observations, and other evaluations that may move the new teacher into a vulnerable position. Additionally, classroom management, communication skills, and planning may overwhelm the first-year teacher, which may bring about lower teachers' self-efficacy, doubt in their teaching ability, and thoughts of leaving the classroom setting (Moir, 2007).

The fourth phase in Moir's (2007) stages of teacher development is rejuvenation. In

rejuvenation, new teachers typically experience a winter break that provides some needed time away from the classroom and school environment. New teachers may find time to plan and reorganize. With the thought they have surpassed the first half of the school year, the new teacher may note their growth and coping skills and how they have managed in their new position. This often helps to move the new teacher into the spring as they prepare for end of the school year tasks.

Moir's (2007) last phase of teacher development is reflection. During the month of May, first year teachers begin to reflect over the successes and challenges of their first year. This reflection guides the new teacher to thoughts of change that could be made in areas of lesson planning, classroom management, instructional strategies, and assessments. The new teacher may feel a sense of pride in completing their first year of teaching. They may begin to look forward with anticipation to their second year of teaching, which brings them back to the initial phase of anticipation (Moir, 2007). These new teacher development phases can be helpful in the design of new teacher and induction programs. Comprehensive induction programs were implemented to remove some of these observed difficulties for novice teachers (Serpell, 2000).

Comprehensive Induction

A comprehensive induction program is designed to provide systematic and sustained support to beginning teachers for at least one school year (Drexler, 2006; Serpell, 2000). Truly comprehensive induction programs continue the training process for two or three years and into a lifelong program of professional development to keep new teachers retained and improving towards increased effectiveness (Drexler, 2006; Wong, 2004). Induction programs are organized by schools in conjunction with district or state mandates to compensate for what may be seen as inadequacies of teacher preparation programs. Comprehensive induction has four primary goals:

1) socialization of new teachers into the school community, 2) improved teaching skills, 3) work through new teacher concerns, and 4) continued professional development for teachers (Serpell, 2000).

Induction involves planned guidance and orientation to help new teachers fit into the school systems that already exist (Drexler, 2019). Induction programs aim to move teachers towards improved effectiveness, professional development and collegial conversations in education, answers to typical beginning teacher concerns, and introduction of new teachers to the school community and culture (Hope, 1999; Serpell, 2000; Wong, 2004). School districts design induction for training, support, and retention of new teachers in the education field (Dexler & Wong, 2004). To encourage a lifelong learning program, induction programs include a comprehensive structure with well-defined roles, professional learning that is organized and sustained, and collaboration with other educators to develop collegiality and community (Wong, 2004).

In the socialization of new teachers into the school community, induction involves orientation with the intention of helping new teachers fit into the school system and engage in collegial conversations with fellow teachers (Serpell, 2000). These conversations may contribute to the professional growth and development of new teachers as they learn from more experienced teachers. Induction orientation also involves collaboration with group work, shared experiences, and group identity. The collaborative style helps to reduce the difficulty of the transition into teaching and maximize the retention of highly qualified teachers (Drexler, 2006).

Induction provides new teachers opportunities to improve their teaching skills. Kidd et al. (2015) stated these opportunities should be personally and professionally fulfilling and offer targeted support in professional learning. Opportunities may involve instruction in classroom

management and effective teaching techniques, observation of master teachers, collaboration with veteran teachers, and constructive feedback of their teaching (Kidd et al., 2015). A new teacher may need guidance in how to teach and may find support through district induction programs.

The transition to teaching can be a difficult process for beginning elementary and secondary teachers during the first few years. Many new teachers experience similar challenges as they adjust to the profession of teaching, such as classroom management, isolation, planning, and assessment. An induction program that is highly structured, rigorous, and seriously monitored with well-defined roles may provide the support new teachers need to survive and thrive in the teaching profession (Wong, 2004).

Teachers typically continue to seek improvement in their teaching skills with professional development opportunities. State teaching boards require teachers to routinely grow in their craft as educators. In the state of Minnesota, teachers are required to complete 125 continuing education units (CEUs) every five years (PELSB, 2022). These CEUs may be in multiple areas of professional development but must have education hours in these seven specific areas: positive behavior intervention, accommodation, modification, and adaption of curriculum, materials and instruction, mental illness, suicide prevention, reading preparation, English language learners, and cultural competency. Along with state required CEUs, educators typically set goals for their learning and teaching with their administration at their schools. These goals are many times site goals and personal goals that are in coordination with performance reviews implemented by school districts. Induction helps professional development and learning to be sustained and organized for the new teacher. In the life of teachers, induction is the first phase in a career-long learning process that hopefully starts the new teachers on the right path of continual

growth and learning.

Teacher induction programs are most effective when they are integrated into the broader vision of the school, the district, and the state and involve improvement in performance for all teachers (Alliance for Excellent Education, 2014). Successful induction programs strive to develop a system of quality standards that provide meaningful support for all teachers as they move through their educational careers (DeAngelis et al., 2013; Drexler, 2006; Kelly et al., 2019; Toombs & Ramsey, 2020).

Hewitt (2009) described three types of induction programs: the basic orientation model, the instructional practice model, and the school transformational model. The simplest model is the basic orientation model, which provides basic professional development on responsibilities and district policies. The basic orientation model may have informal mentors and a minimal amount of observation of other teachers. The instructional model provides more extensive professional development. These professional developments include such topics as classroom management and quality instruction. It also involves well-trained mentors. The instructional practice model of induction works with new teachers for two or more years. The school transformational model is used least due to the amount of time, resources, and complexity involved in implementing it well. This model uses the components of the other two models of induction and implements formative assessment standards to help personalize professional development for each teacher (Hewitt, 2009). These three types of induction programs can guide schools and administrations in the planning of induction programs. Schools may be able to implement more components from the transformational model into their current programs to help increase new teachers' retention.

Successful Mentoring and Induction Programs

High quality teacher induction programs often have three major similarities. The programs are highly structured, focused on professional learning, and emphasize collaboration (Gourneau, 2014). The most common components of successful induction programs are mentorship, a reduced course load, seminars or workshops, and supportive communication with administration (Alliance for Excellent Education, 2014).

A significant support feature for teacher induction programs is sustained, rigorous, individualized support from an assigned teacher mentor (Reitman & Karge, 2019). Teachers need to be in touch with a mentor who can offer support when needed. Structured induction programs involve compensation for mentors, and sometimes mentees, through money, release time, or graduate credits. Mentors can also benefit from training in adult coaching, observations, and constructive feedback skills.

A reduced course load in an induction program, both for the mentor and the mentee, may improve teachers' retention. The reduced workload or release time from teaching could allow the new teacher and the mentor to have time together to collaborate, observe one another, and build a positive relationship (Serpell, 2000). Designated time with a mentor allows the partnership to set clear goals and includes systematic observations, which produce better outcomes for the induction program. Systematic observations lead to constructive feedback on the teaching and learning process that occurs in the new teacher’s classroom and can help improve the growth and development of the new teacher. A reduced course load also allows the new teacher to have regular communication with the principal (Alliance for Excellent Education, 2014). The benefits of a reduced workload may be difficult to accomplish as school districts may find it unrealistic to provide the release time needed.

Seminars and workshops are part of a successful induction program. These seminars typically include training on curriculum and technology, effective teaching practices, and current professional development (Serpell, 2000). New teachers may have similar learning needs in classroom management, communication with parents, and student needs. The training and seminars should respond to these needs and provide new teachers with the skills to improve. A comprehensive induction program provides seminars or training from before the first day of school for around two to three years and throughout teachers' careers to add to the lifelong learning process of an educator.

A successful induction program is often marked by positive administrative support. These programs encourage the visibility of the administration to new teachers, which helps to build positive relationships. New teachers are more interested in schools that are organized for productive collegial work with an effective principal's leadership (Ladd, 2011). School principals are identified as a key source of support and guidance for new teachers. The goal for the administration in a successful induction program is to provide an environment where new teachers succeed (Ingersoll & Strong, 2011).

A few successful induction and mentorship programs exist in school districts in the United States and around the world. Successful induction and mentorship programs have different components that bring their success. These programs have had success over time and are beneficial to examine and see what can be learned. Four induction programs have had successful outcomes in the retention of new teachers are Peer Assistance and Review (PAR), the Louisiana Teacher Assistance and Assessment Program (LTAAP), Beginning Education Support and Training (BEST), and Peer Group Mentoring (PGM).

Peer Assistance and Review (PAR)

Peer Assistance and Review was developed by Dal Lawrence. Lawrence emphasized the idea of improved teacher professionalism by having expert teachers mentor new teachers the way doctors mentor interns (Kahlenberg, 2007). Peer Assistance and Review (PAR) is an approach to teacher evaluation that can produce results of keeping effective teachers and removing ineffective ones. According to the American Federation of Teachers (2016), PAR uses the critical elements of professionalism in teaching: induction and mentorship, professional development support, and authority and leadership. PAR uses distributed leadership and lateral accountability. Distributed leadership uses the skills of individual teachers and holds them accountable for their contribution to the goals of the school organization. Lateral accountability involves teachers who work together which allows everyone to improve (American Federation of Teachers, 2016). Distributed leadership and lateral accountability may allow teachers to use their expertise and to become leaders and professionals in their classrooms.

Increased teacher leadership contributes to positive outcomes for teacher quality (American Federation of Teachers, 2016). There is support for the connection between participation in PAR programs and reduced new teachers' attrition rates. The cost of the implementation of PAR programs ranges from $3,000 to $10,000 per teacher (Weins et al., 2019). When compared to the costs of a replacement of a teacher due to attrition at over $12,000, there may be cost benefits to the implementation of the PAR program. PAR programs involve support, reflective practice, and growth for teachers, which in turn improves teacher quality by having expert teachers mentor and support both new and struggling teachers (American Federation of Teachers, 2016). Schools that participated in PAR saw an increase in retention rates among new teachers in each of the first three years of the program (Weins et al., 2019).

Some other Peer Assessment and Review (PAR) programs are Teacher Development and Evaluation (TDE) and Alternative Teacher Professional Pay Systems (ATTPS) or more commonly known as Q Comp. The ultimate goal of these programs is to support and develop teachers so they can be most effective in their teaching of all students. TDE and Q Comp use information from professional evaluation activities to personalize professional learning opportunities for teacher growth (Minnesota Department of Education, 2022). Both TDE and Q Comp utilize lesson observation and feedback from peers and school leaders to help improve teachers' instruction. They also incorporate measures of student academic growth and professional learning opportunities to expand teacher knowledge and instructional skills. Q Comp is specifically designed to improve student learning through recruitment and retention of highly qualified teachers, encouragement of qualified teachers to take on roles to help improve students' academic performance, and provisions of incentives to encourage teachers to keep improving their education skills (Minnesota Department of Education, 2022). Q Comp also offers career advancement opportunities for teachers to potentially move into leadership roles. These leadership roles may include professional learning community team leader, peer reviewer, instructional coach, data coach, classroom demonstration site teacher, equity coach, and/or site team leader. These teacher leader opportunities are designed to help teachers become agents of change in the field of education. These agents of change work to increase teachers' self-efficacy and effective practices to improve students' achievement.

Peer assessment and review programs can be unpopular with some teachers and school districts. Teachers may question how peer teachers, in council and agreement with administration, are allowed to evaluate other teachers and have a part in the decision of which teachers should be retained or not.

Louisiana Teacher Assistance and Assessment Program (LTAAP)

The Louisiana Teacher Assistance and Assessment Program (LTAAP) is an induction and mentorship program that provides new teachers with support while providing a statewide measure of teacher competency for certification. The LTAAP is uniform and statewide in assistance and assessment of new teachers as they enter the education profession for the first time in a Louisiana public school system (Pastorek, 2007). New teachers, during the first semester and throughout the first two years of employment, are provided a mentor who leads professional development activities to enhance teacher competencies (Pastorek, 2007). During the third semester of employment, the new teacher is assigned an assessment team that consists of the principal and an assessor from outside the building. Data are collected by the assessment team as the basis for recommendations for teaching certification. During the assessment semester, the mentor continues to provide a program of encouragement, support, and professional development. The mentor has no role or responsibility in the assessment process or the certification recommendation (Pastorek, 2007). The inclusion of a mentorship component in the LTAAP program is specifically designed to provide assistance to new teachers through classroom visits and conferences in a formative rather than summative measure of evaluation (Bauer & LeBlanc, 2002). The LTAAP is designed to help new teachers become competent, confident professionals in the classroom and support performance standards established for certification in Louisiana. Wong (2004) reported in the 2001-2002 school year the Lafourche Parish Public Schools in Thibodaux, Louisiana lost only one teacher out of the 46 new teachers hired while using the LTAAP. Of the 279 teachers Lafourche Parish hired from 2000 to 2004, only 11 have left the teaching profession (Wong, 2004). The retention rate of the LTAAP in Louisiana is more successful than the national retention average (NEA, 2017).

Beginning Education Support and Training (BEST)

Beginning Education Support and Training (BEST) program is the statewide comprehensive two or three year induction program that began in Connecticut schools. To support new teachers, BEST requires all school districts provide assistance to beginning teachers through mentor teachers. BEST also has an assessment component, which mandates that in order to obtain a Provisional Educator Certification in Connecticut all new teachers must provide evidence of their teaching competencies (Singh, 2006). Evidence of proficiency of these teaching competencies is provided through a portfolio, which contains implementation of an instructional unit, lesson descriptions, videotaped segments of a lesson, samples of student work with corrective teacher feedback, and reflective commentaries. Singh (2006) reported every year, around 3000 teachers submit their portfolios and about 85% of them pass this assessment to obtain a Provisional Educator Certification. Research indicated teachers who had higher portfolio scores in the BEST program also had greater student growth in reading comprehension and contributed to an overall increase in students' achievement (Wilson et al., 2014). The BEST program benefited experienced teachers as well. Opportunities for professional development, leading seminars, mentoring teachers, and portfolio scorers were available to experienced teachers. Almost 40 percent of teachers and administrators in Connecticut participated in mentorship and assessment of new teachers (Miller et al., 2002). Washington school districts that fully engage in the BEST mentorship program retained new educators at a 4% higher rate than school districts who did not use the program (The Office of Superintendent of Public Instruction, 2017).

Peer Group Mentoring (PGM)

Peer group mentoring (PGM) is a model formed to support the professional development

of teachers in Finland. The PGM model is based on the ideas of socio-constructivism, dialogue, and knowledge sharing through critical constructivism (Cavanaugh & King, 2020; Geeraerts et al., 2015). Typical traditional mentorship is based on communication of knowledge from a more experienced teacher to a novice teacher. Ideally, in PGM, knowledge is developed according to integrative pedagogy combining theoretical, practical, self-regulative, and sociocultural knowledge. Personal experiential knowledge is used in combination with theoretical concepts and models (Cavanaugh & King, 2020; Geeraerts et al, 2015).

Reflective practices are implemented for deep understanding of topics being discussed. Each participant engaged in self-reflection to develop their metacognitive and reflective skills and promote self-regulation (Cavanaugh & King, 2020). PGM involves construction of common professional knowledge, professional ethics, and professional practice. Teachers are encouraged to take a critical stance and challenge long-standing ideas in the school culture. Teachers may work together to construct a new educational practice (Langelotz, 2013).

This practice is built on teachers' own experiences through peer group mentoring. Peer group mentoring consists of both beginning teachers and more experienced teachers. Ideally, the size of the group is between five and ten members. Narrative accounts about teaching are shared in peer mentoring groups. The group meets on a regular basis. The group is responsible for planning, organization, and implementation of its own program for professional development throughout an academic year (Geeraerts et al., 2015). Teachers participated in the groups on a voluntary basis. The facilitator of the group is a trained mentor and is paid for the work.

Cavanaugh and King (2020) found teachers unanimously regarded PGM as an important tool in professional development for beginning teachers and throughout the teaching career. Novice teachers described the PGM as very relevant and closely related to professional

experience. Beginning teachers report PGM helps new teachers become more confident as teachers and professionals. Increased confidence of new teachers may have a positive effect on teachers' self-efficacy and retention. New teachers indicated that participation in PGM increased their practical knowledge and skills for teaching (Cavanaugh & King, 2020).

Benefits of Induction Programs

Comprehensive induction programs have multiple benefits for the education profession. Some of these benefits include teacher retention, improvement of teacher practices, student learning support, and acquisition of self-efficacy as teachers (Reitman & Karge, 2019; Toombs & Ramsey, 2020; Weins et al., 2019). Quality induction programs promote greater teacher retention which breaks the cycle of attrition, saves money for schools, and promotes the goal that teacher shortages do not dictate hiring policy (Reitman & Karge, 2019).

Comprehensive induction programs that consist of multiple types of support, such as mentorship, collaboration, and administrative support, reduce the turnover rate of those who receive induction in comparison to those who do not receive induction (Alliance for Excellent Education, 2014; DeAngelis et al., 2013; Kelly et al., 2019; Ladd, 2011; Reitman & Karge, 2019). The quality of the induction program improves teacher commitment and motivation in the education profession (Kelly et al., 2019). There is some evidence the quality of the induction program may be more important than how much time new teachers spend in the induction program (DeAngelis et al., 2013; Wiens et al., 2019). The first few years of teaching require intensive professional development to retain teachers in the profession. Quality induction programs promote greater teacher retention which saves money for school districts and ensures the fulfillment of staffing needs (Toombs & Ramsey, 2020).

Comprehensive induction programs can improve teachers' effectiveness in practice and

student support. On average, teachers substantially increase their effectiveness between their first and second year of teaching (Henry et al., 2011). Since comprehensive induction programs increase teacher retention, they also help increase teaching effectiveness as teachers remain in the profession for more years. Teacher quality is recognized as one of the most powerful school-based factors in student learning. It outweighs a student's social and economic background in accounting for differences in students' achievement (Alliance for Excellent Education, 2014; DeAngelis et al., 2013). So, as teacher retention increases, so do the years of classroom teaching experience. More experience teaching in the classroom increases teachers' effectiveness, and teachers' effectiveness is one of the most powerful school-based factors for improvement of students' achievement (Alliance for Excellent Education, 2014; DeAngelis et al., 2013). When teachers trust in the effectiveness of their work, they tend to believe they can influence how well students learn and develop (Ahokoski et al., 2017).

Induction programs provide time for new teachers to reflect on their teaching practices, which are critical to teachers in development of their own teaching expertise. It helps teachers to observe educational developments, implement their learning, and follow developments in line with educational practices (Orakci, 2021). Reflection on teaching practices means a self-examination of teaching events in an effort to improve professional growth. This form of professional growth is also known as transformational learning and helps teachers to challenge underlying assumptions in teaching (Ketsing et al., 2020). Teachers must constantly look for progress in their teaching, not perfection. For significant change to occur, teachers must reflect on current teaching practices and prepare for potential change. Transformative learning requires multiple modes of reflection (Solis & Gordon, 2020). There are three modes of reflection in teaching: technical, practical, and critical.

Technical reflection, the most basic form of reflection, involves a description of the actions that occurred with a critical lens. A technically reflective teacher looks at the efficiency and effectiveness of a learning situation but does not move to criticism or change of practice (Ketsing, et al., 2020; Orakci, 2021). Practical reflection allows teachers to benefit from their experiences and teaching skills. Teachers use their practical knowledge to back up their reflective dialogue with logical reasons (Ketsing, 2020). In this mode of reflection, teachers try to think about a problem they encounter and find solutions (Orakci, 2021). The final domain of reflective thinking in teaching is critical reflection. As teachers critique their practice, they propose a new way for teaching in the classroom and support their decisions with logical reasoning. A questioning and critical mindset is helpful during and after the action of evaluation. For critical reflection to be achieved, the teacher needs to have an open mind about their teaching and a willingness to learn and improve (Orakci, 2021).

A reflective teacher is development-oriented and open-minded with a focus on lifelong learning. The ability to plan and evaluate the teaching process effectively by self- assessment comes from reflective practice. Reflective thinking ensures professional development of teachers (Orakci, 2021). Transformational learning also requires collaboration with colleagues (Solis & Gordon, 2020). Many school districts have professional learning communities and related practices to support professional development and growth in all teachers.

Professional Learning Communities (PLCs) are utilized in many school districts as part of an induction and mentorship program. They help to foster community and collegial conversations among teachers. PLCs have been defined as effective organizational approaches that allow teachers opportunities to engage collaboratively to improve teaching practice (Kelly & Cherkowski, 2015; Nielsen & Lockhard, 2020). Collaboration, collegial relationships, and

professional learning through reflection with other teachers can provide a structure for improved teaching and learning. PLCs help to shift educational practice from one of isolation to one of collaboration. When involved in collaborative learning, teachers are consistently encouraged and supported to try new innovations (Kelly & Cherkowski, 2015). Opportunities provided by PLCs may build teachers' self-efficacy (Nielsen & Lockhard, 2020). A teacher learning community builds and manages knowledge, creates a shared language for practice and student outcomes, and sustains aspects of school culture that influence norms and instructional practices (Langelotz, 2013). Gaining knowledge and skills in these areas can help increase teachers' self-efficacy. Teachers, typically in similar content groups engage in regular, ongoing, systematic inquiry into educational practices. These conversations can help to vocalize the knowledge of teachers and make that knowledge public and shared with new teachers (Brodie & Chimhande, 2020). PLCs can also build a professional environment for the school and the education profession.

Many professional learning communities (PLCs) use the Community of Inquiry (CoI) theoretical framework (Garrison, 2015). This theory can provide the context to define and use metacognition in a social shared environment like PLCs (Vaughn & Wah, 2020). There are three key elements in the CoI framework: social, cognitive, and teaching presence (Garrison, 2015). Garrison (2015) discusses how the combination of the social, cognitive, and teaching presence reinforces a collaborative constructivist educational experience. Social presence creates an open environment of trust and group collegiality. Cognitive presence is defined by Garrison et al. (2001) ”as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry” (p. 11). The final element of a CoI is teaching presence. Personally meaningful and educationally worthwhile outcomes are brought together with the social and cognitive processes by the unifying force of teaching

presence. Shared metacognition is found at the intersection of the social, cognitive, and teaching presences. When teachers have shared metacognition in PLCs, it is believed awareness is at the core of becoming an effective inquirer, which in turn leads to better teaching practices.

Self-efficacy in humans may be one of the most important influences on a person's behavior (Ahokoski et al., 2017). Teachers' self-efficacy is the belief the teacher has the ability to apply effective teaching skills and create behavior change (Mamak et al., 2020). A positive sense of self-efficacy in teaching can be improved by involvement in comprehensive induction programs (Ahokoski et al., 2017; Darling-Hammond et al., 2002; Pearman et al., 2021). When teachers feel a high level of self-efficacy in their teaching, they are more likely to believe they can reach all of their students, handle problems in the classroom, teach all students to high levels, and make a difference in the lives of students (Darling-Hammond et al., 2002; Pearman et al., 2021). Teachers' beliefs in their own self-efficacy can make their cognitive, emotional, motivational, and decision-making processes more effective (Mamak et al., 2020). Teachers with high self-efficacy will try new teaching techniques and participate in professional dialogue with colleagues in order to meet the needs of their students (Pearman et al., 2021). Teachers with a high perception of self-efficacy prepare for their work, work more efficiently with colleagues and stakeholders, and set high goals for themselves (Vidić et al., 2021). Positive teachers' self-efficacy has been found to increase student academic achievement, student motivation, and positive student behavior (Ahokoski et al., 2017). When teachers' self-efficacy perceptions are negative, it can bring on anxiety for teachers. Teachers with low or negative self-efficacy are typically under greater stress and may be less prepared to face the challenges of teaching tasks (Vidić, et al., 2021). This can cause them to doubt their abilities in all areas of teaching (Mamak, et al., 2020).

Teachers' effectiveness is partially dependent on their self-efficacy beliefs of management of a classroom learning community efficiently, use of resources effectively, and support of parents in their children's learning (Friedman & Kass, 2002). Cherniss (1993) presents three domains of teachers' self-efficacy. The first domain, the task domain, involves the level of the teacher's ability to teach, manage, and motivate the students. The second domain is the interpersonal domain; this domain involves the ability of teachers to work in harmony with others, such as students, parents, colleagues, and administrators. The third and final domain is organization which is the ability of the teacher to influence the school as a political and social organization. These different domains show teaching self-efficacy is not only about how teachers believe they can teach, but also about how they can influence and interact with the school's stakeholders. Teachers' self-efficacy is multi-faceted and does not just involve confidence in the classroom; rather it encompasses the entire role as a teacher, including leadership roles, and connections to stakeholders as well as social self-efficacy. This may be important to new teachers as it helps them feel confident not only in the classroom, but also in other areas of the educational system.

Teachers' professional worlds consist not only of the classroom environment, but also the school organization as a whole including school climate, administrative actions, community of staff and faculty, and decision-making procedures (Friedman & Kaas, 2002). All of these factors influence teachers' sense of self-efficacy. For teachers' self-efficacy to flourish, they need to be acquainted with the organizational goals, values, norms, and social interactions. Successful organizations that familiarize their teachers with the social organization and norms have more dependable performances, higher motivation and satisfaction, and lower turnover (Friedman & Kaas, 2002). It is important for administrators and colleagues to be aids in the socialization of

teachers to the school community to help build their self-efficacy in teaching.

Teachers' sense of efficacy increases when they receive learning opportunities that provide them with greater skills, such as induction and mentorship programs (Ahokoski et al., 2017; Darling-Hammond et al., 2002). Views of self-efficacy appear to form fairly early in the career and seem to be difficult to change. Therefore, it is important to develop teachers' knowledge and skills early on to help develop their teaching self-efficacy early. Teachers' sense of teaching efficacy is not influenced by age or gender, but a sense of efficacy is generally higher for teachers with more experience. Darling-Hammond et al. believed that new teachers' positive feelings about the education field and their plans to stay in the classroom are related to a sense of preparedness and self-efficacy. Teachers' efficacy has been linked to teachers' enthusiasm for teaching. Teachers' preparedness and sense of self-efficacy may be related to the new teachers' feelings about teaching and their plans to remain in the teaching profession (Darling-Hammond et al., 2002).

Smith and Ingersoll (2004) researched the number of induction components implemented in relation to the number of new teachers that left the field of education or moved to a new school after their first year of teaching. Seven components of induction were reviewed including mentorship, common planning time, new teacher seminars, administrative communication, collegial support, reduced teaching load, and assignment of a teacher's aide in the classroom (Ingersoll & Smith, 2004). A direct correlation between the amount of induction support and new teacher retention was evident. When no induction support was provided, 40% of the new teachers left the profession or moved schools. If the induction program involved four induction components, 27% moved or left. When the seven components of induction were implemented for new teachers only 18% moved schools or left the education profession (Smith & Ingersoll,

2004). The data reflects that as additional components of comprehensive induction are implemented, the number of new teachers being retained improves. Comprehensive induction programs may lead to increased self-efficacy, which in turn leads to higher teacher retention.

Difficulties with Induction Programs

Comprehensive induction and mentorship programs are not common practices in most school districts. Most programs narrowly focus on short term support for immediate problems rather than a continued commitment to teacher development (Drexler, 2006). Less than 1% of teachers receive what is considered a comprehensive induction with multiple supports (Reitman & Karge, 2019).

Induction programs tailored to new teachers' specific needs may produce enhanced benefits. Orientation of new teachers entails more than a review of policies in a handbook for a short period of time or a half hour get-to-know-you with a guided tour of the campus. More targeted approaches to mentorship and induction support should be based on teachers' level of preparation (DeAngelis et al., 2013).

Induction programs presumably can vary in cost. Implementation of a comprehensive induction plan takes time, money, and support from administration. Some areas of cost for pre-service and inservice programs may include personnel costs, facilities, materials and equipment, travel and transportation as well as research, development, and implementation (Rice, 2001). Comprehensive induction programs should continue past the first three years of teaching and continue into a career long learning process (Hope, 1999). The cost of time dedicated to comprehensive induction and professional development programs may be unsustainable for school districts. Financial constraints may directly affect what induction and professional development can occur in a district. Hidden and widely dispersed costs involved in

comprehensive induction programs should be identified so administrators can understand the cost to support professional development (Rice, 2001). Comprehensive induction programs involve administrative support. The cost of administrative support to develop and implement a comprehensive induction and professional development program is expensive in personnel.

Role of Mentorship in Induction

Mentorship is a vital part of an induction program; however, it is only a part of the entire program. In order for mentorship to be effective, systematic support in terms of administrative endorsement, stipends, release time, training for the mentor, and careful attention to the matches between mentors and novices are needed (Drexler, 2006). Induction and mentorship programs can be costly in the area of personnel and human resources. Amenable mentors are needed to have a comprehensive induction program. Mentor teachers are vital to new teachers' retention. In nature, ecology teaches that a tree planted in a current forest with mature trees will grow more successfully than a tree planted in an open field (Zachary, 2000). The mature forest creates pathways for the root system of new trees to move through. This set root system allows new trees to embed roots deeper for a more stable foundation. As trees grow, their root systems intertwine and graft to other trees' roots. This creates a foundational structure of interdependence to support all trees and the forest. Mature trees share vital resources with newer trees to help the entire forest become healthier (Zachary, 2000). This tree analogy is not unlike mentorship and induction in education. New teachers come into positions unprepared, isolated, and overworked (Kelly et al., 2019; Ladd, 2011; Darling-Hammond et al., 2002).

New teachers may be similar to a new tree planted in an already mature forest. They may feel disconnected and uprooted from their past experiences in student teaching and not confident in their skill set compared to other teachers. Veteran teachers can be like the mature trees and can

provide pathways for the new teachers to succeed. They help new teachers develop a stable foundation to grow in their teaching skills. When the veteran teacher and new teachers work together, they find they make a foundational structure of interdependence that benefits the students and the entire school community. These supportive systems cannot develop without relationships.

New teachers need connections to thrive and grow. These pathways involve connections with other educators to encourage collegiality, collaboration, and reflection. New teachers are slow in developing their own style of teaching–their root system. Veteran teachers can work with new teachers to provide knowledge and skills in classroom management, lesson planning, student assessment, and other vital areas of teaching. Mentor teachers can provide established pathways for novice teachers to develop strong root structures and nourish skills and abilities. When a mentor or teacher with some experience spends time with and supports novice teachers within an induction program, the benefits can often be seen for everyone involved.

Mentorship is a major part of new teacher induction. Mentorship provides support, encouragement, knowledge, and feedback for new teachers as well as professional development, learning, and growth for the mentor (Drexler, 2006; Kidd & Fitzallen, 2015). Successful comprehensive induction programs involve multiple types of support that consist of intentional and structured mentorship, common collaboration times, and consistent support from school administrations (Alliance for Excellent Education, 2014). Studies show comprehensive induction programs for beginning teachers are effective in the retention of new teachers in the education profession (Alliance for Excellent Education, 2014; DeAngelis et al., 2013; Kelly et al., 2019; Ladd, 2011; Reitman & Karge, 2019; Toombs & Ramsey, 2020; Weins et al., 2019).

Through observation, feedback, and support, mentors help beginning teachers build

confidence and efficacy (Kidd & Fitzallen, 2015). Teachers who have a mentor in their subject or grade level area feel more prepared and are more likely to be retained in the future as teachers (DeAngelis et al., 2013; Kelly et al., 2019; Serpell, 2000). States that require mentors to be in the same or a similar subject, the same or similar grade, and/or the same school tend to have a stronger relationship between mentoring and an increased likelihood of staying than states that require fewer intentional mentor matches in induction programs (Smith, 2007). Matching a novice teacher with a mentor knowledgeable in their subject area has been shown to have significant positive results on students' achievement, and can impact teaching through deeper understanding of the subject, and developing more inquiry-based lessons, student-centered practices, and reform-based instruction (Achinstein & Davis, 2014).

Mentors share their values with new teachers and are often their first colleagues in the education profession. Mentors influence who the new teachers will become in the future (Serpell, 2000). Due to the impact mentors have on beginning teachers, much care must be taken to ensure the proper training and pairing of mentees. This includes careful selection and training of mentors, including training in communication and peer coaching techniques, attention to the specific needs of the new teacher, physical proximity between the new teacher and mentor for ease and consistency of meeting, and conscious matches of the new teacher and mentor using subject area and grade level for guidance (Drexler, 2006; Serpell, 2000). Affirmation and recognition of the mentee from the mentor helps develop resilience that is essential for beginning teachers to thrive in the education profession (Kidd et al., 2015). New teacher attitudes, instructional skills, and feelings of self-efficacy can all be improved with mentorship, along with improved retention rates for new teachers (Toombs & Ramsey, 2020).

Mentorship alone is not an induction program (Drexler, 2006; Serpell, 2000; Wong,

2004). There is considerable variation in the roles, activities, support, compensation, and expectations for mentors (Serpell, 2000). Mentorship, in many schools, is the only strategy for support of new teachers. Sole dependence on mentorship typically relies on veteran and new teachers to seek one another out for mentorship without clear structure or guidance (Wong, 2004). Comprehensive and effective mentorship must provide a strong emphasis on professional accountability and growth as well as emotional support (Drexler, 2006). Traditional mentorship programs contain a number of weaknesses that need to be addressed including incomplete or lack of training for the mentor, unstructured processes for matching mentors and mentees, lack of appropriate compensation for the mentor, lack of structured times and processes for mitigating successful mentorship, and lack of overall time provided to the relationship (Brock & Grady, 1998; Drexler, 2006; Serpell, 2000). For mentorship to impact attrition rates, the mentorship needs to be of high quality (Kelly et al., 2019). Mentorship by itself is less effective than comprehensive induction at affecting new teachers' attrition rates (DeAngelis et al., 2013).

Causes of Teacher Attrition

There is often a connection between mentorship and induction programs and the retention of new teachers. Teachers who receive mentorship and induction stay in the classroom more than two times the rate of those who do not receive mentorship and induction (Carver-Thomas & Darling-Hammond, 2017). The support provided through mentorship and induction influences new teachers' intentions to stay in the profession (Kelly et al., 2019). Mentorship and induction are not the only variables that affect new teachers' retention. Other issues that cause dissatisfaction for new teachers are individual characteristics, pre-service education programs, high-stress environments, heavy workloads, and isolation.

Characteristics of the individual teacher impact retention for teachers as well. These

characteristics range from teacher preparation quality to the ability to handle stress to conflict resolution to life circumstances. The quality of teacher preparation significantly impacts the retention rates of new teachers (DeAngelis et al., 2013; Kelly et al., 2019; Wong, 2004). Prepared teachers are more likely to believe they can reach all of their students, handle problems in the classroom, teach all students to high levels, and make a difference in the lives of their students (Wong, 2004; Kelly et al., 2019). DeAngelis et al. (2013) found a direct association between the perception a new teacher has of the quality of their teacher preparation program and their plans to stay in the classroom. The student teacher's perception of their teacher preparation program, not the actual results of the teacher preparation program, can affect a new teacher's desire to stay in an education setting. After the first year, teachers who were less satisfied with the quality of their teacher preparation program were more likely to leave the education field (DeAngelis et al., 2013). When teacher preparation programs focus on applied teaching skills with practical experience in the classroom, new teachers are more likely to stay in the classroom after their first year (DeAngelis et al., 2013; Kelly et al., 2019). The type of preparation program new teachers' experience affects their intentions to stay in the education field.

Pre-service and novice teachers enter the teaching profession with their own ideas of what a teacher is and what the profession and job should look like. Each student enters a teacher preparation program with prior experiences in school, motivations for entering the education profession, unique personality traits, and various skills (Stolz, 2020). These preconceived notions of student and novice teachers begin to form a teacher identity and are not always accurate or helpful. Students begin to develop their teacher identity once their coursework is combined with field work in the classrooms. One of the overall aims of a teacher education program is to help develop a professional teacher identity. Teacher identity is developed by reflective development

of practices for teaching that help build a personal and theoretical foundation for education. Teacher identity begins in a teacher preparation program, but it occurs over time and really has no end while in the education profession (Dassa & Derose, 2017). More attention to teacher identity in teacher preparation and induction programs may work to help reduce the high rate of new teachers' attrition at this time.

Many colleges and universities have moved to some online teaching in one or more areas of their programs. Teacher preparation programs have also followed along with this trend using technology to connect instructors and students. While online courses available to students can bring benefits to learning through distance learning and more easily accessible classes, it also can bring difficulties. Online learning through asynchronous and video courses can lead to a disconnect of pre-service teachers with other education professionals. As pre-service teachers become more disconnected from the professionals teaching their courses and being in their classes, they also may lose some of their network opportunities which may, in turn, lead to less engagement in the education profession. Teacher preparation programs need to work to set new teachers up for success with the quality of the programs they provide.

Factors beyond teacher preparation quality also influence retention in new teachers (Reitman & Karge, 2019). Educators often deal with stress on the job. Forty-four percent of K-12 education workers in the United States say they ”always” or ”very often” feel burned out at work. Teaching is currently the highest stress job nationally (Argawal & Marken, 2022). K-12 education workers consistently rank among the more burned-out workers nationally, but the COVID-19 pandemic increased challenges and brought new difficulties to the teaching profession (Argawal & Marken, 2022). School openings and closures, parent and community member frustrations, and social, academic, and mental health challenges students face increase

the stress. Greenberg et al. (2016) describes job stress as ”the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker” (p. 3). In the classroom, stressful situations have an impact on a new teacher's intention to stay in the education field. Stressful situations develop from increased workload, little to no support from administration, isolation from colleagues, and difficult students (Hope, 1999; Ingersoll & Strong, 2013).

New teachers experience an increased workload in their first few years of teaching, partly from learning new skills and curriculum for the position. Learning new skills involves an increase in preparation for the classroom. Beginning teachers often start careers in schools with students who are the most difficult to educate (Hope, 1999; Ladd, 2011; Serpell, 2000). Often, new teachers receive the most difficult and challenging assignments in schools (Ingersoll & Strong, 2013). These difficult and challenging assignments can include larger class sizes, a wide range of student needs, increased mental health concerns, chronic behavior issues, attendance issues, and learning difficulties. These challenges may, at times, set up new teachers for failure. Some other issues that are difficult for new teachers include insufficient materials, classroom management, individual differences in students, parent and family relations, assessments, organization of the classroom, communication, effective teaching strategies, planning and time management, and student motivation (Gourneau, 2014). The stress new teachers encounter because of an increased workload and other factors may lead some new teachers to consider leaving the profession (Hope, 1999; Ingersoll & Strong, 2011; Kelly et al., 2019).

First-year teachers may, at times, feel overwhelmed and lonely. New teachers especially struggle with being left on their own to fulfill the role of teacher. The most common complaint of new teachers is isolation from other adults (Wong, 2004). Teaching can be extremely solitary.

New teachers report isolation as one of the top factors for leaving the teaching profession (Alliance for Excellent Education, 2014; Hope, 1999; Ingersoll & Strong, 2011; Kelly et al., 2019). Isolation does not allow new teachers to observe and learn from master teachers and collaborate on lessons. Collegiality must be utilized for teachers' self-improvement and to enhance teacher retention (Hope, 1999).

As with many jobs, there are conflicts that occur and need to be addressed. Teachers are not exempt from such conflicts. Teachers experience difficult situations with students, parents, other teachers, and administration. Conflictive behavior with students and students' lack of engagement has been shown to increase teachers' attrition (Kelly et al., 2019). Teachers do not feel supported by students in these situations, which can remove the joy of teaching for them. Not only do new teachers deal with conflicts with students, but conflictive relationships with parents have been reported. These difficult relationships with parents add to the attrition rate of new teachers (Kelly et al., 2019). Most people deal with conflicts with other employees. This is also a fact with teachers. Conflicts and disagreements over teaching practices and other issues arise and can cause stress for teachers. Finally, many teachers deal with administrative conflicts. Teachers often feel stressed by lack of administration support or disagreements with policies and procedures. All of these conflicts can have an effect on new teacher attrition.

Life circumstances may also play a role in new teacher attrition. From extended family changes to maternity leave to unforeseen situations, new teachers leave the education field. One major reason female teachers leave the teaching profession is to be at home with children. In a study by Kidd et al. (2015), 33% of female teachers who left the profession to be at home with children returned at a later time. Fewer than half of the teachers who leave to be home with children do not return to the classroom. There seems to be a gap in the research in the number of

male teachers leaving the education profession to be at home with children. This could be due to the fact data has not been completed at this time or the education profession is typically a female dominated profession. These are not variables that can be controlled for, but they are factors in a new teacher's decision to leave education.

Teacher attrition and turnover is inevitable (Ingersoll & Strong, 2011). Employee turnover is found in all professions. Some turnover rates may have beneficial results. Turnover can bring better job matches and new ideas into organizations (Ronfeldt et al., 2013). Teacher attrition can weed out educators who may not belong in the classroom. Less effective teachers are more likely to leave the profession (Henry et al., 2011, Ronfeldt et al., 2013). There can be institutional benefits if turnover results in less effective teachers leaving the classroom (Ronfeldt et al., 2013). However, in general, teacher attrition is detrimental to the well-being of schools and students.

Students need consistent connections to grow academically (Ronfeldt et al., 2013). When students are not present consistently in the classroom, schools become concerned about their inconsistent educational attendance and performance. The concern for the student is because they may not have sufficient time in the classroom to connect and learn the content required of them. When teachers are inconsistent in their educational attendance due to teacher turnover, students suffer from a lack of educational consistency of their teacher’s presence (Ronfeldt et al., 2013). Relationships cannot be built between students and teachers when teachers continually turn over, and academic growth suffers. Thus, consistent teacher attendance is important to student growth and learning (Drexler, 2006).

Role of Administration in Teachers' retention

School leadership is highly predictive of teachers' attrition rates (Whipp & Geronime,

2017). One of the primary reasons teachers leave the profession is a lack of support from administration (Ingersoll & Strong, 2011; Kelly et al., 2019; Reitman & Karge, 2019; Whipp & Geronime, 2017). At the elementary level, high rates of teacher attrition are attributed to administrative pressures and accountability as a significant explanation for their departure from the profession (Ladd, 2011). New teachers state the hierarchy of the school system and the complication of changing employment contracts make it difficult to work with schools (Kidd et al., 2015).

Teachers' attrition or thoughts of attrition were less likely when teachers perceived the school leadership as high quality (Ladd, 2011; Whipp & Geronime, 2017). Successful teachers stay in schools where administrators are visible, academic leaders (Drexler, 2006; Wong, 2004). Increased administrative visibility through frequent teacher observations has been linked to improved instruction, self-efficacy, and professional development. Principals who are visible in classrooms and build instructional capacity through effective feedback have similar positive results in teacher growth (Wahlstrom & Louis, 2008).

Principals may also impact teachers' attrition and retention. The higher teachers perceive the quality of school leadership, the more likely new teachers intend to stay at their schools (Drexler, 2006; Ladd, 2011; Whipp & Geronime, 2017). A lack of school administrative support is one factor in new teacher attrition. It is the role of the school to provide an environment where beginning teachers learn, survive, and succeed (Ingersoll & Strong, 2011). Principals and administrators typically are assigned with the role of helping new teachers succeed. Teachers who perceive less principal leadership and support are more likely to leave their school. Teachers who report increased amounts of principal visibility and shared leadership opportunities are more likely to stay in their current school (Urick, 2020). Lower levels of teacher attrition and

migration have consistently been found in schools with more administrative support for teachers (Brown & Schainker, 2008).

Distributive leadership has been praised as a supportive leadership framework for school improvement. The distributive leadership framework encourages teachers to work collaboratively with administration to impact school improvement. This style of leadership provides deliberate ways for administrators to share leadership within a school. Teachers who reported more frequent principal and shared leadership were more likely to stay in their current school the following year (Urick, 2020). One way school leaders may influence the perception new teachers have of administration is by the development of quality induction and mentorship programs through distributive leadership.

Principals play an important role in new teachers' retention. Successful teachers stay in districts where administrators are visible, academic leaders (Wong 2004). Principals and administrators have a complex job. Administrators recruit teachers, support faculty and staff, help to develop teachers, and work to retain an active and dynamic school staff. Retention of effective teachers is one aspect of a principal's job. A principal does this through assistance to new teachers and aid in the transition from student teaching to full time professional teaching (Drexler, 2006). Because of this, much of the responsibility for development and implementation of mentorship and induction programs falls on the principal. New teachers see the school principal as a source of support and guidance as they begin their teaching career and may influence their intentions to stay in the classroom.

Principals set the tone for the new teacher induction and mentorship programs. Principals deal frequently with the reality of large numbers of teachers leaving the profession early in their teaching careers. It is reasonable to suggest principals plan their mentorship and induction

programs with the purpose of the retention of teachers (Hope, 1999). Coaching, conferencing, modeling, and sharing personal experiences are all ways to enhance mentorship and induction programs. To do this, communication is vital. Principals may structure the induction and mentorship program to connect new teachers with peers and promote mutually beneficial relationships between the faculty and staff (Hope, 1999). Principals may identify workshops and conferences for new teachers as a way to demonstrate a commitment to new teacher success. Given the unprecedented teacher shortage in the United States and globally, it will be important for every effort to be made by the administration to support new teachers' retention by the utilization of creative ideas and whatever resources may be available.

Mentorship in Education

There are different kinds of mentors in society today. They range from a local guide to a cheerleader to a career counselor and can be all of those in one mentor. In education, the same is true. There are education mentors who are cheerleaders, local guides, education companions, and agents of change. These mentors all serve a purpose for beginning teachers. Varied concepts of mentorship are important to evaluate because the ideas mentors and beginning teachers bring into the mentorship relationship exerts a strong influence on the type of mentorship that occurs (Fieman-Nemser, 2001).

New teachers must learn to teach and teach students all at the same time (Feiman-Nemser, 2016). This is a huge process for any person. As a beginning teacher, a main concern is maintaining homeostasis or balance. Time is spent thinking of the daily content, organizational tasks, classroom management, and so much more. Taking time to contemplate the implementation of actual teaching duties, including working with a large number of students, time pressures, and instructional materials, comes along with learning to teach (Reitman &

Karge, 2019). New teachers may need a cheerleader during this time. The first year of teaching requires simultaneous socialization into the teaching profession and a specific school environment. New teachers join faculties in which friendships and social groups are already formed while the cultural norms and shared history are unknown to them (Brock & Grady, 1998). A trusted mentor can help new teachers navigate the ecosystem of a school and begin to understand social norms and the school history.

While new teachers often find encouragement in a mentor as a cheerleader, much more is needed to guide them in the education profession. Another aspect of mentorship in education involves being a local guide. This type of mentor shows the ropes of teaching to the novice teacher (Feiman-Nemser, 2016). The local guide helps the new teacher learn where items are in the building, meet teachers and administrators, and start their work in the classroom. This guide typically provides short term support for immediate problems (Drexler, 2006). Many times a local guide is also a cheerleader and can fulfill both needs for the beginning teacher.

Beyond cheerleading and guidance, a new teacher can be supported by an education companion who can guide them in long term goals as professional educators. This companion provides emotional support and a role model. As they work with new teachers, they help with the solution of problems and encourage forward progress through their first year. Development of attitudes, behaviors, and values as new teachers can be assisted by education companions (Allen & Eby, 2007).

The highest level of mentorship in education is an educative mentor. Educative mentorship is founded on a developmental view of learning to teach. This mentor is an agent of change that creates a collaborative culture in schools and works for the growth of all students (Fieman-Nemser, 2016). Educative mentors build joint responsibility in the school community

for the education of all students and the teaching faculty. This is done through reflective practice where the educative mentor helps a novice teacher learn from the examination of the experiences they have in the classroom. An educative mentor is focused on a novice teacher's development in the education profession. The immediate needs of a novice are met while also focusing on long-term goals for professional development. The focus on the professional growth of novices is through work with more experienced teachers. Educative mentorship is based on a broader concept that prioritizes reflection and continued growth. The goal of an educative mentor is to cultivate a disposition of inquiry, focus attention on student thoughts and understanding, and foster disciplined talk about problems of the teaching practice (Bradbury, 2009). Educative mentorship serves as an individualized form of professional development as mentors begin with discussions of issues of immediate concern to a novice and help them develop alternative perspectives that lead to new solutions to difficulties.

New teachers may often enter the field of education with preconceived notions about education. Mentorship is a positive way to help encourage and retain novice teachers. An educative mentor works to help new teachers decompose their preconceptions about what they thought teaching would look like and rebuild a true view of an education professional.

Theoretical Considerations

Theory provides a lens for empirical research (Creswell, 2014; Roberts, 2010). An existing theory can be used to better understand how variables are related (Creswell, 2014). Theory is used to explain the relationship between two or more actions aligned with empirical evidence. The function of a theory is to help inform methods, design, and research questions (Merriam & Tisdell, 2016; Patten, 2014). For this study, Allen and Eby's (2007) theory of mentorship belonging and Kram's (1985) mentor function theory will both provide information

on connections through relationships provided by the theoretical framework (Allen & Eby, 2007). Allen and Eby's (2007) theory of mentorship belonging speaks to the need of new teachers to have relationships to feel connected to others to be successful. Kram's (1985) mentor function theory also adds to the knowledge of the need for mentees to be connected to others to be successful in their mentorship programs.

Theory of Mentorship Belonging

Allen and Eby's (2007) theory of mentorship belonging begins with the idea the mentorship relationship brings a sense of belonging. If new teachers have mentorship relationships that help them with a sense of belonging and bring about positive affective, cognitive, and behavioral outcomes they are more likely to stay in the education profession. One explanation for the positive effects of mentorship is that relationships help fulfill an individual's need to belong. They satisfy the desire to develop and sustain positive interpersonal relationships (Allen & Eby, 2008). People crave connections. This theory of mentorship belonging grew out of an intersection of personality theory, attachment theory, motivation theory, and social psychology. The belongingness need is a universal need across a human lifespan. This may be one reason why mentorship can be an important relational experience at any age for mentors and mentees. It is likely belongingness contributes to the determination of the course of a mentorship relationship (Allen & Eby, 2008). A mentorship relationship that does not fulfill belongingness needs is likely to lead to unsatisfactory outcomes or the discontinuation of the relationship. When a mentee feels a sense of belonging, the mentorship relationship is more likely to move productively and grow and flourish (Allen & Eby, 2008).

The most common cause of a dysfunctional mentorship relationship is mentor neglect (Allen & Eby, 2008). Mentor neglect is when the belongingness needs of the mentee are not met

and the mentee feels neglected or emotionally cut off. It is unknown what length of time in a mentorship relationship produces belongingness. Naturally formed mentorship relationships have been shown to be more effective than formally established mentorship relationships (Allen & Eby, 2008). This lack of effectiveness in formal mentorship relationships may be due to the time limits set upon the relationship. In typical new teacher mentorship relationships, the mentor is assigned for a specific amount of time, usually a year. Belongingness needs in mentorship are more likely to be met when the relationship involves intimacy, trust, and mutuality, which takes time to develop.

Kram's Mentor Function Theory

According to Kram's (1985) mentor function theory the function of a mentor is both for psychosocial support and career development. The psychosocial functions involve role modeling a professional educator. Effective role modeling consists of the modeling of values, attitudes, and work behaviors that are beneficial to the education profession. Psychosocial support also guides new teachers in work with groups, peers, and family demands (Allen & Eby, 2007). Finding a work and life balance is often difficult, and a mentor can be a role model of effective balance. In Kram's (1985) mentor function theory a mentor helps the mentee deal with the difficult tasks that are related to early years of working. Emotional support helps to enhance work experiences for the mentor and the mentee (Allen & Eby, 2007). Psychosocial support also involves the emotional support of acceptance, friendship, and confirmation. This allows new teachers the freedom and support to experiment and reach for career goals. Finally, the psychosocial support of mentorship involves the counsel of the mentee. Counsel helps the mentee to explore personal concerns that would otherwise undermine their self-worth or interfere with productive growth in their field. Psychosocial support helps to alleviate anxiety, fear, and ambivalence while

enhancing self-worth, a sense of competence, a clearer identity, and more effectiveness in the profession (Allen & Eby, 2007).

Kram's mentor function theory (1985) also includes guidance in career functions. One function of a mentor in career guidance is as a coach. A coach enhances the mentee's knowledge and understanding of how to function in the school system through guidance on the role as a teacher and school operational style. Mentors help new teachers to establish relationships and credibility with other teachers. A mentor's public support of their mentee during meetings and conversations with others as well as with peers helps to build the reputation of the mentee as they grow in their career. Part of the career guidance a mentor provides is help with challenging situations and ongoing feedback as a mentor grows (Allen & Eby, 2007). Guidance is valuable to the mentee as they move forward in their education career. Another career area a mentor brings value to is exposure and visibility with administrators and key decision makers, which gives mentees the ability to learn about and see the opportunities available to them in the area of career development. Finally, a mentor can offer guidance to the mentee by helping them navigate as to when, how, and with whom to interact with in administration (Allen & Eby, 2007).

Chapter 3: Methodology

Purpose

This study used a quantitative approach to explore two independent variables of a mentorship program; 1) time spent with a mentor and 2) a common subject area with the mentor, with the dependent variable of teachers' intentions to stay in education. The following sections provide details regarding the research design, population and sample, survey instrument, data collection, data analysis, limitations, and ethical considerations.

Research Design

The research design used for this study is a nonexperimental quantitative design, which used descriptive and inferential statistics to analyze data. The non-experimental quantitative design described trends and answered the research questions without altering or manipulating a specific condition that would change or affect a participant's answer (Orcher, 2014; Patten & Newhart, 2018). This choice of design explored the current state of mentorship programs and teacher attrition. The non-experimental descriptive research design allowed for minimal risk to the participants since there is not any manipulation of the variables. Publicly available secondary data regarding public school teachers and principal survey results were collected from the U.S. Department of Education National Center for Education Statistics.

Research Questions

Three research questions were used to frame this study.

RQ1: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon having a mentor during the first year of teaching?

RQ2: Is there a significant difference ($p<0.05$) in teachers' intention to stay in education for "as long as I am able" based upon the amount of time spent with a mentor during the first

year of teaching?

RQ3: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon whether their mentor teacher instructs in the same subject area?

Hypotheses

Three hypotheses with both a null and an alternative hypothesis were used to frame this study.

Ho1: There is no difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching.

Ha1: There is a significant difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching. New teachers who have a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.

Ho2: There is no difference between teachers' intention to stay in education based upon the amount of time spent with their mentor.

Ha2: There is a significant difference between teachers' intention to stay in education based upon the amount of time spent with their mentor. New teachers who spend more time with a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.

Ho3: There is no difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area.

Ha3: There is a significant difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. New teachers who have a mentor in the same subject area during their first year of teaching will be more likely to

stay in teaching as long as they are able.

Variables

Independent variables included mentorship during the first year of teaching, amount of time spent with mentor during the first year of teaching, and content match between the mentor and mentee. Intention to stay in the teaching profession was the dependent variable as measured by the National Teacher and Principal Survey (NTPS) (NCES, 2015-2016). The NTPS ranked teachers' intention to stay in teaching with the following Likert scale: as long as I am able, until I am eligible for retirement benefits from this job, until I am eligible for retirement benefits from a previous job, until I am eligible for Social Security benefits, until a specific life event (e.g., parenthood, marriage, retirement of spouse or partner), until a more desirable job opportunity comes along, definitely plan to leave as soon as possible, and undecided at this time (NCES, 2015-2016).

Sample

The NTPS is a large sample survey of America's schools. The 2015-16 NTPS is a nationally representative sample survey of public K-12 schools, principals, and teachers in the 50 states and the District of Columbia (NCES, 2015-2016). The selected samples include about 8,300 traditional and charter public schools and public school principals and 40,000 public school teachers. The samples were drawn to support estimates by geography, grade span, and charter school status. Public schools were defined as "traditional public schools, public charter schools, DoD-operated domestic military base schools, Bureau of Indian Education-funded schools, and special purpose schools, such as special education, vocational, and alternative schools" (NCES, 2015-2016, Sampling Frames section, para. 2).

Research Instruments

The NCES designs questionnaires for the NTPS to include both core modules (i.e., sections asked every two years in every NTPS administration) and rotation of modules (i.e., sections asked every four years in alternating NTPS administration). The NTPS gathered information on core topics including teacher and principal preparation, classes taught, school characteristics, and demographics of the teacher and principal labor force every two to three years. In addition, each administration of NTPS contained rotation of modules on important education topics such as professional development, working conditions, and evaluation (NTPS Survey, 2016). The survey provided statistical information collected from a fraction of the population rather than from every member of the population. These data were open to public access located via DataLab. The 2021-2022 NTPS data has not been gathered and shared with the public as of February 2023.

This study uses the following questions from the NTPS 2015-2016 survey:

1) ”In your FIRST year of teaching, were you assigned a master or mentor teacher by your school or district? *If you are in your first year of teaching, please answer for THIS school year.*” Participants respond by selecting either yes or no.

2) ”How frequently did you work with your assigned master or mentor teacher during your first year of teaching?” Participants respond by selecting one of the following: At least once a week; Once or twice a month; A few times a year; Never.

3) ”Had your master or mentor teacher ever instructed students in the same subject area(s) as yours?” Participants respond by selecting either yes or no.

4) ”How long do you plan to remain in teaching? *Mark (X) only one box.*” Participants respond by selecting one of the following: As long as I am able; Until I am eligible for retirement

benefits from this job; Until I am eligible for retirement benefits from a previous job; Until I am eligible for Social Security benefits; Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner); Until a more desirable job opportunity comes along; Definitely plan to leave as soon as I can; Undecided at this time.

The United States Census Bureau conducted the data processing. Each questionnaire was coded according to its response status; for example, whether the questionnaire contained a completed interview, a respondent refused to complete it, or a school closed. The next step was to make a preliminary determination of each case's interview status (i.e., interview, a non-interview, or if the respondent was ineligible for the survey).

NCES received the surveys, and data were entered into electronic files and checked for accuracy. After receiving all of the teachers' information from the lists provided by the schools, the regular public schools were separated into four strata: primary, middle, high, and combined schools. Private schools were not used in 2015-2016 NTPS data collection. After they created the four groups for public schools, teachers were placed into strata based on a combination of subjects taught (Math, Science, English/Language Arts, Social Studies, Other) and teacher order within the teacher listing for the school. For the 2015-16 NTPS, experience as a teacher did not factor into the sort order. Instead, teachers were placed into strata based on a combination of subjects taught (math, science, English/language arts, social studies, etc.) and teacher order within the teacher listing for the school. This process led to a diversification of the sort order with respect to these variables (NTPS, 2016). Weighting of the sample units was carried out to produce national estimates for public schools, principals, and teachers. The weighting procedures used in NTPS had three purposes: to take into account the schools' selection probability, to reduce biases that may result from unit nonresponse, and to make use of available information

from external sources to improve the precision of sample estimates.

Data Collection Procedures

The 2015–16 NTPS used both mail-based survey options and internet reporting for questionnaires. Telephone and in-person contact were used for follow-up conversations. Letters were mailed to sample schools during the summer of 2015 to verify school addresses and eligibility. After verification, a package containing school and principal surveys and information were mailed to schools. The Census telephone center called sampled schools to verify school information, establish a survey coordinator, and follow up on the Teacher Listing Form (TLF), which served as the teacher list frame. Sampled teachers were mailed questionnaires on a flow basis. Follow–up contact was conducted for schools that did not return the TLF. Schools were contacted from Census telephone centers to remind the survey coordinator to have staff complete and return all forms. Principals and teachers were called from the telephone centers to attempt to complete the questionnaire with them over the phone. Field follow–ups were conducted for schools and teachers that had not returned their questionnaires (NCES, 2015-2016).

Data Analysis

Descriptive data were used to determine the number of teachers who had a mentor teacher during their first year of teaching. These data were used to describe other characteristics of the new teacher and the schools they are teaching.

A Chi-Square test was used to determine whether or not there is a significant association between two categorical variables (Orcher, 2005; Patten & Newhart, 2018). Categorical variables fall into a particular category of variables that can be divided into finite categories. These categories are generally names or labels (Orcher, 2005; Patten & Newhart, 2018). The independent categorical variables in this study were 1) the number of times a new teacher meets

with a mentor in their first year of teaching, and 2) whether a mentor teacher instructs in the same subject area as the new teacher. The dependent categorical variable was the amount of time the new teachers' self-discloses they will stay in the classroom.

A Chi-Square test had a null hypothesis and an alternative hypothesis. The null hypothesis stated the two variables are independent of each other. The null hypotheses for this study were 1) there was no difference in teachers' intentions to stay in education based upon time spent with a mentor during the first year of teaching, and 2) there was no difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. The alternate hypothesis asserted the two variables were not independent, which means they were associated with one another. The alternate hypotheses for this study were 1) there was a significant relationship in teachers' intentions to stay in education based upon the time spent with a mentor during the first year of teaching, and 2) there was a significant relationship between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. New teachers who have a mentor in the same subject area during their first year of teaching will be more likely to stay in teaching as long as they are able.

Reliability and Validity

Reliability is synonymous with consistency (Orcher, 2017). Validity is the capacity of a test to measure what it is designed to measure (Patten & Newhart, 2018). The NTPS used quality control and edited procedures to reduce errors made by respondents, coders, and interviewers. General data quality included a number of reviews that could be characterized as consistency edits. The U.S. Department of Education stated these checks involved

> the examination of individual responses, patterns of response, and

> summary statistics for variables and files to ensure consistency within items, respondents, and files. In addition, key variables and cross tabulations of key variables were examined for distributions and relationships that were expected based upon prior administrations and other research, as a check of face validity. (U.S. Department of Education, 2022, p.125)

The validity of the skip patterns in the questionnaire was established for each NTPS questionnaire during the processing of data; that is, U.S. Census Bureau analysts verified that each item in the questionnaire had the number of responses it should have if skip instructions were followed correctly. Quality checks on the edit specifications were performed and resulted in some corrections. Frequency counts were performed to assess the validity of the survey. Unweighted record counts for every variable were examined from the restricted-use data files. Variables with out-of-range values or inconsistent values were identified, and these values were corrected. Univariate, bivariate, and multivariate tabulations of key survey variables were obtained and compared to estimates from the 2011-2012 Schools and Staffing Survey (SASS). Tabulations were reviewed to determine whether the basic relationships observed were within reasonable bounds, which allowed for elements of change. The distributions and relationships observed were consistent with expectations (U.S. Department of Education, 2022).

Limitations

This study attempted to identify key elements in teacher mentorship programs that impact teachers' intentions to stay in the education field. However, there were several limitations to the study. One limitation in this study was the variable of how survey respondents understand the term mentorship. Mentorship is defined more extensively as a relational process through which

novices become more proficient in their profession as a result of structured and planned experiences that provide support (Serpell, 2000). The structure of a mentorship relationship can be as varied as meeting once a year to talk to consistent instruction, structured meetings, and clearly identified goals. The extent of the structure of the mentorship relationship was not measured in this study and could impact the participant's responses to mentor or mentorship questions. Lack of a consistent definition of mentorship may affect the way participants answered questions and their views of what is a mentor.

Another limitation of this study was that data collection of the NTPS are from the 2015-2016 school year. The data was six to seven years old. A 2017-2018 NTPS survey exists, but the specific questions about mentorship are not asked. The questions about mentorship are rotated every other year and will appear again in the 2021-2022 data. A 2019-2020 NTPS survey was not conducted due to the COVID-19 pandemic and shut down of schools and businesses in the United States. The 2021-2022 NTPS survey data has not been released as of October 2022. The data used are from 2015-2016 and may not convey the current opinions of teachers, especially since the COVID-19 pandemic.

Survey samples always have limitations in the survey participants. The 2015-2016 NTPS survey was sent to teachers across the U.S. who were asked to voluntarily complete the survey. The teachers who decide to complete the survey may have a lived experience with mentorship, positive or negative, which may skew results.

The use of the NTPS as data for this study decreased the limitations that may be present with other forms of data collection. The NCES and the United States Census Bureau are accepted as a generally reliable and consistent measure. There is still room for error as all data are inputted by persons at the NCES. Data entry errors may confound the results of this study. However,

compared to voluntary participation in data collection attempts, NCES is mainly successful in the collection of requested data and enjoys relatively high completion rates.

> The NCES does not ask all schools to participate in the NTPS survey.
>
> Schools outside of the United States, schools that teach only prekindergarten, kindergarten, or postsecondary students, and administrative units that do not offer teacher-provided classroom instruction were deleted from the Common Core of Data (CCD) frame prior to sampling for NTPS. Public schools that closed in the school year 2013-14 or were not yet opened were not included. These data also excluded private schools in 2015-2016 (NCES, 2015-2016, Sampling Frame section, para. 1).

Not including these schools may cause a limitation to these data if these teachers were not given the opportunity to respond to the survey.

Ethical Issues

In the early 1970s, the U.S. federal government commissioned a group to determine standards for ethical practices within research that involved human subjects. The Belmont Report was the result of that work. The Belmont Report provided a framework of three basic ethical principles: respect for persons, beneficence, and justice. These basic principles apply to three practical areas in research: informed consent, assessment of risk and benefits, and selection of subjects (Department of Health, Education, and Welfare, 1979).

Due to the implications of the Belmont Report, participant anonymity was crucial in surveys. By keeping the participants confidential, they have more ability to answer questions freely and without hesitation. All of the identifying information for schools, principals, and teachers have been removed from data to protect respondents' confidentiality. The National

Center for Education Statistics (2015-2016) discussed laws that protect the confidentiality of survey participants.

> Three federal laws protect the confidentiality of all individually identifiable information collected by NCES - authorized surveys: the National Education Statistics Act of 1994, as amended, the Privacy Act of 1974, and the Computer Security Act of 1987. In particular, the Education Sciences Reform Act of 2002, as amended, prohibits any of the following activities: producing any publication in which data furnished by any particular individual can be identified; or permitting any person not authorized by the NCES Commissioner to examine any individual data or reports. (NCES, NTPS: Data Processing and Privacy section, para. 3)

Data from the NCES NTPS aligns with the Belmont Report and federal regulations. Participation in the NTPS survey was voluntary, the federal authorization act was named, and the survey provided assurance the results would only be produced as statistical summaries (NCES, 2022). These data were public data and have no identifying characteristics, which helps protect the participants of the survey.

Chapter 4: Results

The purpose of this study was to explore how to best use mentorship in induction teachers' careers to help ensure they stay in the education profession as long as they are able. In Chapter 3, the researcher outlined the course of action for this study. The following chapter allows the researcher to explain the study, the sample, the model, hypotheses testing, and reporting significant differences between variables.

Research Questions and Hypotheses

The researcher developed research questions and hypotheses to drive the study.

Research Questions

Three research questions were used to frame this study.

RQ1: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon having a mentor during the first year of teaching?

RQ2: Is there a significant difference ($p<0.05$) in teachers' intention to stay in education for "as long as I am able" based upon the amount of time spent with a mentor during the first year of teaching?

RQ3: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon whether their mentor teacher instructs in the same subject area?

Hypotheses

Three hypotheses with both a null and an alternative hypothesis were used to frame this study.

Ho1: There is no difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching.

Ha1: There is a significant difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching. New teachers who have a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.

Ho2: There is no difference between teachers' intention to stay in education based upon the amount of time spent with their mentor.

Ha2: There is a significant difference between teachers' intention to stay in education based upon the amount of time spent with their mentor. New teachers who spend more time with a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.

Ho3: There is no difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area.

Ha3: There is a significant difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. New teachers who have a mentor in the same subject area during their first year of teaching will be more likely to stay in teaching as long as they are able.

Descriptive Statistics

The selected samples used for this study include about 8,300 traditional and charter public schools and public school principals and 40,000 public school teachers. Descriptive statistics were calculated to determine the counts and percentages of participant demographics including teacher's age, gender, race, and school grade level.

Teachers' demographics

Table 1 shows responses of novice teachers (three years or less teaching experience) and other total participants (teachers with four or more years of experience) according to their demographics. Participants were asked to identify their age by birth year. Responses from

teachers with three years of experience or less spanned across age-range options from 63 years old to 22 years old. Seventy percent of participants indicated they were between the ages of 22-33 years old, and 3.7% of participants reported an age of 54 years or older. Most teachers with three years of experience or less ranged in age from 22-33 years old (70%) and 34-53 years old (26.3%).

Participants were asked to indicate various demographic characteristics including gender and race. Females who had been teaching three years or less comprised 76.2% of the participants, and males with three or less years of experience comprised 23.8% of the participants. Of the total participants, 2.8% reported their race as Asian, 7.6% identified as Black or African American, 1.5% identified as American Indian, 8.6% reported their ethnicity as Hispanic, and 89.5% identified as White.

Participants were asked to indicate which level (primary, middle, or high school) they taught. Participants who taught at the primary level were 52.4% of the total. Middle school teachers who participated were 19.1% and high school teachers who participated were 29.7% of the total. All of these participants indicated they had taught for three years or less.

Table 1

Participants' Demographics

Variable	% of teachers w/ three years or less experience	Total participants
Gender of participants		
Male	23.8%	23.1%
Female	76.2%	76.8%
Race/Ethnicity*		
Asian	N/A	2.8%
Black or African American	N/A	7.6%
American Indian	N/A	1.5%

Hispanic	N/A	8.6%
White	N/A	89.5%
Age of participants		
22-33 years	70.0%	3.9%
34-43 years	17.1%	31.0%
44-53 years	9.2%	34.9%
54-63 years	3.7%	30.3%
Level Taught of participants		
High School	28.1%	29.7%
Middle School	19.5%	19.5%
Primary/Elementary School	52.4%	51.4%

***** *Race for participants who had been teaching three years or less did not have enough data for NCES to report a percentage.*

Findings Related to Research Questions

Data Results for Research Question 1

As a baseline for the data, Table 2 shows novice teachers' responses to the time planning to remain item in the survey, not separated for experience with a mentor. Novice teachers who have taught less than three years state they are 15.94% more likely to ”stay in teaching as long as I am able” than teachers with three years or more experience. Teachers who stated they ”definitely plan to leave as soon as I can” or are ”undecided at this time” were similar in their answers whether they had taught three years or less or for more than three years. The percentage of difference was less than 1.5% for both responses. Teachers with more than three years of experience were 2.21% more likely to say they were planning to stay ”until I am eligible for Social Security benefit” and 17.01% more likely to state they were planning to stay in teaching ”until I am eligible for retirement benefits from this job.”

Table 2

Teachers' Responses to Time Planning to Remain Item in the Teaching Survey

	Novice Teachers (weighted *n* = 504,119)	Teachers with 3+ Years of Experience (weighted *n* = 2,844,707)

	%	SE	%	SE
As long as I am able	54.80	0.72	38.86	0.32
Until I am eligible for retirement benefits from this job	13.97	0.49	30.98	0.35
Until I am eligible for retirement benefits from a previous job	0.04	0.02	0.12	0.02
Until I am eligible for Social Security benefits	0.54	0.11	2.75	0.11
Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	5.12	0.37	3.50	0.12
Until a more desirable job opportunity comes along	6.55	0.35	5.25	0.16
Definitely plan to leave as soon as I can	1.11	0.17	1.95	0.10
Undecided at this time	17.87	0.58	16.60	0.24

The first research question was, ”Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for ”as long as I am able” based upon having a mentor during the first year of teaching?” The results of a chi-square analysis suggest there are statistically significant differences in teachers' intention to remain in education, $\chi^2(6) = 1182.82$, $p < 0.001$ (Table 3). Novice teachers who were assigned a mentor were more likely to indicate they plan to stay in teaching until they are eligible for retirement benefits from their job (13.23%) compared to novice teachers who were not assigned a mentor (10.22%). Novice teachers who were assigned a mentor were less likely to indicate they are undecided about whether they plan to stay in teaching (17.75%) compared to novice teachers who were not assigned a mentor (19.61%).

Table 3

Differences in Novice Teachers' Time Planning to Remain in Teaching by Mentor Experience

	Not Assigned a Master or Mentor Teacher (weighted n = 100,455)		Assigned a Master or Mentor Teacher (weighted n = 359,756)	
	%	SE	%	SE
As long as I am able	55.83	1.58	55.70	0.83
Until I am eligible for retirement benefits from this job	10.22	1.05	13.23	0.61

Until I am eligible for retirement benefits from a previous job	0.00	0.00	0.05	0.03
Until I am eligible for Social Security benefits	0.50	0.22	0.42	0.11
Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	5.29	0.73	5.41	0.44
Until a more desirable job opportunity comes along	7.03	0.87	6.48	0.41
Definitely plan to leave as soon as I can	1.50	0.55	0.95	0.15
Undecided at this time	19.61	1.25	17.75	0.69

Table 4 shows the response of teachers with more than three years of experience and their decision to remain in teaching if they had a mentor as a new teacher or not. The data show the teachers who have more experience are more equal in their choices to stay or not stay in the teaching profession. If a teacher who has taught more than four years had a mentor in their first years of teaching, they are only 0.42% more likely to say they would stay in teaching ”as long as I am able” as teachers who did not have a mentor assigned to them in their first year of teaching. If a teacher who has more than four years of experience had a mentor they are only 0.92% less likely to be ”undecided at this time” about their decision to stay in the teaching profession. The answer where there is a larger difference in the response is in the category of ”definitely plan to leave as soon as I can.” Teachers who had four or more years of teaching experience and a mentor in their first year of teaching were 2.01% less likely to answer they ”definitely plan to leave as soon as I can” than teachers who had four or more years of teaching experience and did not have a mentor.

Table 4

Differences in Teachers with more than Three Years of Experience Time Planning to Remain in Teaching by Mentor Experience

	Not Assigned a Master	Assigned a Master or Mentor

	or Mentor Teacher		Teacher	
	%	SE	%	SE
As long as I am able	48.38	2.58	48.80	1.38
Until I am eligible for retirement benefits from this job	11.44	1.62	17.13	1.07
Until I am eligible for retirement benefits from a previous job	0.00	0.00	0.00	0.00
Until I am eligible for Social Security benefits	2.01	0.83	1.04	0.28
Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	6.74	1.37	5.86	0.63
Until a more desirable job opportunity comes along	8.99	1.56	7.57	0.71
Definitely plan to leave as soon as I can	3.51	0.98	1.50	0.35
Undecided at this time	18.90	1.86	17.98	1.05

Data Results for Research Question 2

The second research question asks, ”Is there a significant difference ($p < 0.05$) in teachers’ intention to stay in education for ”as long as I am able” based upon the amount of time spent with a mentor during the first year of teaching?” The results of a chi-square analysis also suggest there are statistically significant differences in teachers’ intention to remain in education based upon the frequency with which they met with a mentor, $\chi^2(18) = 5769.33$, $p < 0.001$ (Table 4.5). Novice teachers who never spent time with a mentor were much less likely than teachers who met with a mentor at least once a week (60.33%), once or twice a month (52.46%), or a few times a year (47.53%) to indicate they would stay in teaching ”as long as they are able” (42.03%). Novice teachers who spent time with a mentor at least once a week were 18.3% more likely to state they would stay in teaching ”as long as I am able” compared to teachers who never met with their mentor. Novice teachers who never met with their mentor were 10.71% more likely to state they were ”undecided at this time” about their decision to stay in the education profession. The percentages of novice teachers who were ”undecided at this time”

about staying in the education profession increased as the teacher spent less time with their mentor: at least once a week (15.70%), once or twice a month (18.94%), a few times a year (21.27%), and never (26.41%).

Table 5

Differences in Novice Teachers' Time Planning to Remain in Teaching by Frequency of Time Spent with Mentor

	At Least Once a Week (weighted *n* = 198,036)		Once or Twice a Month (weighted *n* = 95,250)		A Few Times a Year (weighted *n* = 54,810)		Never (weighted *n* = 11,661)	
	%	SE	%	SE	%	SE	%	SE
As long as I am able	60.33	1.12	52.46	1.68	47.53	2.18	42.03	4.40
Until I am eligible for retirement benefits from this job	11.89	0.71	15.09	1.44	14.96	1.57	12.53	3.20
Until I am eligible for retirement benefits from a previous job	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Until I am eligible for Social Security benefits	0.40	0.15	0.38	0.21	0.45	0.25	0.00	0.00
Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	4.72	0.58	6.29	0.82	5.64	1.13	8.73	2.54
Until a more desirable job opportunity comes along	6.24	0.56	5.50	0.75	9.03	1.19	6.69	2.14
Definitely plan to leave as soon as I can	0.69	0.17	1.23	0.39	1.11	0.50	2.51	1.33
Undecided at this time	15.70	0.95	18.94	1.32	21.27	1.76	26.41	4.24

Table 6 shows differences in teachers with more than three years of experience and their plans to remain in teaching by frequency of time spent with a mentor. Experienced teachers who met with their mentor at least once a week in their first year of teaching were 12.56% more likely to stay in the education profession "as long as I am able" than experienced teachers who never met with their mentor in their first year of teaching. Teachers with 3 or more years experience

who met with their mentor at least once a week during their first year of teaching were 51.47% more likely to state they would stay in the education profession ”as long as they are able” than ”definitely plan to leave as soon as I can.” Even when teachers with four or more years of experience stated they ”definitely plan to leave as soon as I can,” if they met with a mentor once a week, they are three times less likely to ”definitely plan to leave as soon as I can” compared to teachers with four or more years of experience who never met with a mentor in their first year of teaching.

Table 6

Differences in Teachers' with more than Three Years of Experience Time Planning to Remain in Teaching by Frequency of Time Spent with Mentor

	At Least Once a Week (weighted *n* = 198,036)		Once or Twice a Month (weighted *n* = 95,250)		A Few Times a Year (weighted *n* = 54,810)		Never (weighted *n* = 11,661)	
	%	SE	%	SE	%	SE	%	SE
As long as I am able	52.57	1.97	47.41	2.66	42.77	3.19	40.01	6.16
Until I am eligible for retirement benefits from this job	16.96	1.57	21.10	2.25	13.39	1.87	10.79	3.47
Until I am eligible for retirement benefits from a previous job	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Until I am eligible for Social Security benefits	1.39	0.46	1.11	0.60	0.00	0.00	0.00	0.00
Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	4.01	0.74	7.15	1.35	8.42	1.80	7.39	3.14
Until a more desirable job opportunity comes along	6.71	1.03	7.35	1.32	8.76	1.67	13.05	3.99
Definitely plan to leave as soon as I can	1.10	0.44	1.41	0.68	1.94	0.88	4.32	2.58
Undecided at this time	17.07	1.59	14.15	1.81	24.37	2.46	24.42	5.52

Data Results for Research Question 3

The third research question was, ”Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for ”as long as I am able” based upon whether their mentor teacher instructs in the same subject area?” The results of a chi-square analysis suggest there are statistically significant differences in teachers' intention to remain in education based upon whether or not their mentor was an instructor in the same subject area, $\chi^2(6) = 1163.76$, $p < 0.001$ (Table 7).

Novice teachers who worked with a mentor who instructed in the same subject area were more likely to indicate they plan to stay in teaching ”as long as they are able” (57.03%) compared to novice teachers whose mentor did not teach in the same subject area (52.04%). Novice teachers who had a mentor in their subject area were 3.09% less likely to state they were ”undecided at this time” about staying in the education field than novice teachers who did not have a mentor in their subject area.

Table 7

Differences in Novice Teachers' Time Planning to Remain in Teaching by Whether Mentor Instructed in the Same Area

	Mentor Teacher Does Not Instruct in the Same Subject Area (weighted n = 95,490)		Mentor Teacher Instructs in the Same Subject Area (weighted n = 264,265)	
	%	SE	%	SE
As long as I am able	52.04	1.74	57.03	0.98
Until I am eligible for retirement benefits from this job	13.16	1.19	13.25	0.73
Until I am eligible for retirement benefits from a previous job	0.00	0.00	0.07	0.04
Until I am eligible for Social Security benefits	0.53	0.23	0.39	0.13

Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	6.47	0.87	5.02	0.50
Until a more desirable job opportunity comes along	6.57	0.84	6.45	0.51
Definitely plan to leave as soon as I can	1.22	0.34	0.86	0.17
Undecided at this time	20.02	1.35	16.93	0.81

Table 8 examines the differences in teachers with more than three years of experience and their time planning to remain in teaching, separating for whether they had a mentor in their same subject area. When a teacher who has been teaching for four years or more had a mentor in the same subject area they are only 0.51% more likely to state they plan to stay in the teaching profession for ”as long as they are able.” Teachers who did not have mentors in their subject area and had been teaching for more than four years were only 0.11% more likely to state they were ”undecided at this time” about their desire to stay in the teaching profession. As teachers gain more experience, their responses to questions about time planning to remain in teaching becomes more equal.

Table 8

Differences in Teachers' with more than Three Years of Experience Time Planning to Remain in Teaching by Whether Mentor Instructed in the Same Area

	Mentor Teacher Does Not Instruct in the Same Subject Area (weighted *n* = 95,490)		Mentor Teacher Instructs in the Same Subject Area (weighted *n* = 264,265)	
	%	SE	%	SE
As long as I am able	48.43	2.48	48.94	1.62
Until I am eligible for retirement benefits from this job	15.43	1.84	17.78	1.23
Until I am eligible for retirement benefits from a previous job	0.0	0.00	0.0	0.00
Until I am eligible for Social Security benefits	0.61	0.36	1.20	0.37

Until a specific life event occurs (e.g., parenthood, marriage, retirement of spouse or partner)	7.55	1.34	5.22	0.70
Until a more desirable job opportunity comes along	8.25	1.30	7.32	0.85
Definitely plan to leave as soon as I can	1.63	0.64	1.45	0.41
Undecided at this time	18.06	2.00	17.95	1.21

Table 9 shows the research questions and the results of their null and alternative hypothesis. All three research questions' null hypotheses were rejected due to the results of the data. The researcher failed to reject all three research questions' alternative hypotheses due to significant results in the data.

Table 9

Null and Alternative Hypothesis Results

Research Question	Null Hypothesis	Reject or fail to reject null hypothesis	Alternative Hypothesis	Reject or fail to reject alternative hypothesis
RQ1: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon having a mentor during the first year of teaching?	Ho1: There is no difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching.	Reject	Ha1: There is a significant difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching. New teachers who have a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.	Fail to reject
RQ2: Is there a significant difference ($p<0.05$) in teachers' intention to stay in education for "as long as I am able"	Ho2: There is no difference between teachers' intention to stay in	Reject	Ha2: There is a significant difference between teachers' intention to stay in education based upon the amount of time spent with their mentor. New teachers who spend more time	Fail to reject

based upon the amount of time spent with a mentor during the first year of teaching?	education based upon the amount of time spent with their mentor.	with a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able.	
RQ3: Is there a significant difference ($p < 0.05$) in teachers' intention to stay in education for "as long as I am able" based upon whether their mentor teacher instructs in the same subject area?	Ho3: There is no difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area.	Reject	Ha3: There is a significant difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. New teachers who have a mentor in the same subject area during their first year of teaching will be more likely to stay in teaching as long as they are able.	Fail to reject

Conclusion

In summary, the data show that when novice teachers have a mentor in the first year of teaching, they are more likely to state they will stay in the teaching profession "as long as I am able." There is a significant difference in teachers' intentions to stay in education based upon having a mentor during the first year of teaching compared to not having a mentor. There is also a significant difference between teachers' intention to stay in education based upon the amount of time spent with their mentor. New teachers who spend more time with a mentor in their first year of teaching will be more likely to stay in teaching as long as they are able. Finally, there is a significant difference between teachers' intention to stay in education based upon whether their mentor teacher instructs in the same subject area. New teachers who have a mentor in the same subject area during their first year of teaching will be more likely to stay in teaching as long as

they are able. The choice of staying in the teaching profession ”as long as I am able” increases if the novice teacher met at least once a week with their mentor in their first year of teaching and had a mentor who taught in the same subject area.

Chapter 5: Discussion, Implications, and Recommendations

Overview of Study

The primary purpose of this study was to determine if having a mentor in the first year of teaching helps new teachers remain in the teaching profession for a longer period of time. The secondary purpose of this study was to see which parts of mentoring affect the new teachers' decision to stay. These areas included the amount of time spent with the mentee and if the mentee and mentor shared the same subject area in teaching. The findings of this study lend support to some prior research and shed light on potential new directions for education research. This chapter presents the major findings of the study in the context of the current literature, the scientific and practical implications of the findings, the study limitations, and suggested topics for future research.

Discussion

The results of this study suggest that novice teachers who were assigned a mentor were more likely to indicate they plan to stay in teaching until they are eligible for retirement benefits from their job compared to novice teachers who were not assigned a mentor. Additionally, novice teachers who were assigned a mentor were less likely to indicate they are undecided about whether they plan to stay in teaching compared to novice teachers who were not assigned a mentor. Thus, having a mentor may help to support novice teachers' decisions to remain in the field for longer compared to novice teachers who did not have a mentor; however, it is important to note that the differences in survey responses between novice teachers who did and did not have a mentor tended to be small.

Additionally, the amount of time novice teachers spent time with mentors was associated with their retention-related decisions; for instance, novice teachers who never spent time with a

mentor were much less likely than teachers who met with a mentor at least once a week, once or twice a month, or a few times a year to indicate they would stay in teaching ”as long as they are able.” Novice teachers who never spent time with a mentor were also more likely to be undecided about their intentions to remain in the teaching profession. Therefore, spending more time with mentors may help to support novice teachers’ decisions to remain in the field for longer compared to novice teachers who did not have a mentor; however, it is important to note that the differences in teachers’ intentions based upon frequency of meeting with mentors tended to be small.

Furthermore, novice teachers who worked with a mentor who instructed in the same subject area were more likely to indicate they plan to stay in teaching ”as long as they are able” compared to novice teachers whose mentor did not teach in the same subject area. Novice teachers who worked with a mentor who instructed in the same subject area were also less likely to be undecided about their intentions to remain in the profession. Consequently, having a mentor who instructed in the same subject area as teachers may help to support novice teachers’ decisions to remain in the field for longer; however, it is important to note that the differences in novice teachers’ intentions to remain in the profession between those who did and did not have a mentor who instructed in the same subject area tended to be small.

When looking at the data from teachers who have taught for three or more years, the data is similar. Experienced teachers who had a mentor during their first year of teaching were more likely to indicate they plan to stay in teaching until they are eligible for retirement benefits from their job compared to experienced teachers who were not assigned a mentor during their first year. This data may show that the benefits of a mentor in the first year of teaching continues to influence a teacher's desire to stay in the education field longer than experienced teachers who

did not have a mentor in their first year of teaching. The amount of time experienced teachers spent time with mentors in their first year of teaching was associated with their retention-related decisions; for example, experienced teachers who never spent time with a mentor were much less likely than teachers who met with a mentor at least once a week, once or twice a month, or a few times a year to indicate they would stay in teaching ”as long as they are able.” Experienced teachers who never spent time with a mentor in their first year of teaching were more likely to be undecided about their intentions to remain in the teaching profession. Therefore, spending more time with mentors may continue to help to support experienced teachers' decisions to remain in the field for longer compared to experienced teachers who did not have a mentor in their first year of teaching. Lastly, having a mentor teacher in the same subject area for experienced teachers did not make a significant difference in their decision to stay in education “as long as I am able”. Consequently, having a mentor during the first year of teaching who met with the teacher at least once a week may help support novice teachers, and continue to support experienced teachers, in their decisions to remain in the field for longer periods of time.

Mentorship for Novice Teachers

The research found in this study may add additional support for Allen and Eby's (2007) theory of mentorship, which states that belonging begins with the mentorship relationship. People crave connections, and the results of this study suggest that spending more time with mentors and having a mentor in the same subject area can potentially create connections to support novice teachers' intentions to stay in the profession. Mentor relationships move in different directions, either positive, negative, or neutral. It is likely belongingness contributes to determining in which direction a mentoring relationship grows (Allen & Eby, 2007). If new teachers have mentoring relationships that create a sense of belonging and bring about positive

affective, cognitive, and behavioral outcomes, they may be more likely to stay in the education profession.

Belongingness is a universal need across a human's lifespan. Belongingness needs intimacy, trust, and mutuality, which takes time. When a mentee feels a sense of belonging, the mentorship relationship is more likely to move productively and grow and flourish. There are two main features associated with the need to belong. First, individuals need frequent interactions with the other person which are positive and effective in nature. Second, the person must believe the relationship is marked by ongoing affective concern. Thus, for belongingness to occur, a mentee must believe a mentor cares about their well-being, feels affection towards them, and works to continue in relationship with the mentee (Allen & Eby, 2007). While it may not be easy to determine the amount of time in a mentoring relationship that is needed for belongingness, this study shows that meeting at least once a week with a mentor increases new teachers' intentions to remain in the profession and reduces their undecidedness about staying in education.

In Kram's (1985) mentor function theory, a mentor helps the mentee deal with the difficult tasks that are related to early years of working in the field of education. This involves emotional support of acceptance, friendship, and confirmation which allows new teachers freedom and support to experiment and reach for career goals. Kram also discussed psychosocial support of mentorship which involves offering of counsel to the mentee. Counsel helps the mentee to explore personal concerns that would otherwise undermine their self-efficacy and interfere with productive growth. Psychosocial support from a mentor can help to alleviate anxiety, fear, and ambivalence while enhancing self-efficacy, a sense of competence, a clearer teacher-identity, and more effectiveness in the classroom (Allen & Eby, 2007).

Mentorship builds relationships and provides belonging which in turn helps with new teachers' retention. The need for human connection appears to be innate, but the ability to form healthy relationships is learned. Maintaining a strong relationship requires care and communication. Positive relationships and work with other teachers are vital to early career teachers' satisfaction on the job and for retention in the profession (Kelly et al., 2019). New teachers will benefit from having a mentor during the first year of their teaching experience to help build collegial relationships and guide them through some of the stressors of the education profession. This study shows that the benefit of a mentor alone may increase a new teacher's likelihood of staying in the education profession "as long as I am able" and decrease their uncertainty about staying in the profession." This result aligns with Toombs and Ramsey's (2020) research results, which suggested that new teachers stay where they experience support, such as a mentor. Strong and Ingersoll's (2011) study also showed that comprehensive teacher induction with mentorship and the amount of support received by new teachers affects retention. As pointed out before, when teachers stay in the education field for more than three years, there is a significant increase in their teachers' effectiveness. These facts alone should give pause to pre-service teaching programs, school district induction and mentorship programs, and state policy makers and legislators.

Not only do new teachers and mentors benefit from the effects of a more positive school culture, but teachers and staff who are not in the mentorship relationships may also benefit. Wong (2004) showed that a more positive school culture due to mentoring relationships helped teachers, students, administrators, and even families thrive. Teachers remain with a district when they feel supported by the administration, have strong bonds with colleagues, and collaborate with a sense of purpose or vision. Increased relationships among teachers may benefit the school

community as a whole. Thus, the overall school community can benefit from relationships that mentor teachers develop with new teachers.

Collegiality has a positive effect on the overall school culture. When teachers leave the education field at alarming rates, it is hard to form relationships and build unity (Ronfeldt et al., 2013). Not only do new teachers deal with issues involving relationships in the education community, they also deal with extreme stress in the work environment. Argawal and Marken (2022) found that 44% of K-12 teachers say that they are always stressed or very often stressed in their work environment. Isolation, extra work hours, increased workloads, poor student behavior, lack of student interest, lack of administrative support, low salaries, test requirements, and the public's attitude towards the role teachers play in students learning all affect new teachers' willingness to stay in the education field (Alliance for Excellent Education, 2014; Ingersoll & Strong, 2011; Kidd et al., 2015; Ladd, 2011). Thus, taking time to build positive, collegial relationships among teachers may benefit the entire school community.

Frequency of Mentorship

Along with having a mentor, this study shows that there is an increase in new teachers' retention when more time is invested in the mentorship relationship. The National Teacher and Principal Survey (NTPS) clearly asks new teachers their intention to stay in teaching "as long as I am able" in relation to the amount of time spent with their mentor. This increase in retention compounds as time spent with the mentor teacher increases. More time with a mentor allows for new teachers to develop skills as reflective practitioners, which is critical for new teachers to develop expertise. Designated time with a mentor provides time for lesson observation, both of the new teacher and the mentor by the new teacher, which in turn improves the new teacher's instruction skills.

Collaboration between the new teachers and mentors also allows for guidance in lesson planning and preparation. New teachers who have mentors receive more guidance with assessment of student learning and classroom management and engagement. Working with parents is modeled for new teachers by mentors as time together is increased. Designated time with a mentor allows the mentorship relationship to grow and deepen, which in turn produces enhanced outcomes for the new teacher (Drexler, 2006; Serpell, 2000). Any entity working with pre-service or new teachers would find a benefit in offering more frequent meeting times with mentors to help increase self-efficacy and belongingness, which in turn will increase new teachers' retention. Teachers' retention is vital in reducing the current teacher shortage that the United States is facing. Less effective teachers are more likely to leave the education profession. As teachers are retained for longer periods of time, their teachers' effectiveness increases. There is a cyclical nature in teachers' effectiveness, student impact, and teacher retention. Teachers' effectiveness has the largest impact on students' achievement, and gains in students' achievement affect teacher longevity. So, increased time invested in new teacher mentorship will increase teachers' effectiveness which increases students' achievement which in turn increases teacher retention (Darling-Hammond et al., 2002; Henry et al., 2011; Pearman et al., 2021).

Mentors in Similar Instructional Areas

This study also shows that having a mentor teacher in the same subject area will increase new teachers' intentions to stay in the field ”as long as I am able.” In successful mentoring relationships, mentors and mentees are matched on work experience, personality, grade level, and subject area (Serpell, 2000). Therefore, a mentor is more effective in new teachers' retention if they share the same subject area as the mentee. Content knowledge was thought to be the domain of pre-service teacher education, but given the short period of the student teaching

experience and the complex and contextualized work of learning to teach, more teachers are entering the profession lacking this specific subject knowledge (Feiman-Nemser, 2001). Even those who enter teaching with a depth of content knowledge need to develop pedagogical content knowledge, which involves an understanding of specific pedagogy and content, reflecting how topics are organized, represented, and adapted to particular student learners and contexts (Achinstein, & Davis, 2014). Given these facts, subject area mentorship matters in retaining new teachers.

New teachers are charged not only with the skill of learning how to teach, but also learning the specific content that they are teaching. Many times society places all teachers into one category assuming teaching any subject or grade level is all the same. In actuality there are great differences between the pedagogy needed to teach kindergarten versus sixth grade versus high school seniors. The same is also true for content areas. Teachers who instruct in the area of physics have different pedagogical needs than teachers who teach algebra or music. Ensuring that new teachers are placed with mentors who share the same subject area or grade level can help to increase new teachers' ability to teach content areas with more effectiveness.

Implications and Recommendations for Higher Educational Practices and Policy

This research has implications for higher education. Pre-service teacher training programs, where college students are educated in pedagogy and content as they become teachers, also need to consider the implications of mentorship and how it can affect and improve a pre-service teacher’s learning experience. Since mentoring relationships affect teachers' self-efficacy and belongingness, it would be beneficial for pre-service teacher training programs to implement mentorship into their programs. This mentorship could be with faculty or university supervisors and would work to improve relationships between education students and

the instructional programs. Having a mentor during a pre-service teacher training program may expose education students to the benefits of mentorship and prepare them to search out mentoring relationships as they enter the education field. New teachers often comment that student teaching had the greatest influence on their development as teachers (Alger & Kopcha, 2009). Student teaching is a formative experience for novice teachers where they begin to develop their own teacher identity and self-efficacy. Intentionally working to design programs that encourage mentoring relationships may benefit student teachers and, therefore, overflow into novice teaching experiences. As student teachers have positive experiences with mentors in their higher education experience, this may in turn carry over into their teaching career which may encourage new teachers' retention.

Student teaching supervisors may have a special relationship and opportunity to speak to the educational self-efficacy of the teacher. The advice a student teaching supervisor may share with their student teacher can influence teachers' self-efficacy and the ability to be reflective on student learning and their own learning. This ability to help develop teachers' self-efficacy in student teachers may be pivotal in the retention rates of beginning teachers. As student teachers meet weekly with university supervisors in their field of educational study, these mentorship relationships benefit student teachers' self-efficacy and belongingness.

This research also affects the guidance professors give to student teachers as they move into the classroom setting. Professors, utilizing the research, can encourage new teachers to find a mentor that is in their subject area they can meet with at least once a week if one is not provided by the school district, and/or if a complimentary connection is not developed with the mentor teacher. This encouragement from a professor can help students to understand the importance and the positive effects of having a mentor.

New teachers may benefit from more time in the student teaching or internship program. Some year-long residency/student teaching programs exist in teacher preparation programs. These programs place students in their intermediate methods field experience and their student teaching placement in the same classroom for one year. This configuration allows the student teachers to see how teachers build community, develop instructional strategies, implement classroom management, and differentiate and assess the same group of students for an entire year. The student teacher also benefits from seeing students progress through an entire year of school. During this year-long experience, a university supervisor visits them weekly to observe, teach, and conference with them regularly. Developing a year-long mentoring relationship with both a cooperating teacher and a university supervisor will benefit the student teachers as they enter into their own classroom setting.

Higher education programs could also offer graduate induction programs for new teachers. In this type of program, the new teaching graduates would be assigned a classroom where they would be the teacher of record. For the first year of their teaching career, the new teachers would have a mentor who visits their classroom weekly to observe them, teach with them, or teach lessons to the class so the new teacher can observe and learn from their expertise. The new teacher and mentor would meet weekly to discuss lesson plans, teaching effectiveness, assessment, and general growth in teaching and teachers' self-efficacy. Such a year-long graduate induction program would benefit new teachers in building mentoring relationships with experienced teachers and, in turn, may increase new teachers' retention.

As schools work with novice teachers in the future, enforcing weekly meetings with a mentor in the same subject area should increase new teachers' retention. As teacher retention increases, novice teachers' self-efficacy will increase. Multiple scholars show a positive sense of

self-efficacy in teaching can be improved by greater involvement in comprehensive induction programs that include mentors (Ahokoski et al., 2017; Darling-Hammond et al., 2002; Pearman et al., 2021). Teachers who have a positive self-efficacy are more likely to believe they can make a difference in their students' lives. They also believe they can reach all of their students, handle classroom issues, and teach students at high levels (Darling-Hammond et al., 2002; Pearman et al., 2021). Teachers with higher self-efficacy are more willing to try new techniques to meet students' needs (Pearman et al., 2021). According to Vidić et al. (2021), a teacher with high self-efficacy is more likely to prepare for work, work more effectively with other teachers, and set high goals for themselves and their students. Consequently, if new teacher retention is increased through weekly mentoring with a teacher in the same subject area, it can be assumed teachers' self-efficacy will be increased and as self-efficacy increases, so will teacher retention.

Along with teachers' self-efficacy and teachers' retention increasing with weekly meetings with a mentor who is in the new teacher's subject area, teachers' effectiveness increases. Students receive effective instruction from teachers who have more experience in the classroom. On average, teachers substantially increase their effectiveness between their first and second years of teaching (Henry et al., 2011). When teachers trust in the effectiveness of their work, they tend to believe they can influence how well students learn and develop (Ahokoski et al., 2017). Thus, when districts work to develop their mentorship programs, it will serve them well to require weekly meetings with a mentor teacher who is in the same subject areas as the mentee. Mentoring in this way increases new teachers' desire to stay in the education field "as long as I am able," which increases the new teachers' self-efficacy and in turn increases their teachers' effectiveness (Darling-Hammond et al., 2002; Henry et al., 2011; Pearman et al., 2021).

Lastly, this research has implications for mentorship practices outside of the field of

education. If new teachers who met with a mentor weekly in the same field increased their retention, it could be assumed the same would happen in other areas if the mentorship requirements were applied. Areas such as business, career and technical studies, and churches may benefit from having the knowledge of the benefits of weekly meetings with a mentor in the same subject area. In the past businesses have used apprenticeship to guide new employees in the transition to a new position. Many companies incorporate programs where they ask current employees to join a mentorship program for new employees. Career and technical education such as plumbing, electrician, or mechanical studies already use the process of mentoring to train their new employees in their new position. Applying the current research from this study, it could be assumed that weekly meetings with a new employee in similar work roles could be the most beneficial. Finally, churches strive to mentor their congregants in the area of Christian discipline. These areas of Christian discipline include prayer, Bible study, teaching, and acts of service. Designing mentoring programs where mentors and mentees meet once a week would encourage relationship building and create a sense of belonging. The data from this study could be transferred into other occupational areas to encourage weekly meetings with a mentor who has a similar background as the mentee to improve relationships.

Mentorship of new teachers matters for students. New teachers who have mentors that meet weekly with them and are in the same subject area increase the new teachers' response to staying in the education field ”as long as I am able.” One of the primary goals of any school is the success and achievement of their students. Improving students' achievement is greatly affected by the quality of the teacher (Cespedes et al., 2019; DeAngelis et al., 2013; Drexler, 2006; Henry et al., 2011; Ingersoll et al., 2011; Ronfeldt et al., 2013; Wong, 2004) and positive teachers' self-efficacy increases students’ academic achievement, students’ motivation, and

positive behaviors in students (Ahokoski et al., 2017). Teachers' retention increases experience in the classroom which in turn increases self-efficacy and teachers' effectiveness, and teachers' effectiveness is one of the most powerful school-based factors for improving students' achievement (Alliance for Excellent Education, 2014; DeAngelis et al., 2013). Looking at the implications of this data, school districts should develop mentoring programs that include weekly meetings for the mentor and mentee and a matching system to match new teachers with mentors in the same subject area.

Implications and Recommendations for Educational Practices and Policy

Considering the benefits of mentorship for teachers' retention, this study has implications for developing and implementing induction and mentoring programs that are required by state statutes in the state of Minnesota and 26 other states. State legislators and policy makers have an important role in guiding local school districts in the area of mentorship and induction programs. The state is involved in funding for local school districts and must consider this study and how mentorship affects the retention of new teachers. The Professional Educator Licensing and Standards Board (PELSB) sets the standards of effective practice for teacher preparation programs. This determines the guidelines that university and higher education programs develop as they work with education students. Given this data, PELSB and other state teaching boards must consider their standards of effective practice and how it affects the retention of new teachers.

Induction and mentorship programs states develop need to consider the benefits of the amount of time spent with the new teacher and whether the mentor teaches in the same subject area as the mentee. As districts set budgets that compete for the seemingly limited funding, it would be beneficial for them to consider setting aside money to help local school districts as they

implement their induction and mentorship programs to help retain new teachers. If a school district invests in assigned mentors to meet with their mentee at least once a week, the school district could conclude that these new teachers would be more likely to be retained in the teaching profession. The opposite is also true. If a school district does not assign a designated amount of time for a mentor to spend with their mentee, and they spend less time than once a week with their mentee, these new teachers are less likely to continue in the education profession for ”as long as I am able.” There are also implications for school districts to require mentor teachers to be in the same subject area as the new teacher. The data shows when a new teacher has a mentor who is in the same subject area, it can be assumed the new teacher would be more likely to stay in the profession longer. It would be beneficial for districts to consider the time requirements mentors spend with their mentees and the subject area of the mentor to help retain more new teachers in the teaching profession and reduce the current teaching shortage.

These induction and mentorship programs may be costly; however, they may be less costly than rehiring and training new teachers. One example of the cost of implementing an induction and mentorship program is the Peer Assistance and Review (PAR) induction program which ranges from $3,000 to $10,000 per teacher (Weins et al., 2019). Compared to the average cost of a replacement teacher due to attrition at over $12,000, which include recruiting, interviewing, hiring, and onboarding costs, there could be significant cost benefits in the implementation of induction and mentorship programs (American Federation of Teachers, 2016).

Legislators and policy makers need to consider the impact of mentorship on teacher retention. Policies need to be designed with mentorship and induction in mind, and creative ways to fund these programs need to be developed given the research. Many school districts struggle with investing in comprehensive induction programs due to the lack of funding that may result

from legislative decisions. Funding from policy makers and legislators for induction programs could ease the financial burdens on school districts and also encourage teachers by showing financial backing of the state in supporting new teacher retention which is likely to lead to increased students' achievement.

Legislators also develop policy and procedures for the state teacher licensing boards, which in turn affect university pre-service teacher programs and, in turn, teacher retention. Some of these policies include 1) how many hours a student teacher spends in a classroom before student teaching, 2) how many weeks a student teacher must spend in a classroom as the teacher, 3) how many times a student teacher must be observed and by who, 4) requirements for cooperating teachers to host a student teacher, and 5) requirements for university supervisors. Cooperating teachers and university supervisors are new teachers' first mentors. It would behoove state governing boards to implement policies that require cooperating teachers to have an understanding of self-efficacy and belongingness in new teachers. This would encourage cooperating teachers to consider their function as a mentor to the student teacher in more than just instructional strategies. The cooperating teacher would be informed of the needs of student teachers and beginning teachers and be able to guide and counsel these students more effectively. This would ultimately help cooperating teachers and student teachers build positive mentoring relationships to help improve student learning and teacher retention.

Recommendations for Further Research

This research has implications for further exploration in the area of mentoring and teacher retention and effectiveness. Some of the areas for future research may involve, but are not limited to, developing a working definition of mentor in the area of education, utilizing the 2021-2022 National Teacher and Principal Survey (NTPS) from the National Center for

Education Statistics (NCES) when the data is finalized and released for public use, and analyzing practices of mentorship outside the field of education.

As more and more states are requiring new teacher induction and mentoring programs, more research could be conducted to determine a working definition of mentor in the field of education. Feiman-Nemser (2001) conducted research in the area of mentoring in education and has coined the term ”educative mentor.” Feiman-Nemser defines educative mentor as ”cultivating a disposition of inquiry, focusing attention on student thinking and understanding, and fostering disciplined talk about problems of practice” (Feiman-Nemser, 2001, p. 28). Educative mentoring involves one on one, close to the classroom work on teaching between a more experienced and a less experienced teacher with the goal of growing the early career teacher’s practice (Fieman-Nemser, 2016). Effective role modeling consists of the modeling of values, attitudes, and work behaviors that are beneficial to the education profession. A working definition of a mentor in the field of education could influence the way in which districts plan and implement induction and mentoring programs.

This research shows that mentoring affects the retention of new teachers. It also shows that weekly meetings with a mentor and similar subject mentors influence the retention of new teachers. Future studies could look into other areas that affect new teachers' retention and are involved in induction programs. These include areas of, but are not limited to, teacher peer observations, team teaching, and professional learning communities since these areas have also been shown to help increase new teachers' retention and improve teachers' effectiveness.

Future research could be conducted using the 2021-2022 National Teacher and Principal Survey (NTPS) from the National Council for Education Statistics (NCES). The data used in this study was obtained from the 2015-2016 NTPS. The 2017-2018 NTPS did not ask questions

about early career experiences for teachers. Questions about mentorship are not included in the 2017-2018 NTPS. The 2019-2020 NTPS was not given to teachers due to the COVID-19 pandemic. The 2021-2022 NTPS data has not been published yet. When the 2021-2022 NTPS data is published, a study similar to this study could be informational, especially with the effects of the COVID-19 pandemic.

Finally, the research from this study could be used to research mentoring in areas outside of the education field. Businesses, churches, and career and technical education could apply the knowledge of this study to their mentoring practices and research the effectiveness.

Limitations

Several limitations should be noted in reviewing the findings and implications of this study. One major limitation of this study was the year the data was collected. The current study uses the 2015-2016 National Teacher and Principal Survey (NTPS) from the National Council for Educational Statistics (NCES). Survey samples have limitations in the survey participants. The 2015-2016 NTPS survey was sent to teachers across the United States who were asked to voluntarily complete the survey. The teachers who decide to complete the survey may have a lived experience with mentorship, positive or negative, which may skew results. Along with the lived experience of the participants, certain people may be more likely to volunteer to respond to a survey which may also skew the results.

The data used in this study is eight years old. The data from the 2017-2018 NTPS does not have a question section on early career options, so there are no questions about mentoring in the 2017-2018 NTPS. During the 2019-2020 NTPS the COVID-19 pandemic occurred. The survey for 2019-2020 was not executed. Being that the data used for this study is eight years old, the participants responding to the survey may not have lived through the world experiences that

have occurred in the past eight years. This dated survey participation may skew the results. The 2021-2022 survey has not been published as of March 2023. The 2021-2022 survey may also be skewed due to the fact teachers who completed it taught during a worldwide pandemic the year before the survey and are still feeling the effects in their teaching.

A final limitation to this study is the fact there is not a definitive definition of the word *mentor*. This researcher found that the definition of mentor was not stated in the National Teacher and Principal Survey (NTPS). Therefore it is logical to assume each participant chose to define a mentor with their own definition. As stated early in this research, a mentor can be many things from a trusted friend who guides a person through job and life situations to a person who is assigned to meet with a mentee as part of a job requirement or additional assignment. Since there is no definitive definition of mentor, we do not know from the survey questions what the person completing the survey was defining as a mentor. It can be assumed some participants thought of a mentor as someone who influences their teaching and helps with lesson plans and other teaching related items, while others may have thought of a mentor as a person who talked with them occasionally because they were assigned to talk to them. Due to this fact, the research cannot say with certainty each participant was thinking of a mentor in a particular way. The response to the survey questions may be different depending on the definition participants viewed the word *mentor*. In any case, the data shows that independent of a participant's definition of mentor, the fact that a new teacher was assigned a mentor increased the likelihood the novice teacher would self-report their intention was to stay in teaching as long as possible. Until the word *mentor* has a definitive definition, this will continue to be a limitation in the study of mentorship and its effects.

Conclusion

New teachers are in a precarious situation in the education field today. As mentioned previously, new teachers are entering into classroom environments where they could be a fourth, fifth, or even sixth new teacher for that specific classroom in a single year. New teachers may be more likely to be hired in lower socioeconomic school settings with increased student behavior issues and learning needs as teachers with more experience often choose to stay in schools where students' achievement is higher and teacher attrition and mobility is more stable. These classroom environments for new teachers are not conducive for encouraging new teacher retention.

The problem of teachers' retention and teacher shortage has only grown in recent years. Graduates are choosing other professions with higher salaries, more opportunities for professional growth, and less occupational stress. With school safety issues, lack of funding, increased mental health needs of students, and less people choosing teaching as a profession, the lack of teachers will continue to grow. On top of that, the COVID-19 global pandemic and worldwide shutdown caused loss of student learning and prompted the early retirement of many teachers. The learning losses for students during the shutdown are still being felt today and will continue to be an issue for learners in the future. Some student developmental milestones were delayed or missed altogether. Mental health issues surged and continue to grow. Due to all of these factors and more, we are facing one of the greatest teacher shortages in recent history.

This teacher shortage in the United States is only getting worse. The majority of schools have classroom teaching positions that cannot be filled on a day to day basis with substitute teachers. In turn, they resort to filling these positions by splitting classrooms and sending students to other teachers, which enlarges their classroom sizes to as many as 40-45 elementary

students. Schools also resort to using teacher prep time to cover classrooms that do not have a teacher. To alleviate the teacher shortage, state legislation has developed a tier system for obtaining a teacher license. At this time in the state of Minnesota, any person with a four year degree in any subject may apply to be substitute teacher. There is also a tier 1 teaching license that schools may utilize if they are unable to fill a position. A tier one license involves a person with a four year degree, in any subject, being able to teach in any classroom for up to one year with permission of the school and district. This means that for a year, students receive academic training from a person who has not had any training in the subject or content of teaching.

As teacher attrition and the teacher shortage expands, there are ever increasing implications for our society. Teacher attrition or stop gap policies for the teacher shortage place less qualified or effective teachers in the classroom. When students receive an education from less qualified or effective teachers, students' achievement lowers. As students' achievement lowers there will be a detrimental effect on society in general. The productiveness of society academically and intellectually will lessen. As the general effectiveness of teaching lessens due to teacher attrition, the potential academic achievements of the United States will also lessen. The United States as a whole loses the costly resource of highly educated teaching professionals who can impact and make a difference in students' lives and their academic and personal growth potential in society and globally.

This research shows when mentors meet weekly with novice teachers and are in the same subject areas, the new teachers are more likely to state they will stay in the education profession ”as long as I am able.” This is important for practice and policy of schools and districts as they look to explore induction and mentorship programs. This researcher would recommend school districts require mentors meet weekly with their mentees and work in the same subject area.

These requirements increase new teachers' retention rates, which in turn increase teacher's self-efficacy and effectiveness, which finally increase students' achievement.

Mentors in education are shown to have a positive effect on new teachers' retention, students' achievement, and school culture. There needs to be a change in our educational system and it needs to come quickly. Students are suffering from the lack of effective teachers in the classroom and will continue to suffer if we do not make changes. This research shows the positive effect that mentorship can have on new teacher attrition which in turn benefits our children in their learning. The education system as a whole needs to consider the positive implications of mentorship and work to implement these findings consistently in our education system. Students, families, and society as a whole depend on our education system to develop productive and well-educated citizens. As positive mentoring relationships become standard in our educational system, the impacts will be far reaching for the growth of our students' achievement and our education system as a whole.

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