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# THE DYNAMICS THAT EXIST AMONG THE TEACHER PREPARATION PROGRAM, STUDENT ACHIEVEMENT, AND TEACHER PERFORMANCE 

by

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 in Education Leadership
# THE DYNAMICS THAT EXIST AMONG THE TEACHER PREPARATION PROGRAM, STUDENT ACHIEVEMENT, AND TEACHER PERFORMANCE <br> by Marva R. Rasberry 

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## Dedication

This dissertation is dedicated to my parents, Marvin and Ruthie Rausaw, who always believed in me. They placed an emphasis on education and prepared an amazing template and roadmap for me to follow. Although they are not physically here to witness this monumental time in my life, I know their angelic spirits surround me. I would also like to dedicate this study to my husband, Anthony Rasberry, who has supported me throughout this arduous journey. Thanks for your unconditional love, support and patience. To my two beautiful daughters, thanks for your patience and understanding. I have planted a seed, please water it and watch it grow. To my Heavenly Father, you have truly kept me throughout this process. I am grateful this mission is accomplished.

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# ABSTRACT <br> THE DYNAMICS THAT EXIST AMONG THE TEACHER PREPARATION PROGRAM, STUDENT ACHIEVEMENT, AND TEACHER PERFORMANCE 

Marva R. Rasberry<br>University of Houston-Clear Lake, 2022

## Dissertation Chair: Antonio Corrales, EdD

The purpose of this research study was to examine the dynamics that exist among the teacher preparation program (TPP), student achievement, and teacher performance. This study included a review of data collected from archived data derived from the Developmental Reading Assessment (DRA), the State of Texas Assessment of Academic Readiness (STAAR) for grades 3-11, as well as the Texas Teacher Evaluation and Support System (T-TESS) evaluation data from a purposeful sample of 233 teachers employed at a school district located in Southeast Texas. A purposeful sample of 10 teachers who earned their teaching credentials via either a traditional teacher preparation program or an Alternative Certification Program (ACP) were also interviewed to provide more in-depth understanding of the dynamics that exist among the preparation programs, student achievement, and the teachers' classroom performance. Findings indicated there was not a statistically significant mean difference in student achievement and teacher
performance in terms of the type of teacher preparation program. On the other hand, findings suggested teacher performance ratings have a statistically significant influence on student reading achievement and teacher performance did moderate the relationship between the type of teacher preparation and student achievement. Teachers also reported that completing relevant coursework and actual teaching experiences encountered during their teacher preparedness, interest in the teaching profession, and issues with teacher performance evaluation contributed to their performance ratings and student achievement.

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## CHAPTER I:

## INTRODUCTION

The increasingly high teacher turnover rate imposes a plethora of burdens on campuses and districts from which they depart (Sorenson \& Ladd, 2020). Teacher turnover costs the nation billions of dollars annually, ultimately resulting in draining resources, diminishing teacher quality, and undermining the nation's ability to close the student achievement gap (Amos, 2007). Today teachers are increasingly held accountable for implementing research-based effective teaching strategies that result in improved student achievement. This calls for investigating the effectiveness of teacher preparation programs to provide school districts with data for informed decision-making. Students must have access to quality teaching in all classrooms daily (Coggshall, Bivona, \& Reschly, 2012). This study aims to extend the discussion by examining the dynamics among teacher preparation, teacher performance, and student achievement. Chapter One will present the research problem in the study, the significance of the study, the purpose of the study, research questions, and provide key term definitions.

## Research Problem

In the report of the Education Commission of the States, the commission raised the important question of whether there are alternative route programs (ACP) that graduate high percentages of effective new teachers with average or higher than average rates of teacher retention (Allen, 2003). Research on teacher preparation and certification is a multi-faceted and complex field that is impacted by competitive ideas about the purpose of the study and its impact on education (Cochran-Smith \& Villegas, 2015). Research has addressed the effectiveness of alternative and traditional teacher preparation programs, while studying the tools and opportunities needed to meet the challenges of teaching a more diverse student population (Cochran-Smith \& Villegas, 2015). It is
difficult to ascertain which part of the retention gap between alternative and traditional preparation teachers can be attributed to their preparation program platform, or differences in organizational supports for these educators (Redding \& Smith, 2016). High turnover creates a sense of uncertainty in the classroom, thus impacting the learning environment. The high cost of teacher turnover is embedded in various budget line items and is often substantial, causing a chance for draining limited school resources away from educational programs (Levy, Ellis, Jablonski, \& Karelitz, 2012). Teacher retention is important because teacher turnover creates instability and costs and negatively impacts teaching quality - especially in schools that most need stability (Donaldson \& Johnson 2011).

Students' academic achievement and chances for success in life are greatly improved by having been educated by well-prepared certified educators. There are few studies that compare the effectiveness of the teacher preparation and its impact on student achievement (Goldhaber \& Liddle, 2012). Sufficient research suggests effective teachers are the most important contributors to student learning in classrooms (Glazerman, Loeb, Goldhaber, 2010). One of the most powerful influences on learning is the quality of instruction teachers impart in their students. Ultimately, preparing teachers is crucial to student achievement (Chetty, Friedman, \& Rockoff, 2014).

In an effort to fill a gap in research and inform teacher preparation programs about areas of needed improvement, the forming of teacher efficacy beliefs, while enrolled in a teacher preparation program, is of great importance (Gonzalez, 2017). To better understand the dynamics and development of teachers' perceptions of their professional competency, it is important to determine if their perceived competence as a prospective teacher, while in a teacher preparation program, had any influence on their subsequent perception as a teacher (Hernandez, 2020). Examining the dynamics among
the teacher preparation program, teacher performance, and student achievement is crucial to addressing the issue of stability in the classroom, which ultimately impacts student achievement.

## Significance of the Study

There is a need to ensure teacher candidates have a sense of preparedness and confidence, both of which impact teacher commitment and teacher performance. Recognizing the key components of educator preparation programs and determining their effectiveness, as it relates to teacher performance and student achievement are fundamental to fostering a teacher's commitment to the teaching profession. There is also growing evidence that certain teacher preparation programs regularly graduate more effective teachers than others, suggesting individual programs can have meaningful impacts (Gansle, Noell, \& Burns, 2012). There is a need for this study to ascertain the level of influence the teacher preparation program has on teacher performance and student achievement.

## Research Purpose and Questions

The purpose of this research was to examine the dynamics that exist among the teacher preparation program, student achievement, and teacher performance. The research questions that guided this study were as follows:

R1. Does the type of teacher preparation program influence teacher performance?
Ha: There is a relationship between the type of teacher preparation program and teacher performance.

R2. Does the type of teacher preparation program influence student achievement?
Ha: There is a relationship between teacher preparation programs and teacher performance.

R3. Does teacher performance mediate the relationship between the type of teacher preparation program and student achievement?

Ha: There is relationship between the type of teacher preparation program and student achievement.

R4. Does the type of teacher preparation program and teacher performance influence student achievement, controlling for years of teaching experience? Ha: There is a relationship between the type of teacher preparation program, teacher performance, and student achievement.

R5. Does teacher performance moderate the relationship between the type of teacher preparation program and student achievement?

Ha: Teacher performance moderates the relationship between the type of teacher preparation program and student achievement.

R6. What are teachers' perceptions regarding the influence of teacher preparation programs on teacher performance and student achievement?

Ha: There is a relationship between teacher preparation programs and teachers' self-efficacy.

## Definition of Key Terms

Alternative Certification Program (ACP) - Alternative certification programs offer a nontraditional route to certification that may allow you to teach while completing the requirements. These programs are located within universities, school districts, education service centers, community colleges, and private entities (Texas Education Agency, 2014).

Developmental Reading Assessment (DRA) - a series of leveled books and recording sheets designed to allow teachers to determine students' reading accuracy, fluency, and comprehension levels (Scholastic, 2020).

Mediation - explains the difference between an independent and dependent variable (Tsang, 2015).

Moderation - acts upon the relationship between two variables and changes its direction or strength (Tsang, 2015).

State of Texas Assessment of Academic Readiness/End-of-Course (STAAR/EOC - the State of Texas' testing program, which is based on state curriculum standards in core subjects, including reading, writing, mathematics, science, and social studies (Texas Education Agency, 2012).

Student Achievement - Evaluates performance across all subjects, for all students (Texas Education Agency, 2014).

Teacher Performance - The teacher behavior that demonstrates how teachers behave in the process of the teacher learning environment that exhibits their ability to carry out an assigned task (Azeem \& Omar, 2018).

Teacher Preparedness - a healthy blend of content knowledge, instructional strategies, and classroom management tactics (Meador, 2019).

Texas Teacher Evaluation and Support System (T-TESS) - an evaluation tool designed to provide continuous, timely, and formative feedback to educators to improve their practice (Texas Education Agency, 2013).

Traditional Preparation Program (TPP) - This term represents the entity that provides the training for teacher state certification (Jang \& Horn, 2017).

## Conclusion

This chapter developed an inquiry-based analysis for the need to examine the dynamics that exist among the teacher preparation program, teacher performance, and student achievement. Chapter Two will provide dialogue of the literature relevant to this study, including the factors that influence teacher preparation programs and their
correlation to teacher performance and student achievement. In addition, Chapter Two will provide information on the impact teacher retention has on student achievement.

## CHAPTER II:

## REVIEW OF THE LITERATURE

Effective teaching has been an issue of national concern for many years, but recently there is an even greater focus on the effectiveness of teacher preparation programs to produce high-quality teachers. As educational policies continue to hold teachers responsible for their performance, there is a need to hold teacher preparation programs accountable for teachers' performance (Coggshall, Bivona, Reschly, 2012). Teachers are consistently held responsible for exhibiting their ability to deliver effective strategies, which requires adequate preparation prior to entering the classroom (Coggshall et al., 2012). Regardless of what content area is taught by the teacher, there is growing consensus that the most pertinent impact in the education of a student is a well-prepared, caring, and highly qualified teacher (O'Shea, Hamittee, Mainzer, \& Crutchfield, 2000).

The increased focus on effective teaching can be attributed to a variety of factors, including achievement gaps, poor academic performance on state and national tests as compared to their peers in other nations, and the need to manage spending by governments at the state, national, and local levels (Subotnik, 2014). These factors have brought national attention on schools, the quality of teachers placed in the classrooms, and the effectiveness of the preparation teachers receive in traditional and alternative teacher preparation programs. Preparedness of teachers and the impact on teacher commitment to the teaching profession is critical to maintaining stability in this critical foundation of society. This study examined the relationships that exist among Teacher Preparation Programs (TPP), teacher performance, and student achievement. To address these issues, this literature focused on: (a) the type of teacher preparation programs (TPP), e.g., a traditional or alternative certification program, (b) the relationship between
the TPP and student achievement, and (c) the relationship between the TPP and teacher performance.

## The Type of Teacher Preparation (TPP) Program - Alternative and Traditional

Teacher certification requirements and preparation programs vary across states; however, most traditional systems have similar requirements (Jang \& Horn, 2017). According to researchers Jang and Horn (2017), approximately 80\% of all teacher candidates complete a traditional teacher preparation program. The traditional teacher preparation program is an undergraduate program of studies including teaching theories and methodologies culminating in a bachelor's degree and teaching certificate. The traditional teacher preparation program also includes coursework on content subject matter and pedagogy, as well as student teaching, which is sometimes referred to as field experience (Jang \& Horn, 2017). The TPP typically includes courses on pedagogy, subject content, and courses on teaching special populations (i.e., English language learners and special education students) (Goldhaber, 2018).

The TPP provides teacher candidates with scheduled access to the classroom with opportunities to teach students under consistent supervision (Whitford, Zhang, \& Ketsiyannis, 2017). The traditional teacher preparation program typically serves undergraduate students who do not have any prior teaching experience. A significant portion of the nation's investment in the teacher workforce occurs during their preparation period (Goldhaber, 2018). The comparison of teacher preparation programs and which route the teacher candidate selects, ACP or traditional teacher preparation route, speaks to the contentious debate about whether to professionalize or deregulate teacher preparation (Goldhaber, 2018). In a recent study using survival analysis, Overshelde and Wiggins (2020) found traditional preparation program teachers tend to remain in the classroom longer than ACP teachers.

Within the last five years, teacher preparation programs have received a significant amount of policy and research attention (Goldhaber, 2018). Despite the ideology that preparation for formal classroom responsibilities is designed to improve the readiness of teacher candidates, the value of teacher preparation is still unclear (Goldhaber, 2018). The role of teacher preparation programs is to ensure teacher candidates are thoroughly prepared with the skill set necessary to be effective educators (Cummins \& Asempapa, 2013). Alternative Certification Programs were created to diversify and enhance the teaching force by permitting those without teaching certifications to switch careers and enter the classroom as a teacher (Whitford, Zhang, Katsiyannis, 2017).

Alternative Certification Programs were designed to offer an alternate form of teacher preparation, ultimately attracting a different population of teachers; however, research suggests this population of teachers may not provide as much of an alternative as initially intended (Matsko, Ronfeldt, \& Nolan, 2021). ACP programs often offer reduced tuition rates, have fewer admissions requirements, and are often focused on recruiting people of color (Villegas \& Lucas, 2002). Pathways that provide a quick track to teacher certification are often referred to as alternative certification programs (Matsko et al., 2021). ACP programs focus on the practical as opposed to the theoretical (Kee, 2012).

The differences between a traditional teacher preparation program and fast-track or alternative certification teacher preparation programs highlight two issues central to current debates in teacher education: (a). the timing initial teacher preparation should occur, and; (b). the content of that preparation (Goldhaber, 2018). Teacher candidates' success results are particularly important for teacher preparation programs when considering mounting efforts to hold teacher training programs accountable for their graduates'outcomes after entering teaching (Crowe, 2010). Alternative Certification

Programs provide teacher candidates with full access to teaching students with minimal supervision while enrolled in the teacher preparation program (Whitford et al., 2017).

An estimated twenty percent of teacher candidates completed their teacher preparation in an Alternative Certification Program (DeMonte, 2015). Alternative Certification Programs are often led by school districts or nonprofit organizations like "Teach for America". However, the fastest growing ACP programs are led by for-profit programs like "Teach for Texas" or Kaplan University (von Hippel, 2018). These programs provide a pathway into teaching for individuals who hold a bachelor's degree, but do not have any teaching credentials. Frequently ACP programs allow teacher candidates to begin teaching immediately while taking teacher preparation coursework simultaneously (DeMonte, 2015). Alternative Certification programs vary in time, format, and location, although the majority of ACP are closely supervised by state agencies (Jang \& Horn, 2017). Nearly one out of every five teachers nationwide receive their teacher preparation through an ACP pathway (McFarland et al., 2018). As of 2020, the ACP program "Teach for America" has over 62,000 alumni across the United States (Yin \& Partelow, 2020).

In a recent study, researchers Matsko, Ronfeldt, and Nolan (2021) compared traditional teacher preparation teachers to ACP teachers in Chicago Public Schools. At the conclusion of their study, they found each pathway differed drastically in the type of preparation the different preparation programs offered. Additionally, they found differences in other aspects that were not typically studied, including mentor experiences, mentor supports, and mentor characteristics. Ronfeldt, Schwartz, and Jacob (2014) found approximately one-half of teachers from an ACP did not complete student teaching compared to only $8 \%$ of teachers from a traditional teacher preparation program. Additionally, Ronfeldt et al. (2014) discovered almost 70\% of teachers from a TPP
completed the highest level of practice teaching compared to $30 \%$ of teachers from an ACP.

Researchers have evaluated the strengths and weaknesses of alternative certification programs, while gaining a better understanding of how they differ in form, function, and quality of preparation. Individuals enrolled in an ACP program also receive coaching and feedback from program staff who observe and evaluate their delivery of instructional strategies. There has been a growing rate of popularity for alternative teacher certification programs, which is largely due to the serious teacher shortage across the country (Cochran-Smith, et al., 2012). Alternative Certification Programs were created to diversify and increase the teaching force by providing a platform for those without certification to switch careers and expedite their entry into K12 classrooms (Yin \& Partelow, 2020).

The Committee on the Study on Teacher Preparation Programs of the National Research Council (2010, pg.63), stated "research is badly needed" to compare teacher preparation pathways to determine whether the participating teachers complete most of their training before or after beginning to teach full-time, to determine the specific components of that training, and to understand the effects of different teacher preparation pathways on K-12 student success. There is a plethora of alternative routes to teacher certification programs, which include "Teach for America" (TFA), "Alternative Certification for Teaching" (ACT), "Teaching Fellows", and other state-created alternative certification programs (Jang \& Horn, 2017). The description of the aforementioned alternative programs provides a platform for comparing their effectiveness (Jang \& Horn, 2017). One commonality between alternative teacher certification preparation and the traditional college teacher preparation program is a bachelor's degree is a minimum requirement. The bachelor's degree does not have to be
in education, and this allows for the non-traditional teacher candidate to seek certification.

Teacher certification requirements and preparation programs vary across states; however, most traditional systems have similar requirements (Jang \& Horn, 2017). According to researchers Jang and Horn (2017), approximately eighty percent of teacher candidates complete a traditional teacher preparation program. The traditional teacher preparation programs consist of an undergraduate program that leads to the attainment of a bachelor's degree and teaching certificate. The traditional teacher preparation program includes coursework on subject matter and pedagogy, as well as student teaching, which is sometimes referred to as field experience (Jang \& Horn, 2017). The traditional teacher preparation program typically includes courses on pedagogy, subject content, and courses on teaching special populations (i.e., English language learners and special education students) (Goldhaber, 2018).

The alternative certification program's purpose is often to fill a geographic or content specific shortage (Kee, 2012). Additionally, the ACP attempts to increase the teacher candidate pool by recruiting a diverse pool of teacher candidates (Kee, 2012). A significant portion of the nation's investment in the teacher workforce occurs during their preparation period (Goldhaber, 2018). The comparison of teacher preparation programs and which route the teacher candidate selects, ACP or TPP, speaks to the contentious debate about whether to professionalize or deregulate teacher preparation (Goldhaber, 2018).

As exhibited in this section, the traditional teacher preparation program refers to an undergraduate program of study at a post-secondary institution that focuses on pedagogy, subject matter, and courses concentrated on teaching special populations. Additionally, this research provided a general definition of the ACP. The alternative
certification program provides an alternative route to entering the teacher profession for those who have a bachelor's degree.

Jorrisen (2002) believes it is the level of preparation that influences satisfaction in teaching, which inevitably determines a teacher's decision to stay in the profession or leave. Policymakers and researchers agree there is a need to have better systems in place to evaluate the effectiveness of teacher preparation programs (Ronfeldt \& Campbell, 2016). The data and methods required to evaluate the effectiveness of teacher preparation programs should be informed by well-established scientific methods that address the measurement of behavior (Subotnik, 2014). Subotnik (2014) further suggests there are three methods for evaluating the effectiveness of a teacher preparation program: (a). value added assessments of student achievement, (b). standardized observation protocols, and (c). surveys of teacher performance. These methodologies can be utilized as a measurement tool to determine if teacher candidates are equipped to support and sustain student learning. Both ACPs and TPPs must focus on skill development that results in sustained and improved student academic performance.

Four days prior to the 2016 presidential election, the United States Department of Education (USDE), issued a policy requiring every state to publish an annual evaluation on the quality of their teacher preparation programs (von Hippel, 2018). The purpose of these evaluation tools was to measure graduates' impact on student performance and standardized assessments, as opposed to measuring things like curriculum and staff credentials. The programs were assigned four performance categories: (a). (low performing, (b). at-risk of being low performing, (c). effective, or (d). exemplary).

The purpose of these evaluation reports was to provide feedback to the TPP, as well as assist school districts evaluate teacher candidates from different programs (von Hippel, 2018). The evaluation reports were published on the TPPs' websites. The
overarching purpose of this process was to improve teacher recruitment and preparation across the nation. At the end of this process the former American Federation of Teachers President, Randi Weingarten, felt the regulation was misguiding and therefore, the regulation was never implemented at the national level.

As evidenced in research, the evaluation of teacher preparation programs is considered important at the state level. In 2010, eleven states and the District of Columbia received funding to create and implement teacher preparation program report cards as part of the federal "Race to the Top" grant program (von Hippel, 2018). By the year 2017, 21 states agreed with the evaluation program, which aided the states in connecting teachers' student growth data with their preparation program. Different states based their decision to require the evaluation process on inconsistent results when comparing teacher preparation programs. Research from the states of Louisiana and New York demonstrated that the difference between teacher preparation programs was substantial. Contrary to those results, research from the states of Missouri and Texas, revealed the differences between the quality of teacher preparation programs was minimal (von Hippel, 2018); von Hippel, (2018) also stated that as long as the teacher preparation program produces effective classroom teachers the program evaluation will provide a positive review of the program.

The researcher, DeMonte (2015), predicted by the year 2025, more than 1.5 million new teachers will be hired, which is considered a conservative estimate. If these teachers are inadequately prepared, they could potentially impede the efforts to solve the nation's educational problems. Although ACP programs have been ridiculed for lack of effective pedagogy coursework and limited student teaching experiences, traditional teacher preparation programs have also been scrutinized for lacking content-specific teacher preparation (Whitford et al., 2017). Research indicates there are differences in the
effectiveness of teacher candidates depending on the teacher preparation program (DeMonte, 2015). If one of our nation's goals is to close the achievement gap, then ensuring teacher candidates are prepared for the demands of the classroom is of utmost importance (DeMonte, 2015).

As previous and current research shows, the quality of the teacher preparation program directly influences the level of quality and preparedness exhibited in the classroom by the teacher. Teacher preparation programs must provide the level of support teachers need to ensure students receive the high-quality instruction they deserve (Coggshall, Bivona, Reschly 2012). The next section will examine in depth the relationship between the TPP and student achievement.

## The Relationship Between Teacher Preparation Program (TPP) and Student

## Achievement

Student achievement is a term often considered difficult to define (York, Gibson, \& Rankin, 2015). York, Gibson, and Rankin (2015), defined student achievement in their research as a catchall phrase that refers to the attainment of end results aligned to educational experiences. The term, "student achievement", is considered herculean as it covers a broad range of educational outcomes ranging from graduation diplomas to moral development (York et al., 2015). Some educational researchers argue student achievement refers specifically to the accumulation of certain skills and knowledge obtained upon completion of a course (York et al., 2015). In an article, Kuh, Kinzie, Buckley, Bridges, and Hayek (2006), defined student achievement as engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills, and competencies, persistence, attainment of educational outcomes, and post-college performance. This term aligns directly with student success.

Findings from a study conducted by York, Gibson, and Rankin, (2015), identified six components to define student achievement. Those six components consist of academic achievement, satisfaction, acquisition of skills and competencies, consistency, mastery of learning objectives, and career success. Arum and Roksa, (2011) argue grades are not always the best way to measure student achievement, as grading approaches differ, depending on the educational environment. Szell (2013) states in his study that the measurement of student achievement cannot be based solely on student performance.

There is a myriad of factors that impact student achievement. These factors include the students' gender, place of residency, family background, attitude toward learning, and their connection with others (Szell, 2013). Additionally, Szell (2013) concluded there are school-related factors that impact student achievement, which include the infrastructure of the school the student attends, the learning environment, and the number of students enrolled in the school.

Teacher candidates' career decisions, coupled with student achievement, reveals that teachers who have experienced a more comprehensive teacher preparation program feel more prepared and will deliver instruction much more effectively than their less well-prepared peers (Kee, 2012). A large study in Texas showed teachers of ACP programs felt less prepared than their colleagues who had completed a traditional teacher preparation program, in certain content areas (Kee, 2012). Contrary to the findings of this study, other studies reveal the opposite, which exhibits there is very little difference in the level of preparedness felt between an ACP and TPP teacher candidate (Kee, 2012). One of the most compelling studies on teacher preparedness found there are three critical elements that contribute to a teacher's feeling of preparedness. Those key elements are the person, the program, and the school (Kee, 2012). Of the three integral components,
the program stood out as the most important element, because of its impact on teachers' feelings of preparedness.

Ronfeldt \& Campbell, (2016) reviewed the difference between the average observation rating and the average rating based on the teachers influence on their students' performance on the state test. The result of this study was the program whose graduates performed best on classroom instructional practices observed also performed best on measures that measured teachers' impact on student achievement. Authors Duncan and Tooley, (2016) noted, a single measure cannot convey the entire teacher performance story, whether it is the story of a teacher candidate, or an entire cohort of teacher preparation program graduates. It was also discovered, in a study conducted by Ronfeldt, Schwartz, and Jacob, (2014), that teachers who completed a traditional teacher preparation program felt more prepared for teaching and indicated a higher likelihood of remaining in the teaching profession.

Darling-Hammond, Chung, and Frelow (2005) conducted a study that examined the differences among the preparation perceptions of teachers based on their experience with the teacher preparation program they completed. The study included the examination of differences among the teacher performance of ACP versus traditional teacher preparation teachers. The study further evaluated the similarities and differences in the way teachers felt they were prepared. The ratings of graduates of TPPs were significantly higher than those of ACP teachers (Darling-Hammond, Chung, \& Frelow, 2002). The major differences centered around teachers' knowledge on instructional strategies, including how to best meet the needs of students.

A large amount of empirical evidence reveals teacher quality is the factor that most influences student achievement (Goldhaber, 2018). Every student deserves access to a quality education, and teaching is a core determinant of students' educational
experience. The evaluation of teacher preparation programs based on student achievement is the most common output focused approach (Ronfeldt \& Campbell, 2016).

In spite of it being the most common measurement tool of teacher preparation programs, many people have expressed their concern with this approach (Ronfeldt \& Campbell, 2016). Researchers Ronfeldt \& Campbell, (2016), expressed in an article that, among those concerns is the fact that students are not randomly assigned to teachers, so utilizing student achievement to measure teachers who work with struggling students may be deemed unfair. Another concern centers on the fact that most student achievement evaluation is targeted towards teachers who teach in tested grade levels, which excludes teachers who are in non-tested grade levels (Ronfeldt \& Campbell, 2016).

The effectiveness of a teacher is often evaluated by the extent to which they influence achievement gains (Henry, et al., 2014). Stellar teaching is correlated to better learning outcomes, increased student achievement, and long-range benefits, once students enter adulthood (Fiddeman \& Bartelow, 2021). There is a focus at both the federal and state levels on teacher training and whether teacher preparation programs can be improved through changes to preservice training or accountability measures (Goldhaber and Cowan, 2014). Teachers grow more effective the longer they teach and typically require significantly more investment in training and development at the beginning of their career.

Fenstermacher and Richardson (2005) argued good teaching does not always result in learning, because other elements such as social environment and student initiative are considered influences that sometimes complicate a direct correlation between the two. In a recent article, researcher Goldhaber (2019) expressed an enormous amount of experiential evidence reveals teacher quality is the educational factor that most impacts student achievement. Goldhaber's same research also shows a significant amount
of the nation's investment in teacher education occurs during the teacher preparation period.

A plethora of research studies exhibit positive effects on student achievement from teachers who received their training in a traditional preparation program and were certified to teach by their state (American Association of Colleges for Teacher Education, 2012). Noell, Porter, Patt, and Dahir (2008) analyzed the State of Louisiana's test scores for students in grades four through nine and discovered there was negative impact on student achievement linked to teachers' lack of training, specifically in the content area they were teaching. Their findings were statistically significant in the content areas of math, language arts, and social studies. The findings of this study revealed that teachers who are certified and teaching in a specific content area are more effective than those not certified to teach in a content area in which they are teaching (Noell et al., 2008). To solidify these findings, Goldhaber, (2002), confirmed through his research that there is a positive influence of teachers' preparation on student achievement.

In a study conducted by researchers Darling-Hammond, Holzman, Gatlin, and Helig (2005), the achievement gains of fourth and fifth grade students enrolled in a school located in the Houston area were examined. There were six different reading and mathematics tests examined over a six-year period. The research discovered traditional teacher preparation educators consistently produced strong achievement gains than those of ACP teachers. Aligned with the findings of Hammond, et al, (2005), researchers Clotfelter, Ladd, and Vidgor (2006), studied data on teachers and their impact on student achievement based on their teacher preparation program. The results of their study showed third through fifth grade students, whose teachers completed a traditional teacher preparation program, achieved higher than other students whose teachers received their preparation from an ACP. In a study of high school mathematics and science, researchers

Goldhaber and Brewer (2000), discovered there was a strong influence of the teacher preparation program on student achievement in both content areas.

Students' academic achievement and chances for success in life are greatly enhanced by being taught by well-prepared teachers. In a previous article in the American Association of Colleges for Teacher Education (AACTE) (2012), it was noted that fully certified teachers are more effective in increasing student achievement than those teachers that are inadequately prepared. There is an abundance of research studies that report positive effects on the achievement of students who are prepared at collegiate based educator preparation programs and obtain their certification. In recent research conducted by Goldhaber (2018), he reported evidence that suggested teachers' knowledge of their subject matter, as measured by the degrees and certification, was closely aligned with high student performance. Studies with more detailed measures of teachers' education levels and course work confirmed the positive impact of teachers’ academic preparation on student achievement (Goldhaber, 2018).

Kraft (2017) argues that teachers contribute to student development in quantifiable ways. Von Hippel, Bellows, Osborne, Lincove, and Mills (2016) reach a similar conclusion about the identification of Teacher Preparation Program (TPP) effects based on programs in Texas. Teacher preparation programs may be differentially effective at developing the skills that promote lengthy careers in education. DeAngelis, Wall, and Che (2013) found teachers' satisfaction with their preservice training is predictive of early career attrition. Differences in teacher mobility across programs may, therefore, reflect a combination of the selection of prospective teachers for admission, the effects of exposure to a particular curriculum or faculty, and the assignment of teacher candidates to specific schools (Goldhaber \& Cowan, 2014). Investigating the different
effects on student achievement based on a teacher preparation program is both complex and demanding (Whitford, Zhang, \& Katsiyannis, 2017).

The effectiveness of a teacher is commonly assessed by the extent to which teachers promote student achievement (Jang \& Horn, 2017). Researchers have utilized state-level data to validate this finding. Some of the studies reviewed discovered less selective ACP programs were substantially less effective or slightly less effective than traditional program in promoting student achievement (Henry et al., 2014). Conversely other studies revealed ACPs are equally effective in Texas and New York. Author, von Hippel, (2018) states in a recent article that students' test scores cannot be utilized to ascertain whether a TPPs' teacher candidates are good, bad, or average. ACP is generally viewed negatively as it relates to student achievement (Whitford et al., 2017).

Kee (2012), a researcher, analyzed traditional approaches to addressing teacher preparation programs by comparing teachers who completed an alternative certification program versus those who completed a traditional college preparation program. The researcher surveyed four urban school district teachers for this study. Kee (2012), showed that more important than the educator preparation platform was the quality of the teacher and the fact that a quality teacher has a direct impact on student performance. Well prepared teachers produce quality student achievement and are well prepared in the areas of knowledge and skills needed to be successful in the classroom (Peterson-Ahmad, Hovey, Peak, 2018).

The quality of classroom instruction is a critical measurement tool for educational transformation (Kim, Raza, \& Seidmann, 2019). There is still a great deal unknown as they relate to what actually takes place in the classroom (Kim et al.,2019). Although there are many evaluation tools utilized to measure the performance of teachers, very few have been utilized across different cultures, conditions, and intrusions (Kim et al., 2019). The
breadth and depth of skills required for today's quality teachers call for strategies beyond literacy and numeracy known as $21^{\text {st }}$-Century skills (Kim et al., 2019). These skills include a variety of competencies that encompass critical thinking, problem solving, creativity, global awareness, and civic responsibility (Kim et al.,2019). The findings of the dynamics that exist among teacher preparation programs and student achievement are robust, as research indicates there is a consistent relationship between teacher preparedness and student achievement (Blomeke, Olsen, Suhl, 2016). The next section will focus on the relationship between the teacher preparation program and teacher performance.

## The Relationship Between Teacher Preparation Program (TPP) and Teacher Performance

Teacher observations must not focus only on training the teacher has received, but also what the teacher is doing in the classroom (Burns \& Lawrie, 2015). The receipt of feedback from evaluative observations should provide a platform for the teacher to reflect and make changes as deemed appropriate (Kim et al.,2019). Teacher evaluations focus on traditional classroom observations which include student's academic performance as an added evaluative component to assist with ascertaining teacher quality (Dearrington \& Martinez, 2019). Four purposes of teacher performance evaluations are performance improvement, teacher development, compensation, and teacher effectiveness (Barden, 2014). Additionally, Barden (2014) adds an additional purpose to the aforementioned list, which is to retain quality teachers who are change agents.

Once teacher candidates enter the labor market it is natural to focus on their performance (Goldhaber, 2018). There is a growing lack of highly qualified teachers, despite the need for strong teachers to be present in every classroom (Goldhaber, 2018). This is crucial to the success of students. There is an increased debate regarding the
effectiveness of alternative and traditional teacher certification programs as it relates to producing highly qualified teachers. This issue seems to be centered on the quality of teacher training and the lack thereof, which poses an issue as it relates to the assessment of teacher preparation program platforms. A vast amount of the research on teacher preparation is limited in scope, as it focuses on inputs of the preparation program as opposed to outcomes of the program (Boyd, Grossman, Lankford, Loeb, \& Wycoff, 2009).

A recent study conducted using Federal School and Staffing Survey revealed firstyear teachers who had fewer types of education coursework and shorter student teaching experiences felt less prepared than those who had gone through a college preparation program (Legler 2002). A literature review conducted by Legler (2002), revealed a major supporting factor for alternative certification programs is that they require less coursework and requirements before becoming the teacher of record, which in turn, makes the teaching profession more accessible to career change agents and candidates who are interested in teaching but do not have adequate funds to pay for prolonged education.

Whether or not a teacher's pathway to credentialing is traditional preparation or alternative certification, all teacher preparation programs must review a variety of variables associated with effective teacher performance (Kraft, 2017). In a recent article, authors Katiuki, Njeka, and Mbugua (2019), conducted a study on the influence of teachers' preparedness on performance of students in a region of Kenya. Teacher related factors and in particular, teacher preparedness was cited as a major influential factor to poor teacher performance (Katiuki, Njeka, \& Mbugua, 2019). Von Hippel (2018), argues most differences between teacher preparation programs is too small to make a difference
in relation to teacher performance. There is very little evidence that supports how teacher candidates should be evaluated in terms of their performance (Goldhaber, 2019).

The constant debate over utilizing measures of teachers' student academic performance to assess teacher preparation programs is an extension of the contention over this information being utilized to assess individual teachers' performances. The researchers Ronfeldt and Campbell, are two of the first persons to examine whether there are differences between teacher preparation programs based on teacher evaluations (Duncan \& Tooley, 2016). This research utilized three years of teacher evaluation data from teachers who were recent graduates from Tennessee University and ACP programs located in the State of Tennessee. In this study Ronfeldt and Campbell, (2016), analyzed data that utilized components of their teacher evaluation that were outside the teachers' control or the program they attended.

Several studies focusing on teacher preparation programs have reached divergent conclusions regarding the benefit of the program and its effectiveness in the development of quality teacher candidates. Boyd, Grossman, Lankford, Loeb, and Wyckoff (2009) examined teachers employed in New York City and they concluded the difference among teachers from programs who graduate teachers of average performance those who exhibit high performance looks much like the comparison between a first- and second year teacher. Previous findings from researchers, von Hippel, Osborne, Lincove, and Mills (2016) determined a similar conclusion about teacher preparedness. This research suggests whether a teacher's pathway to credentialing is traditional or alternative, all teacher preparation programs must review a variety of variables associated with effective teacher performance.

Researcher and author, von Hippel (2018), rated teacher preparation programs in a recent article; this was done by reviewing the evaluations the teacher candidate received
sfrom their campus administrator. This evaluation was derived by the principal observing teacher candidates. Principal evaluation tools vary across programs and in many cases may be biased (von Hippel, 2018). This bias may be in favor of teachers with economically disadvantaged students, or it may be based on the principal favoring the teacher or providing the teacher with a positive evaluation in the past. This study revealed the amount of research on the teacher preparation program and the dynamics that exist among teacher performance is very limited. The next section will provide an in-depth perception of the influence of the teacher preparation program.

## Summary of Findings

The nature of teacher preparation is considered critical for ensuring a highquality teacher candidate who is prepared to educate students. Research indicates traditional programs are more effective than alternative programs (Jang \& Horn, 2017). Research shows traditional teacher preparation programs (TPP) yield better instructional knowledge and teacher performance as opposed to an ACP program (Jang \& Horn, 2017). The findings on student achievement vary. There remains a desire to study longterm effects of the dynamics of teacher alternative certification programs and traditional teacher preparation programs and the dynamics that exist among student achievement and teacher performance.

The findings of this study reveal teachers feel differently about their teacher preparation programs, based on their personal feelings and the fact that teacher preparation programs vary depending on the program. Additionally, teachers prepared in a traditional teacher preparation program feel better prepared than those who were prepared in an ACP platform. Considering the findings of both teacher and student outcomes studies, a conservative approach to teacher preparation and certification policies could potentially reduce the level of confidence in meeting the demands of the
teacher workforce. The process to improve teacher education programs will not improve teacher quality if states continue to allow schools systems to employ teachers with quality preparation. There is evidence that suggests long-term effects of having quality teacher preparation programs may save money in the areas of hiring staff, inducting and replacing underprepared teacher candidates who leave the profession (DarlingHammond, Chung, Frelow, 2002).

A challenge for states, school districts, and teacher preparation programs is the quest of developing and enhancing the pool of effective and affordable preparation routes that develop highly qualified competent teachers as they enter the classroom. An additional finding is that the strength of the teacher preparation cohort varies from year-to-year, as the program's recruiting efforts change (Darling-Hammond, Holtzman, Gatlin, \& Heilig, 2005). Findings also point to the need for more research on how to measure teacher performance to assist with guiding federal and state policymaking. There is still a need to determine whether teacher preparation programs need to be professionalized or deregulated (Goldhaber, 2019).

If the multi-faceted society in which we exist expects all students to demonstrate stellar academic performance, a more deliberate set of strategies to ensure teacher candidates are fully prepared and are provided resources to gain access to knowledge needed is of utmost importance. There appears to be a gap in the amount of research that analyzes the dynamics that exist among teacher preparation programs and teacher performance. There is a need to determine if the coursework and observation experiences provided in the teacher preparation program impact the performance evaluation of teachers in the classroom.

## Theoretical Framework

The framework for this study is grounded in the model that analyzes the dynamics that exist among the teacher preparation program, student achievement, and teacher performance. The interaction between student achievement, teacher performance, and the teacher preparation program is defined within the educational function theory. The Social Constructivism is the theoretical framework utilized, which connects several factors and issues related to teacher retention and the impact the educator preparation program has on it. According to Driscoll (2000), constructivism learning theory is a philosophy which enhances students' logical and conceptual growth. This theoretical framework establishes a clear and solid path to define and connect teacher retention and teacher educator preparation programs. It provides an opportunity to define a connection between student achievement, teacher performance, and the effectiveness of the educator preparation platform in another paradigm or worldview (Mertens, 2015).

Social constructivism is a concept that enhances learning among individuals who are in training and learning institutions (Kupar, 2018). Social constructivism creates a means for educators to establish an alignment between their attitudes, norms, values, behavioral traits, actions, and emotions (Kupar, 2018). Kupar (2018) provides areas that highlight the overview of social constructivism, which are as follows: (a). knowledge is constructed by learners; (b). knowledge is experienced based; (c). learning is social; (d). all aspects of the person are connected; and (e). learning communities should be inclusive and equitable. In conclusion, the social constructivism theory creates a clear avenue to identify the connections that exist among teacher preparation programs, student achievement, and teacher performance. This theoretical tandem establishes the main foundation of this study.

## Conclusion

The literature reviewed provides a framework for the plethora of research ideas brought forth in this study. The review of relevant literature relating to the purpose of this study, which was to examine the dynamics that exist among teacher preparation programs (TPP), student achievement, and teacher performance. Chapter III will present the method used by the researcher to conduct the study. Additionally, the next chapter will provide an overview of the research problem, research purpose and question, research design, participant/samples data collection process, data analysis, ethics and limitations for this study.

## CHAPTER III:

## METHODOLOGY

The purpose of this research was to examine the dynamics that exist among teacher preparation programs, teacher performance, and student achievement. A purposeful sample of teachers employed in a suburban school district, located in Southeast Texas, was solicited for participation in this study. Quantitative data collected, such as the type of teacher preparation program, teacher performance, and student achievement were analyzed using Chi-square test of independence, independent $t$-test, regression analysis, and Sobel test of mediation. For the qualitative analysis, data was obtained from individual teacher interviews and the data were interpreted, using an inductive and deductive coding process. This chapter presents an overview of the research problem, operationalization of theoretical constructs, research purpose and questions, research design, population and sampling selection, instrumentation used, data collection procedures, data analysis, privacy and ethical considerations, and the research design limitations of this study.

## Overview of the Research Problem

Research on teacher preparation and certification is a multi-faceted and complex field that is impacted by competitive ideas about the purpose of the study and its impact on education (Cochran-Smith \& Villegas, 2015). Research has addressed the effectiveness of alternative and traditional teacher preparation programs, while studying the tools and opportunities needed to meet the challenges of teaching a more diverse student population (Cochran-Smith \& Villegas, 2015). It is difficult to ascertain which part of the retention gap between alternative and traditional preparation teachers can be attributed to their preparation program platform, or to differences in organizational supports for these educators (Redding \& Smith, 2016). There are very few issues
challenging the education profession as much as the current and increasing shortage of teachers (Zeller \& Zhang, 2016). Compounding those leaving the field for retirement is the high rate of teachers exiting the teaching profession annually for other reasons, such as disagreeable working conditions, lack of preparation, and low compensation (Garcia \& Weiss, 2019). Teacher retention is important as teacher turnover creates instability and costs while negatively impacting instructional delivery quality, especially in schools that most need stability (Donaldson \& Johnson, 2011).

In an effort to fill a gap in research and inform teacher preparation programs about areas of needed improvement, the forming of a teacher's confidence, while enrolled in a teacher preparation program, is of great importance (Gonzalez, 2017). To better understand the dynamics and development of teachers' perceptions of their professional competency, it is of interest to ascertain if their perceived competence as a prospective, while in a teacher preparation program, had any influence on their subsequent perception as a teacher. The purpose of this research paper is to examine the dynamics that exist among the teacher preparation program, teacher performance, and student achievement.

## Operationalization of Theoretical Constructs

This study consisted of three constructs: (a). teacher preparation program (TPP), (b). student achievement, and (c). teacher performance. Teacher Preparation Program is defined as the entity that provides the training for teacher state certification (Texas Education Agency, 2018). Student achievement is defined as a measure of the growth of knowledge in a specific content area (Johnson \& Hull, 2014). Student achievement was measured by how well students performed on the Developmental Reading Assessment (DRA) for grades K-2, and how well students performed on the State of Texas Assessment of Academic Readiness/End of Course (STAAR/EOC) for grades 3-11. This construct was measured by utilizing archived data reported on the DRA and

STAAR/EOC results from the 2020-2021 school year. Teacher performance is defined as the formal process used to evaluate a teacher's effectiveness in the classroom (Sawchuk, 2015). This construct was measured utilizing archived data reported on teacher performance from the Texas Teacher Evaluation and Support System (T-TESS) during the 2020-2021 school year.

## Research Purpose, Questions, and Hypotheses

The purpose of this research was to examine the dynamics that exist among the teacher preparation program, teacher performance, and student achievement. The research questions that guided this study were:

> R1. Is there a relationship between teacher preparation program and teacher performance?

R2. Does the type of teacher preparation program influence student achievement?
R3. Does teacher performance mediate the relationship between the type of teacher preparation program and student achievement?

R4. Does the type of teacher preparation program and teacher performance influence student achievement, controlling for years of teaching experience?

R5. Does teacher performance moderate the relationship between the type of teacher preparation program and student achievement?

R6. What are teachers' perceptions regarding the influence of teacher preparation programs on teacher performance and student achievement?

## Research Design

For the purpose of this study, a sequential mixed methods design was utilized to examine the dynamics that exist among teacher preparation programs, teacher performance, and student achievement. This design consisted of two phases: a quantitative phase and a qualitative phase. The largest advantage of this design was that it
allowed for a more in-depth examination of the quantitative results through the integration of the qualitative interview data. For the quantitative phase, archived data from the STAAR, DRA, and T-TESS were utilized. For the qualitative phase the researcher conducted individual interviews to better ascertain participant's perception of teaching self-efficacy and bring a rich narrative to the data. Quantitative data were analyzed using Chi-square test of independence, independent t -test, regression analysis, and Sobel test of mediation, while qualitative analysis utilized an inductive coding process.

## Population and Sample

The population of this research study consisted of a small suburban school district located in Southeast Texas. This school district is composed of four campuses: one early childhood center (grades PK-Kinder), one elementary campus (grades 1-5), one middle school campus (grades 6-8), and one high school campus (grades 9-12). The district employs 222 teachers, and has a student population of 3,512 students (TEA, 2020). Table 3.1 displays the total staff count, total teacher count, staff gender, staff ethnicity, staff's level of education, and the staff's years of experience district data obtained from the 2019-2020 Texas Academic Performance Report. Table 3.1 displays the teacher demographics of the participating school district. Out of the 222 teachers, $71.6 \%$ are female, and $28.4 \%$ are male. The demographic data reflects $39.3 \%$ of the teachers are African American; 21.2\% are Hispanic; 25.7\% of the teachers are White; $0.9 \%$ of the teachers are American Indian; $10.1 \%$ are Asian; and $2.7 \%$ are Two or More Races. Additionally, the data reflects $66.2 \%$ of the teachers have a Bachelor's Degree; $31.1 \%$ of the teachers have a Master's Degree, and $2.2 \%$ have a terminal degree. The data reflects $47.7 \%$ of the staff have 1-10 years of experience. Additionally, $11.4 \%$ of the teaching staff have over 20 years of experience.

Table 3.1:
District Teacher Demographic Data

| Staff Information | Teacher Count | Teacher Percentage (\%) |
| :---: | :---: | :---: |
| Total Staff | 436 | 100.0 |
| Total Teachers | 222 | 39.3 |
| Female | 159 | 71.6 |
| Male | 63 | 28.4 |
| African American | 87 | 39.3 |
| Hispanic | 47 | 21.2 |
| White | 57 | 25.7 |
| American Indian | 2 | 0.9 |
| Asian | 23 | 10.1 |
| Pacific Islander | 0 | 0.0 |
| Two or More Races | 6 | 2.7 |
| Bachelors | 147 | 66.2 |
| Masters | 69 | 31.1 |
| Doctorate | 5 | 2.2 |
| Beginning Teachers | 27 | 12.3 |
| 1-5 Years' Experience | 74 | 33.3 |
| 6-10 Years' Experience | 32 | 14.4 |
| 11-20 Years' Experience | 64 | 28.6 |
| Over 20 Years' Experience | 25 | 11.6 |

A purposeful sample of teachers employed in the school district was asked to participate in this study. Table 3.2 provides the school district's student demographic information. The data in Table 3.2 shows $46.4 \%$ of the students are Hispanic; $41.8 \%$ of the students are African American, $3.4 \%$ of the students are White, $0.3 \%$ of the students are American Indian, $6.0 \%$ of the students are Asian, $0.1 \%$ are Pacific Islander, and $1.9 \%$ of the students are two or more races

Table 3.2:
District Student Demographic Data

| Student Race/Ethnicity | Student Count | Student Percentage |
| :--- | :---: | :---: |
| Hispanic | 1,667 | 46.4 |
| African American | 1,480 | 41.8 |
| White | 130 | 3.4 |
| American Indian | 10 | 0.3 |
| Asian | 210 | 6.0 |
| Pacific Islander | 5 | 0.1 |
| Two or More Races | 497 | 1.9 |
| Stafford Elementary | 403 | 78.4 |
| Stafford Intermediate | 378 | 71.5 |
| Stafford Middle | 717 | 69.7 |
| Stafford High |  | 67.1 |

## Participant Selection

The researcher conducted interviews with a purposeful sample of teachers employed in a suburban school district located in Southeast Texas. The participants consisted of males and females, with teaching experience ranging from 0-37 years. The grade levels taught by the participants ranged from PreK to twelfth grade. Participants were educators who received their teaching certification via a traditional teacher preparation program or an alternative certification program.

## Instrumentation

## State of Texas Assessment of Academic Readiness/End-of-Course (STAAR/EOC).

The STAAR/EOC assessment was administered to students for the first time in 2012. This assessment is used to assess students' skills in reading, mathematics, science, and social studies. Additionally, the STAAR was designed to measure a student's college and career readiness, beginning in elementary school. The STAAR assessments include mathematics and reading grades $3-8$, writing grades four and seven, science grades five and eight, and social studies grade 8; end-of-course (EOC) assessments include Algebra I and II, English I, II, and III, Biology, and U.S. History. Students must be enrolled in the aforementioned EOC courses for them to take the five assessments.

In the past, grades five and eight have been designated as Student Success Initiative (SSI) grade levels. Due to the COVID-19 pandemic The Texas Education Agency revamped the assessment program, resulting in the deletion of the SSI program. Students who do not meet standards on the EOC tests are provided opportunities to retest in the five EOC areas until they are successful. The STAAR assessment is aligned with the Texas Essential Knowledge and Skills (TEKS), which is the state's curriculum.

There is a demand for students to exhibit academic growth from year-to-year. This assessment assesses a student's knowledge based on the curriculum taught within a
specific academic year. Reliability for the STAAR test was estimated in 2011-2012 using statistical measures in the internal consistency, classical standard error measurement, conditional standard error measurement, and classification accuracy. For the purpose of this study, grades 3-8 reading and mathematics, and EOC content areas Algebra I and English I and II data from the school year 2020-2021 were collected.

## Reading/English I and II STAAR/EOC

The reading STAAR/EOC is administered to students in grades 3-8 and the English I and II test is administered to students in grades 9-10. This assessment measures students' ability to think critically, understand written texts across genres, understand and analyze literary texts, and understand and analyze informational texts. The genres assessed included fiction, literary non-fiction, poetry, drama, media literacy, composition, writing, and revising and editing, as well as persuasive, procedural, and expository writing (TEA, 2014). The STAAR/EOC reading test contains 34-44 questions, depending on the tested grade level. The English I and II tests both contain 52 questions.

## Mathematics/Algebra I STAAR/EOC

The mathematics STAAR/EOC is administered to students in grades 3-8 and the Algebra I test is administered to students in grades 9-10. This assessment measures numerical representation and relationships, computations, and algebraic relationships, geometry and measurement, data analysis, financial literacy, quadratic functions and equations, graphing linear functions, quadratic functions and equations, and exponential functions and equations (TEA, 2018). The STAAR mathematics test contains 32-50 questions and the Algebra I test contains 54 questions.

## Developmental Reading Assessment (DRA)

The DRA is a standardized reading assessment used to determine the instructional level of students in grades 1-3. This assessment is designed to determine if a student is
reading below grade level, on grade level, or above grade level. It is administered individually to students by teachers or reading specialists. The DRA is administered at the beginning, middle, and end-of-year to track and monitor each student's progression/regression. There are four developmental reading levels included: emergent reader (middle to end of kindergarten), the early reader (beginning to middle of first grade), the transitional reader (middle of grade one to the end of grade two), and the extended reader (beginning of grade 3 to the end of grade 4).

The purpose of the DRA is to identify student's independent reading level, fluency, and comprehension. This assessment is utilized to ascertain student's reading strengths and weaknesses, as well as to monitor the reading growth of students. This assessment is administered, scored, and interpreted by the classroom teacher. For the purpose of this study, grades K-2 from the 2020-2021 were utilized.

## Texas Teacher Evaluation and Support System (T-TESS)

The T-TESS is a teacher evaluation system that focuses on providing Texas teachers timely and formative feedback, so they can improve their practice (Texas Education Agency, 2019). The T-TESS consist of three components: (a) goal-setting and professional development plan, (b) the evaluation cycle (i.e. pre-conference, observation, and post-conference), and (c) student growth measure (Texas Education Agency, 2019). This evaluative tool was utilized to ascertain the performance evaluation of teachers in the sample district. The focus of the T-TESS evaluative tool is to capture the holistic nature of teaching, which is the idea that a constant feedback loop exists between the teacher and the student, while gauging the effectiveness of the teacher (Texas Education Agency, 2019).

## Data Collection Procedures

## Quantitative

Prior to data collection, the researcher gained approval from the University of Houston-Clear Lake's (UHCL's) Committee for Protection of Human Subjects (CPHS) and the school district in which the study took place before any data was collected. Using the Texas Education Agency 2020-2021 Texas Academic Performance Report (TAPR), one year of state archived data (e.g., number of teachers, years of experience, demographics), was downloaded and merged into an IBM SPSS database for further analysis. Additionally, using the Eduphoria software data from the 2020-2021 school year, one year of district archived data (e.g., STAAR/EOC, DRA, student achievement, and teacher performance) was also downloaded and merged into an IBM SPSS file for further analysis.

## Qualitative

Participants were solicited to participate in a semi-structured one-on-one interview. Ten general education teachers within the four campuses were invited to participate. The interviews were digitally recorded and transcribed. The interview questions were designed by the researcher and evaluated by peers. The interviews were conducted with teachers who agreed to serve as participants in the study. Five interviews were conducted via phone and the remaining interviews were conducted face-to-face, at a location of the participant's choosing and at a time that was convenient for them. The interviews lasted between 15-25 minutes in length. Qualitative interview data will be analyzed with the utilization of thematic analysis. The data collected will be maintained confidentially, for five years, following the conclusion of the research, before it is destroyed. Participant's identities were kept anonymous by assigning them identities that could not be linked to them and cause undue risks.

## Data Analysis

## Quantitative

Data were imported in IBM SPSS for analysis. To answer research question one, the researcher utilized a Chi-square test of independence to determine if there was a statistically significant mean difference between the two types of teacher preparation programs: (a) alternative certification program, and (b) traditional preparation program, and teacher performance. To answer research question two an independent $t$-test analysis was conducted to determine if the teacher preparation program influenced student achievement. The independent variable was the type of teacher preparation program, and the dependent variable was student achievement. Effect size was measured using Cohen's $d$ and r 2 .

To answer question three, the Sobel test of mediation was utilized to determine if teacher performance mediated the relationship between the type of teacher preparation program and student achievement. To answer research question four, hierarchical multiple-regression techniques were utilized to ascertain if the type of teacher preparation and teacher performance influenced student achievement, controlling for years of experience. Effect size was measured using r2. To answer question five, regression techniques were utilized to determine if teacher performance moderated the relationship between the type of teacher preparation and student achievement. A significance value of .05 was utilized for this study.

## Qualitative

Qualitative data were analyzed using thematic analysis. Thematic analysis provides an inductive process to bring categories of data derived from participants' expressions, responses, and viewpoints regarding a prescribed phenomenon (Braun \& Clarke, 2012). Qualitative data were analyzed using thematic analysis. After the
transcription was completed, interview transcripts were coded to identify patterns and themes to organize and manage responses in relevant pieces of information. As repeated themes surfaced, they were organized into categories and a narrative description of the researcher's findings was exhibited in a detailed discussion of the participant's perceptions. Upon completion of the transcript coding process, the codes were placed into larger groups of themes. This information was utilized in conjunction with the quantitative data, to ascertain a more in-depth understanding of teaching self-efficacy and its influence on the teacher preparation program.

## Qualitative Validity

Throughout this study the researcher will refer to reviewed literature, member checking, peer debriefing and triangulation, to ensure the validity of data analysis. The emphasis of this evaluation will be based on the researcher's personal feelings and understanding of what the interview disclosed. The individual interviewee responses and a mutual understanding were of critical importance in validation. Member checking was utilized to ensure credibility and transferability of the study.

## Privacy and Ethical Considerations

Prior to data collection, the researcher gained approval from the University of Houston-Clear Lake's (UHCL's) Committee for Protection of Human Subjects (CPHS) and the school district in which the study took place. Participants received a cover letter, via email, with information regarding the study, which included the purpose of the study and detailed instructions for the interview. The data collected will be maintained confidentially, for five years, following the conclusion of the research, before it is destroyed. Participant's identities were kept anonymous by assigning them identities that could not be linked to them and cause undue risks.

Throughout the interview process, the researcher made a conscious effort to remain neutral and as objective as possible to alleviate the possibility of any personal beliefs being imposed. Given that there were open-ended response items that generated qualitative data the possibility of subjective bias was addressed by using peer review. All information obtained from the participant's interview transcriptions were transcribed with stellar accuracy and precision to ensure the internal and external validity of this study. Throughout the coding process every attempt was made to remain objective as themes and supporting data were selected to justify and support the findings.

## Research Design Limitations

Research limitations are defined as characteristics of design or methodology that affect the interpretation of the findings of a research study (Price \& Murnan, 2004). The research design consisted of several limitations. First, the participants were not randomly selected as they were purposefully selected from the participating district. Second, not all alternative teacher preparation programs are equivalent. Some alternative teacher preparation programs require a rigorous amount of observation; others require minimal hours of observation. There are different types of alternative teacher preparations (i.e. education service center program, university alternative program, private vendor alternative program), and depending on the alternative program, the course of study may vary - causing one program to be more rigorous than another. Third, not all traditional teacher preparation programs are equivalent. Universities have different course requirements, and some are more rigorous than others.

Fourth, the teacher performance evaluation tool, the T-TESS, is subjective, which may cause the teacher to have a preconceived bias. Fifth, the State of Texas Assessment of Academic Readiness/End of Course (STAAR/EOC) results may create a perception that a teacher's instructional delivery in a content-area is less than effective. This could
be due to a teacher being assigned to more than one content area that is assessed on the STAAR/EOC. This may be more prevalent in grades three through five. Sixth, the Developmental Reading Assessment was conducted in the fall semester; therefore, teachers may feel as though they did not have ample time to adequately work with their students on reading skills. The district has four campuses. The number of teachers on each campus varies based on the campuses' grade span and course content. For this study, teachers from all campuses, all content areas, and all grade levels were selected to participate.

## Conclusion

The purpose of this study was to examine the dynamics that exist among the teacher preparation program, teacher performance, and student achievement. This chapter identified the need to further examine the correlation between the constructs. To better understand teacher preparation programs and the dynamics that exist among teacher preparation programs, teacher performance and student achievement, the quantitative and qualitative findings were pertinent in this study. In Chapter IV the archived data, interview focus group, and achievement data were analyzed and discussed in further detail.

## CHAPTER IV:

## RESULTS

This purpose of this study was to examine the dynamics that exist among the teacher preparation program (TPP), student achievement, and teacher performance. This chapter will describe the findings derived from participants' archived data and responses of the semi-structured interviews from the ten participants. The qualitative data were comprised of reflections and acumen from the participants in the individual interviews. Qualitative methodology provides acute insights into participants' responses and stories, bringing forth rich narrative data from the inquiry to be analyzed (Saldana \& Omasta, 2018).

Data was collected beginning with the Spring of 2021 and ended Fall 2021. This was during the COVID-19 pandemic, which may have impacted some participants' responses as a result of the negative impact the pandemic had on emotional stability of educators during this time. The qualitative data gleaned from the open-ended responses to the three constructs were utilized to generate domains, identified themes, and recurring patterns. The results were organized by domain.

All qualitative data were analyzed and reviewed for frequency of occurrence within the participant sample. Saldana and Omasta (2018), recommend presenting the cross-analysis of results through frequency of occurrence in the sample. In addition, to reduce any potential bias and allow for additional analysis of inference within the analysis process, a peer-debriefer was utilized. Peer debriefing is defined as the process of analytic triangulation, where a researcher elicits the expertise of an academic peer not directly involved in the research process to further examine the data results (Given, 2008). The peer debriefer for this study was an adjunct professor of qualitative research
whose specialization includes curriculum, assessment, instructional design, and teacher preparation. The chapter will conclude with a summary of findings.

## Participant Demographics

For the quantitative portion of this study the participants recruited consisted of 133 teachers (33-early childhood; 100-3-12 th grade). The majority of the EC-2 $2^{\text {nd }}$ grade participants were female ( $\mathrm{n}=31,93.9 \%$ ), were African American ( $\mathrm{n}=52,52.0 \%$ ) and White ( $\mathrm{n}=8,24.2 \%$ ), and had 3-5 years of teaching experience $(\mathrm{n}=8,24.2 \%)$ and 15-20 years $(\mathrm{n}=8,24.2 \%)$. Seventeen $(51.5 \%)$ completed a traditional preparation program and 16 completed an ACP program (48.5\%). The majority of the $3-12^{\text {th }}$ grade participants were female ( $\mathrm{n}=67,67.0 \%$ ), were African American ( $\mathrm{n}=52,52.0 \%$ ), and had 3-5 years of teaching experience $(\mathrm{n}=27,27.0 \%)$. Fifty-four (54.0\%) completed a traditional preparation program and 46 completed an ACP program (46.0\%). Tables 4.1 and 4.2 exhibit a summary of participant's descriptive factors, including gender, race/ethnicity, years of experience, and teacher preparation program per grade level.

Table 4.1:
Grades EC-2: Teacher's Gender, Race/Ethnicity, Years of Experience, and Preparation $\underline{\text { Program ( } n=33 \text { ) }}$

$$
\text { Frequency (n) } \quad \text { Percentage (\%) }
$$

Gender

| Male | 2 | 6.1 |
| :--- | :---: | :---: |
| Female | 31 | 93.9 |

Race/Ethnicity
African American 8 24.2
Asian/Pacific Islander 6
18.2

Hispanic 7
21.2

White 8
24.2

2 or more races 4
12.1

Years of Experience
0-2
6
18.2

3-5
8
24.2

6-10
6
18.2

15-20 8
24.2

20+
5
15.2

Teacher Preparation Program
$\begin{array}{lll}\text { Traditional } & 17 & 51.5 \\ \text { Alternative } & 16 & 48.5\end{array}$

Table 4.2:
Grades 3-12: Teacher's Gender, Race/Ethnicity, Years of Experience, and Preparation Program ( $n=100$ )

$$
\text { Frequency (n) } \quad \text { Percentage (\%) }
$$

Gender

| Male | 33 | 33.0 |
| :--- | :--- | :--- |
| Female | 67 | 67.0 |

Race/Ethnicity
African American 5
52
52.0

Asian/Pacific Islander 6
$6 \quad 6.0$

Hispanic 9
$9 \quad 9.0$

White
30
30.0

2 or more races 3
3.0

Years of Experience

| $0-2$ | 18 | 18.0 |
| :--- | :--- | :--- |
| $3-5$ | 27 | 27.0 |
| $6-10$ | 25 | 25.0 |
| $15-20$ | 18 | 18.0 |
| $20+$ | 12 | 12.0 |
|  |  |  |
| cher Preparation Program | 54 | 54.0 |
| Traditional | 46 | 46.0 |

The interviewees for this study consisted of 10 teachers (6-secondary; 4elementary). Twenty percent of the interviewees were male $(\mathrm{n}=2)$ and $80.0 \%$ of the participants were female $(\mathrm{n}=8)$. The majority of the interviewees were African American ( $\mathrm{n}=7,70.0 \%$ ), taught English Language Arts/Reading ( $\mathrm{n}=4,40.0 \%$ ), were assigned to the Middle School level (grades 6-8), completed a traditional preparation program ( $\mathrm{n}=7,70.0 \%$ ), and taught a STAAR tested grade level. Of those participants who teach a STAAR tested grade level, thirty percent completed an alternative teacher
preparation program and seventy percent completed a traditional teacher preparation program. The respondent's years of teaching experience varied with an equal distribution of 0-2 years, 6-8 years, 11-15 years, and greater than 20 years. Table 4.3 exhibits a summary of participant's descriptive factors including gender, race/ethnicity, years of experience, grade level taught, content area taught, and level of education. Table 4.4 exhibits participants' assigned content area and specifies whether or not they teach a tested grade, and the grade level they teach.

Table 4.3:

Interviewee's Gender, Race/Ethnicity, Years of Experience, and Teacher Preparation Program

$$
\text { Frequency (n) } \quad \text { Percentage (\%) }
$$

| Gender |  |  |
| :--- | :--- | :--- |
| Male | 2 | 20.0 |
| Female | 8 | 80.0 |
| Race/Ethnicity |  |  |
| African American | 7 | 70.0 |
| Hispanic | 2 | 20.0 |
| White | 1 | 10.0 |
|  |  |  |
| Years of Experience | 2 | 20.0 |
| $0-2$ | 0 | 10.0 |
| $3-5$ | 2 | 20.0 |
| 6-8 | 2 | 20.0 |
| $11-15$ | 1 | 10.0 |
| $16-20$ | 2 | 20.0 |
| $20+$ |  |  |
| Teacher Preparation Program | 7 | 60.0 |
| Traditional | 3 | 40.0 |
| Alternative |  |  |

Table 4.4:
Interviewee's Subject Area Taught, Grade Level Taught and STAAR Tested Grade Level Frequency (n) Percentage (\%)

Subject Area
English Language Arts/Reading 40.0
Mathematics 20.0
Science 110.0
Social Studies $\quad 1 \quad 10.0$
Elective $\quad 1 \quad 10.0$
All core subjects (Elementary self-
contained)
Grade Level Taught
Elementary (grades EC-5) $\quad 3 \quad 30.0$
Middle (grades 6-8) 50.0
High (grades 9-12) 20.0
STAAR Tested Grade Level
$\begin{array}{lll}\text { Yes } & 7 & 70.0\end{array}$
$\begin{array}{lll}\text { No } & 3 & 30.0\end{array}$

## Research Question One

Research question one, Is there a relationship between the type of teacher preparation program and teacher performance?, was answered using a Chi-square test of independence. The findings of the Chi-square test of independence indicated a relationship did not exist between the type of teacher preparation program and teacher performance for all $\mathrm{K}-12$ teachers, $\chi(3, \mathrm{~N}=133)=4.602, \mathrm{p}=.203$. Fifty-two percent of the ACP teachers scored "proficient" in comparison to $47.9 \%$ of the traditionally certified teachers. However, in the "accomplished" category, there were twice as many of the traditionally certified teachers than ACP teachers ( $66.7 \%, 33.3 \%$ respectively).

For the EC-2 teachers, the findings of the Chi-square test of independence indicted a relationship did not exist between the type of teacher preparation program and teacher performance, $\chi(2, N=33)=5.898, \mathrm{p}=.052$. Sixty-nine percent of the traditionally certified teachers scored "accomplished" in comparison to $30.8 \%$ of the ACP teachers. Only traditionally certified teachers were rated in the "distinguished" category. For the 3-12 teachers, the findings of the Chi-square test of independence indicted a relationship did not exist between the type of teacher preparation program and teacher performance, $\chi(3, \mathrm{~N}=100)=4.345, \mathrm{p}=.227$. Fifty-three percent of the traditionally certified teachers scored "proficient" in comparison to $47.3 \%$ of the ACP certified teachers. Sixty-six percent of the traditionally certified teachers were rated "accomplished" in comparison to $34.5 \%$ of the ACP teachers. Only eight teachers were rated in the "distinguished" category with two being traditionally certified teachers and six being ACP certified.

## Research Question Two

Research question two, Does the type of teacher preparation program influence student achievement?, was answered using an independent t-test analysis. The results of the independent t -test indicated the type of teacher preparation program did not influence DRA scores, $\mathrm{t}(25)=-.485, \mathrm{p}=.632$. Traditionally certified teachers $(\mathrm{M}=5.27, \mathrm{SD}=$ 2.31) had similar student DRA scores to the ACP certified teachers $(M=5.67, S D=$ 1.87). Table 4.5 displays the independent t-test results for traditionally and ACP certified teacher's DRA scores.

Table 4.5:
Independent t-test: DRA Scores

| Certification | N | M | SD | t | df | p-value |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Traditional | 15 | 5.27 | 2.31 | -.485 | 25 | .632 |
| ACP | 12 | 5.67 | 1.87 |  |  |  |

*Statistically significant ( $\mathrm{p}<.05$ )
The results of the independent $t$-test indicated that the type of teacher preparation program did not influence mathematics STAAR scores, $\mathrm{t}(30)=-1.404, \mathrm{p}=.171$. Traditionally certified teachers $(M=38.5, S D=12.4)$ had slightly lower student mathematics STAAR scores to the ACP certified teachers $(M=44.7, S D=12.5)$. Table 4.6 displays the independent t-test results for traditionally and ACP certified teacher's mathematics STAAR scores.

Table 4.6:
Independent t-test: Math STAAR Scores

| Certification | N | M | SD | t | df | p-value |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Traditional | 14 | 38.5 | 12.4 | -1.404 | 30 | .171 |
| ACP | 16 | 44.7 | 12.5 |  |  |  |

*Statistically significant ( $\mathrm{p}<.05$ )
The results of the independent t -test indicated that the type of teacher preparation program did not influence reading STAAR scores, $\mathrm{t}(18.7)=-.293, \mathrm{p}=.773$.

Traditionally certified teachers $(M=44.5, S D=12.1)$ had slightly lower student reading STAAR scores to the ACP certified teachers $(M=46.5, S D=20.8)$. Table 4.7 displays the independent t -test results for traditionally and ACP certified teacher's reading STAAR scores.

Table 4.7:
Independent t-test: Reading STAAR Scores

| Certification | N | M | SD | t | df | p-value |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Traditional | 15 | 44.5 | 12.1 | -.293 | 18.7 | .773 |
| ACP | 13 | 46.5 | 20.8 |  |  |  |

*Statistically significant ( $\mathrm{p}<.05$ )

## Research Question Three

Research question three, Does teacher performance mediate the relationship between the type of teacher preparation program and student achievement?, was answered using bivariate regression, multiple regression, and the Sobel test of mediation. Given the small sample sizes for "developing" and "distinguished" teacher performance ratings, only the ratings for "proficient" and "accomplished" were used in the analysis. For DRA scores, the results of the Sobel test indicated that teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement, $\mathrm{z}=1.06, \mathrm{p}=.287$ (see Table 4.8).

Table 4.8:
Sobel Test: DRA Scores

| Constructs | Z | B | SE | $\mathrm{p}-$ <br> value |
| :---: | :---: | :---: | :---: | :---: |
| 1. Teacher Preparation Program/DRA | ----- | . 400 | . 826 | . 632 |
| 2. Teacher Preparation Program/Teacher Performance | ----- | -. 175 | . 090 | . 053 |
| 3a. Teacher Preparation Program/Teacher | --- | 1.130 | . 889 | . 216 |
| Performance/DRA |  |  |  |  |
| 3b. Teacher Preparation Program/Teacher | ----- | . 027 | . 868 | . 976 |
| Performance/DRA |  |  |  |  |
| 4. Sobel Test | 1.06 | ------ | . 186 | . 287 |

*Statistically significant $(\mathrm{p}<.05)$
For mathematics STAAR scores, the results of the Sobel test indicated that teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement, $\mathrm{z}=-.716, \mathrm{p}=.474$ (see Table 4.9). For reading STAAR scores, the results of the Sobel test indicated that teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement, $\mathrm{z}=-.039, \mathrm{p}=.969$ (see Table 4.10). Teacher performance ratings do have a statistically significant influence on reading STAAR scores $(\mathrm{p}=.008)$.

Table 4.9:
Sobel Test: Math STAAR Scores

| Constructs | z | B | SE | p- <br> value |
| :--- | :---: | :---: | :---: | :---: |
| 1. Teacher Preparation Program/DRA | ----- | 6.222 | 4.432 | .171 |
| 2. Teacher Preparation Program/Teacher Performance | ----- | -.252 | .207 | .237 |
| 3a. Teacher Preparation Program/Teacher |  |  |  |  |
| Performance/DRA | ---- | 4.409 | 4.975 | .385 |
| 3b. Teacher Preparation Program/Teacher |  |  |  |  |
| Performance/DRA | ---- | 6.970 | 4.992 | .177 |
| 4. Sobel Test | .716 | ----- | 1.551 | .474 |

*Statistically significant ( $\mathrm{p}<.05$ )
Table 4.10:
Sobel Test: Reading STAAR Scores

| Constructs | z | B | SE | p-value |
| :--- | :---: | :---: | :---: | :---: |
| 1. Teacher Preparation Program/DRA | $-\cdots--$ | 1.928 | 6.338 | .763 |
| 2. Teacher Preparation Program/Teacher Performance | ----- | -.008 | .203 | .970 |
| 3a. Teacher Preparation Program/Teacher |  |  |  |  |
| Performance/DRA | ----- | 19.155 | 6.522 | $.008^{*}$ |
| 3b. Teacher Preparation Program/Teacher |  |  |  |  |
| Performance/DRA <br> 4. Sobel Test | ----- | 1.340 | 6.054 | .827 |

*Statistically significant ( $\mathrm{p}<.05$ )

## Research Question Four

Research question four, Does the type of teacher preparation program and teacher performance influence student achievement, controlling for years of experience?, was answered using hierarchical multiple regression techniques. Given the small sample sizes for "developing" and "distinguished" teacher performance ratings, only the ratings for "proficient" and "accomplished" were used in the analysis. For DRA scores, the results of the hierarchical multiple regression analysis indicated that the type of teacher preparation program and teacher performance did not influence student achievement, controlling for years of experience, $F(3,22)=.582, p=.633$.

For mathematics STAAR scores, the results of the hierarchical multiple regression analysis indicated that the type of teacher preparation program and teacher performance did not influence student achievement, controlling for years of experience, $F(3,20)=1.219, p=.329$. For reading STAAR scores, the results of the hierarchical multiple regression analysis indicated that the type of teacher preparation program and teacher performance did influence student achievement, controlling for years of experience, $F(3,19)=3.174, p=.048$, adjusted $-r^{2}=.229$. Approximately $23.0 \%$ of the variation in reading STAAR scores can be attributed to the type of teacher preparation program and teacher performance did not influence student achievement, controlling for years of experience.

## Research Question Five

Research question five, Does teacher performance moderate the relationship between the type of teacher preparation and student achievement?, was answered using regression techniques. For DRA scores, the results of the regression analysis indicated that teacher performance did not moderate the relationship between the type of teacher preparation and student achievement, $\mathrm{t}=1.054, \mathrm{p}=.303$. For reading STAAR scores, the
results of the regression analysis indicated that teacher performance did moderate the relationship between the type of teacher preparation and student achievement, $t=3.053, p$ $=.007$. For mathematics STAAR scores, the results of the regression analysis indicated that teacher performance did not moderate the relationship between the type of teacher preparation and student achievement, $\mathrm{t}=.900, \mathrm{p}=.379$.

## Research Question Six

Research question six, What are teachers' perceptions regarding the influence of teacher preparation programs on teacher performance and student achievement?, was answered by utilizing an inductive coding process to address the open-ended responses of ten participants. The identification of common themes and patterns derived from the interviews were utilized to organize responses into relevant data categories of information. From the interviews, five significant themes emerged. The themes assigned to the data collected responses were: (a). Experience/Teacher Preparedness; (b). Teacher Preparedness/Coursework/Student Achievement; (c). Profession/Interest; (d). Teacher Preparedness Program Recommendation; and (e). Teacher Preparedness/T-TESS.

The first theme, experience/teacher preparedness, included the participants' perspective of the value of having the opportunity to experience student teaching and/or classroom observations, prior to entering the profession. This theme supported and exhibited the participants' confidence in their performance as a teacher regardless of the type of teacher preparation program they completed. The second theme, teacher preparedness/coursework/student achievement focused on the correlation between the teacher preparation program courses the participants' deemed as a positive influence on their students' achievement. The third theme, profession/interest ascertains the participants’ driving force/reason for pursuing a teaching career.

The fourth theme, teacher preparation program recommendations, was a reflection platform for participants to reflect on the plethora of teaching experiences they encountered over the course of their teaching career. This reflective rostrum also provided the participants an opportunity to share recommendations they felt would benefit teacher preparation programs. The fifth and final theme, teacher preparedness/TTESS, provided an opportunity for teachers to express their thoughts on the alignment between the T-TESS performance evaluation system and the teacher preparation program they completed.

## Experience/Teacher Preparedness

The theme, experience/teacher preparedness, captured the participants' views on the benefit of having the opportunity to experience being in a classroom, whether it was for observation, student teaching, or serving as a substitute, prior to beginning their official career as a teacher. The opportunity to have prior experience in a classroom, as exhibited by the participant's responses, supported their confidence as a prepared teacher, regardless of the teacher preparation platform. Twenty percent $(\mathrm{n}=2)$ of the participants were novice teachers and the other $80 \%(n=8)$ had six or more years of teaching experience.

One participant stated, "The observations were important!" The participant further expressed they wished they had the opportunity to experience student teaching but were grateful for the opportunity to observe classes. The participant continued:

The traditional way gave you more of a heads up of what was to come. We had to have so many semesters of observation and student teaching. When I got to the classroom it was not "baptism by fire". Most ACP candidates haven't seen a classroom since they were a student.

One participant reflected on the fact that today, many alternative certification program candidates are not required to student teach; they are approved to teach, and this is considered their first year of teaching, like a paid student teaching internship. Another participant continued by expressing how their substitute teaching assignment prepared them for the "real" classroom, because now they don't have any classroom management issue.

I substitute taught for a long-term sub assignment at No-Name Middle School, and that is a tough school by itself. However, the school trusted me to do the job of a teacher and I trusted myself in the classroom.

Additionally, another participant's sentiments were tied to their instructional delivery preparation and how their experience enhanced their teacher preparedness: My teacher certification training allowed me to gain hands-on experience. As a student teacher I was able to try out new strategies, lesson plans, and ways of student engagement, to see what worked prior to entering the profession. I felt confident starting my first year as a teacher.

One participant expressed a sense of empathy for teachers who did not have the opportunity to experience student teaching prior to entering the classroom. Additionally, this participant felt there was no comparison between having a student teaching opportunity and entering the classroom without any formal exposure to the classroom as a practicing teacher. During the interview, another participant referred to the current alternative education preparation programs as "trendy". This participant further expressed positive sentiments on having the opportunity to student teach, additionally expressing a sense of sorrow for current educator who did not have the opportunity to experience student teaching.

Another participant focused their responses on the dynamic changes in the field of education and how that impacted their experiences as an ACP candidate.

Education has been changing. There has been a dynamic change in education, and I don't feel the ACP program fully prepared me for the crazy situations I found myself involved in as a novice teacher. There was a marked difference in my preparation as a new teacher and the preparation I received when working on my Master's Degree.

This same participant adamantly expressed their earnest belief in the teacher having an opportunity to spend time in the classroom prior to having their own classroom.

I believe the experience I was afforded during my student teaching was directly tied to my success when I entered the classroom. I mentor novice teachers today and one in particular is an ACP candidate. There are some basic pedagogical lessons I received during student teaching and during the time I was enrolled in my teaching program, my mentee has not been taught. There is a great deal of on-the-job training taking place, which is not always feasible for the new teacher. An additional participant felt the experience correlation and the benefit of being in the classroom more than eight years, had been beneficial. This participant alluded to the idea that experience is the best teacher. Participant nine had a different perspective as it relates to the value of experience in the classroom.

The idea of having an opportunity to student teach versus enter the classroom without prior experience really depends on the individual. The determined individual is more apt to challenge themselves to be successful due to stereotypical thoughts that ACP candidates are less prepared when they enter the
classroom. I was determined I would be successful as a teacher, because I felt this was my professional calling.

The last participant simply felt they would be lost without having had the experience in the classroom as a student teacher prior to having their own classroom. This candidate shared they were fortunate to have had the opportunity to teach more than one grade level. They further expressed they felt this was the result of them being prepared and flexible. Although the participants attended various teaching programs, $90 \%$ of the participants felt the opportunity to experience being in a classroom, prior to launching their teaching career, positively impacted their preparedness as a teacher. It is important to note that the participants' experience platforms varied (i.e., classroom observations, student teaching, and substitute teaching).

## Teacher Preparedness/Coursework/Student Achievement

When analyzing the dynamics that exist among the teacher preparation program and teacher preparedness/coursework, it was important to ascertain the participants' sentiments regarding any relevant coursework they had while in their respective teacher preparation program that they found beneficial in cultivating success as a teacher. Seventy-five percent of the participants expressed their thoughts on courses they deemed valuable as they prepared to become a teacher. Twenty-five percent of the respondents focused on the student teaching opportunity they were provided, which was addressed in another theme. Out of the seventy five percent who expressed their sentiments regarding beneficial coursework, seventy percent completed a traditional teacher preparation program, and thirty percent completed an alternative certification teacher preparation program.

Participant One stated, "The most beneficial courses I had in the teacher preparation program were the ones taught by professors who were either current or
previous educators." The participant further shared they felt this was an advantage because the professors were able to provide "real information". Another participant's coursework connection was not directly associated with a traditional education course, however, the participant referenced an Ethnic Literature Course, they deemed beneficial to their success as a teacher and the development of their self-efficacy. Participant Three stated, "The instructional delivery the professor demonstrated when teaching, was beyond great!" The participant further expressed how not just the course content, but the passion in which the teacher taught, caused them to be more determined to be an excellent teacher, because the professor utilized, what he now knows, was effective instructional strategies.

Participant Four provided reflections on a course they took in conjunction with student teaching. They responded, as illustrated below:

One course I took during my student teaching was centered around the socialemotional learning needs of students. It talked about where they (students) should be developmentally in various grade levels. Now that I teach middle school students, that course has helped me be able to help and support my students master the lesson, if they are struggling.

The participant further stated, "So for me that course helped as it relates to the preparation of teachers".

Additionally, the participant was convincingly sure this course assisted them with being able to establish positive rapport with their students once they began teaching. The next participant was a bit reserved when reflecting on any course work they deemed relevant to their preparedness as a teacher. They basically felt that regardless of the coursework, the individual should have an innate interest in teaching.

Many of the participants expressed the fact that they felt there was no program that fully prepared you for the actual experiences you encounter as a first-year teacher. A common opinion expressed by tested grade level teachers was "I don't think any program prepares you for the state assessment stress a new teacher encounters." One participant felt as a mentor teacher, their heart goes out to their current mentee. They further shared how there are common teaching practices they observe their mentee struggling with, which are not taught in any preparation program.

Although responses varied, the participants were able to identify and reflect on the course(s) they deemed beneficial in cultivating their preparedness as a teacher, regardless of the teacher preparation platform. It is interesting to note that during the interviews the traditional preparation program participants were able to quickly reflect and formulate a response to this question, whereas the alternative preparation program participant pondered on developing a response. Seventy percent of the participants were able to provide a reflective response, when asked which of the teacher preparation course(s) they had taken were deemed beneficial to their preparedness as a teacher. It is important to note that the teachers who completed a traditional preparation program responded without hesitation to this question, whereas those teachers who completed an alternative certification program had to really think about a response, many of whom opted to not respond.

## Profession/Interest

When determining the influence the teacher preparation program had on personal interest in the professions, it was important to garner an understanding of the reason the participants entered the teaching profession. The definition of purpose fosters the reason something exists, or is done, made, or used (Scherrer, 2019). It is interesting to note $100 \%$ of the participants stated their reason for entering the profession was to make a
difference in the lives of those they serve. One participant said, "It's a profession I had been interested in for a while, but the salary did not excite me initially." The participant further shared they prayed about entering the profession and decided to apply for an alternative teacher preparation program, saying "I think my passion greatly impacted my belief in my ability to teach." And finally, the participant exclaimed, "I haven't looked back once, since I made that decision!"

The opportunity to foster an interest in the teaching career, as a result of a loved one modeling a selfless dedication to a profession, played an integral role in another participant's decision to enter the profession. One participant was a descendent of a teacher and stated, "My mother was a teacher and I always said I was not going to be a teacher." An interesting response from another participant yielded an interesting response, as illustrated below:

I was good in math and figured out my junior year, I did not like Accounting, so I started taking education and math classes. I began to reflect on the great math teacher my mother was and how I remembered her loving her job! Now that I think about it, the great educator my mother is has helped develop my selfefficacy.

Another participant connected their experience serving as a volunteer in an afterschool program, while in college, coupled with a stellar professor who taught a course, as their reason for pursuing a degree in education. The participant's response is illustrated below:

I chose to do some volunteer hours at a high school. I worked with Advanced
Placement English students at a high school. I immediately wanted to become more vested in teaching, so I began to seek a degree in education.

The participant further shared how a professor taught in a manner that really sparked their interest in the course content, as well as sparking their interest in the field of education. Experiencing educational inequities as a child greatly influenced one participant's decision to become a teacher. The participant stated:

First of all, the educational inequities I saw growing up in my schooling experience and how so many of my peers didn't have the same college opportunities or job opportunities I had because of the education they received. I attended a school for the gifted, so my educational trajectory was very different; I was afforded a lot more scholarship opportunities than they (my friends) were. Those educational inequities caused me to want to help bridge the gaps and pursue a career in teaching. I think this played a major role on my self-efficacy as a teacher.

Fifty percent of the participants referenced an individual who played a major role in their decision to seek a career in education, while the other $50 \%$ of the participants referenced a situation that prompted their interest in a teaching career. Regardless of the type of teacher preparation program, there was a consensus among the participants that there is a connection between the reason they entered the profession and that individual and/or situation influencing their interest in the teaching profession.

## Teacher Preparedness/Program Recommendations

Providing participants an opportunity to reflect on recommendations they felt would enhance the teacher preparation programs exhibited a common response. One hundred percent of the participants offered a recommendation that all teacher preparation programs should require their students to experience participation in required student teaching. The length of time for the student teaching varied from six weeks to a
semester. Several participants shared how important the student teaching component was for them.

I would have been lost entering the classroom without the student teaching component. Just observing a class for a couple of days does not suffice, nor does it come close to preparing you for having your own classrooms. I was able to have a mentor at the school where I did my student teaching.

One participant felt requiring teaching candidates to complete a career interest survey prior to being accepted to the program would be beneficial. Additionally, a common sentiment was the need for teacher preparation programs to meet regularly with school districts to ascertain their input on teacher preparation pedagogy.

## Teacher Preparedness/T-TESS

The participants had very strong opinions regarding the T-TESS. Several expressed a sense of feeling this evaluative tool did not fully represent their true teaching skills. There was an overwhelming sense of subjectivity expressed throughout the interviews, resulting in many participants feeling discord is often created between the teacher and the evaluator as a result of the T-TESS performance review. There were three participants who were perfectly confident in themselves and their teaching ability and did not appear the least bit phased with this evaluative tool at all. One participant expressed, "It is what it is." Another participant's sentiments were as follows:

I feel it is an opportunity to cultivate teachers; grow those who are weak. I also feel if the evaluator likes the teacher, the evaluation is sometimes embellished. That's my opinion and for now I am sticking to it. I welcome anyone in my room at any time. I am confident in my teaching skills and my ability to close achievement gaps that exist in my classroom. The pandemic has caused me to
have to work harder to close those gaps, but I am confident in my ability to teach my students.

## Summary of Findings

For Research Question One (RQ1) the findings of the Chi-square test of independence indicted a relationship did not exist between the type of teacher preparation program and teacher performance for all K-12 teachers. For RQ1 as it relates to the EC-2 teachers, the findings of the Chi-square test of independence indicted a relationship did not exist between the type of teacher preparation program and teacher performance. For RQ1, as it relates to the 3-12 teachers, the findings of the Chi-square test of independence indicted a relationship did not exist between the type of teacher preparation program and teacher performance.

Research Question Two (RQ2) indicated the type of teacher preparation program did not influence mathematics STAAR scores. Traditionally certified teachers had slightly lower student mathematics STAAR scores than the ACP certified teachers. The results of the independent t-test indicated the type of teacher preparation program did not influence reading STAAR scores. Traditionally certified teachers had slightly lower student reading STAAR scores than the ACP certified teachers.

The findings of RQ3 for DRA scores indicated teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement. For mathematics STAAR scores, the results indicated teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement. For reading STAAR scores, the findings indicated teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement. Additionally, findings show teacher performance ratings do have a statistically significant influence on reading STAAR scores.

The findings of RQ4 as it relates to DRA scores indicated the type of teacher preparation program and teacher performance did not influence student achievement, controlling for years of experience. For mathematics STAAR scores, the results indicated the type of teacher preparation program and teacher performance did not influence student achievement, controlling for years of experience. For reading STAAR scores, the results indicated the type of teacher preparation program and teacher performance did influence student achievement, controlling for years of experience.

For RQ5 as it relates to DRA scores, the results indicated teacher performance did not moderate the relationship between the type of teacher preparation and student achievement. For mathematics STAAR scores, the results indicated teacher performance did not moderate the relationship between the type of teacher preparation and student achievement. For reading STAAR scores, the results indicated teacher performance did moderate the relationship between the type of teacher preparation and student achievement.

When comparing interview participants' responses regarding the influence the teacher preparation program has on student achievement and teacher performance, the qualitative analysis revealed five major themes that emerged: Experience, Teacher Preparedness/Coursework/ Student Achievement, Teacher Preparedness Program Recommendations, Profession Interest, and Teacher Preparedness/T-TESS. Qualitative analysis of these rich data narratives illustrated the value of having prior classroom experience, as a student, before beginning any teaching and the influences on teacher preparedness. The data analysis also revealed teacher preparation coursework plays a major role in the teacher preparation program.

## Experience/Teacher Preparedness

Findings regarding the dynamics that exist among experience and teacher preparedness exhibit a need to ensure all teacher preparation programs include a student teaching component. It was evident, through the interviews, that the benefit of having classroom experience prior to entering the classroom, is most beneficial for prospective teachers. This experience platform may include classroom observations, student teaching, or substitute teaching. These findings are aligned with the fact that there is still limited research on the alignment between the teacher preparation program and teacher performance, as indicated in the current research data. These findings suggest there is a need for a review of teacher preparation programs' content.

## Teacher Preparedness/Coursework/Student Achievement

It was important to glean from the participants' teacher preparation pedagogy what they deemed pertinent to their teacher preparedness, as well as to student achievement. When examining the level of dynamics that exists among teacher preparedness, relevant teacher preparation program/course work/student achievement, findings indicated there were no dynamics that exist among the teacher preparedness, coursework, and student achievement as it relates to the DRA and STAAR mathematics. Contrary to the aforementioned findings, findings indicated there was an impact on teacher preparedness/coursework/student achievement and STAAR reading, controlling years of experience. This would suggest there may be additional emphasis placed on the preparation of teacher candidates who are seeking an English language arts/Reading certification, and/or the level of training required for this content area may be impacted based on the level of experience the teacher candidate has in the area of literacy.

## Teacher Preparedness/T-TESS

In addition to examining the dynamics that exist among teacher preparation programs and student achievement, data was analyzed to ascertain participants’ perspective on the performance evaluative tool, T-TESS, ultimately connecting the teacher preparation program to teacher performance. The data results indicate a relationship did not exist between the type of teacher preparation program and teacher performance. Several participants felt this performance evaluative tool was not representative of their teaching skills. Additionally, the participants felt the T-TESS is quite subjective. Several participants demonstrated a high level of self-confidence. These findings suggest a need for the teacher preparation program to include a component on performance evaluation tools to assist prospective teachers with a feeling of preparedness.

The majority of the participants identified with at least one teacher preparation course they felt influenced their success as a teacher. It was interesting to ascertain the influence individuals and/or situations had on the participants' decision to pursue a teaching career and the influence the person/situation had on the participants' teaching self-efficacy. Overall, the majority of the participants felt the experience and coursework the teacher preparation program provided influenced their preparedness as a teacher. The qualitative data did not clearly reveal an indication the type of teacher preparation program impacts the teachers' performance in the classroom.

## Conclusion

This Chapter presented the results of the qualitative data analysis of this study. The quantitative data analysis indicated a relationship did not exist between the type of teacher preparation program and teacher performance for all K-12 teachers. Additionally, data revealed teacher performance ratings do have a statistically significant influence on
reading STAAR scores. The quantitative data revealed that for reading STAAR scores, teacher performance did moderate the relationship between the type of teacher preparation and student achievement. In other words, the relationship between the type of teacher preparation and student achievement was influenced by how well a teacher performed.

Participants' interviews revealed the teacher preparation program and the opportunities provided to prospective teachers had a strong influence, regardless of the type (traditional or alternative) on student achievement and teacher preparedness. This was due to a myriad of factors (i.e. classroom observation, student teaching, coursework, the professor(s) program). Chapter V provides a discussion of the findings detailed in this chapter compared to the findings listed outlined in Chapter II, along with the implications of the findings concluded for this study and recommendations for future research studies.

## CHAPTER V:

## SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

Measuring what happens throughout teacher preparation has been a consistent convoluted puzzle for some time (Cohen \& Berlin, 2019). Teacher education research is still creating a powerful set of tools and resources that can be utilized to identify components of teacher preparation programs that will yield high-quality teachers (Cohen \& Berlin, 2019). Effective educator preparation, which increases teacher preparedness and retention, is needed more now than ever before (Darling-Hammond \& Hyler, 2020). To assist teacher preparation programs with the challenge of identifying relevant pedagogy necessary to develop high-quality educators, there is a need for this study. There is an acute need to ascertain the impact the teacher preparation program has on student achievement and teacher performance in order to provide today's classroom with educators who are equipped effectively to teach and close the achievement gap.

This study was completed amid the pandemic in the Fall of 2020 and the Spring of 2021. The collection of data for the quantitative portion derived from archived data collected from STAAR, grades 3-Exit Level, Reading and Mathematics data, Grades K-2 DRA data, and T-TESS performance evaluation data collected from 133 PK-12 teachers. In the Fall of 2021, semi-structured interviews were conducted with 10 teachers. Each interview lasted approximately 15-25 minutes. Qualitative data gleaned from the openended responses for the three constructs were utilized to generate domains, identified themes, and recurring problems.

The interviewees for this study consisted of 10 teachers (6-secondary; 4elementary). Twenty percent of the interviewees were male $(\mathrm{n}=2)$ and $80.0 \%$ of the participants were female $(\mathrm{n}=8)$. The majority of the interviewees were African American ( $n=7,70.0 \%$ ), taught English Language Arts/Reading ( $n=4,40.0 \%$ ), were
assigned to the Middle School level (grades 6-8), completed a traditional preparation program ( $\mathrm{n}=7,70.0 \%$ ), and taught a STAAR tested grade level. This chapter presents the summary, implications, and recommendations for future research of this topic.

## Summary

The quantitative data analysis included five research questions. The first research question, Is there a relationship between the type of teacher preparation program and teacher performance?, addressed the relationship between the type of teacher preparation program and teacher performance. The research question was answered using the Chisquare test of independence. Fifty-two percent of the ACP teachers scored "proficient" in comparison to $47.9 \%$ of the traditionally certified teachers. There is limited research on the influence the teacher preparation program has on teacher performance. A vast amount of the research on teacher preparation is limited in scope, as it focuses on inputs of the preparation program as opposed to outcomes of the program (Boyd et al., 2009). This study aligns with current and previous research. Author, von Hippel, (2018), argues most differences between teacher preparation programs is too small to make a difference in relation to teacher performance. Several studies focusing on teacher preparation programs have reached divergent conclusions regarding the benefit of the program and its effectiveness in the development of quality teacher candidates. As indicated in previous and current research, the amount of research on the teacher preparation program and the dynamics that exist among teacher performance is very limited.

The result of the quantitative data analysis found there was not a statistically mean difference in the type of teacher preparation program and teacher performance for grades EC-12 teachers. Findings for research questions number one indicated there was not a statistically significant mean difference in the influence the teacher preparation program had on teacher performance. This aligns with researcher Kraft's (2017) study,
which found whether a teacher's pathway to credentialing is traditional preparation or alternative certification, all teacher preparation programs must review a variety of variables associated with effective teacher performance. Both current and previous research indicate there is still a great deal unknown, as it relates to what actually takes place in the classroom (Kim et al.,2019).

Research question two, Does the type of teacher preparation program influence student achievement?, was answered using an independent t-test analysis. Quantitative analysis indicated teachers who completed a traditional teacher preparation program and those who completed an ACP had very similar student assessment data results. These results align with research that embraces the ideology that regardless of the type of teacher preparation program a teacher completes, it has no influence on student achievement. The research of Goldhaber, (2019), expressed an enormous amount of experiential evidence revealing teacher quality as the educational factor that most impacts student achievement. Fenstermacher and Richardson, (2005), argued good teaching does not always result in learning, because other elements such as social environment and student initiative are considered influences that sometimes complicate a direct correlation between the two.

The results indicated the type of teacher preparation program did not influence DRA scores, or mathematics STAAR scores, or reading STAAR scores. These results are consistent with the research conducted by Szell (2013) which indicates there are a variety of factors that impact student achievement - students' gender, place of residency, family background, attitude towards learning, and students' connections with others. Aligned with the findings of current research, a large amount of empirical evidence reveals teacher quality is the factor that most influences student achievement (Goldhaber, 2018).

Research question number three, Does teacher performance mediate the relationship between the type of teacher preparation program and student achievement?, centered around teacher performance and determining if it mediated the relationship between the teacher preparation program and student achievement. For reading STAAR scores, the Sobel test indicated teacher performance did not mediate the relationship between the type of teacher preparation programs and student achievement. Findings also indicated teacher performance ratings do have a statistically significant influence on reading STAAR scores. The research question was answered using bivariate regression, multiple regression, and the Sobel test of mediation. The findings for research question number three revealed teacher performance did not mediate the relationship between the type of teacher preparation program and student achievement.

As highlighted in a study by authors Duncan and Tooley (2016), a single measure cannot convey the entire teacher performance story, whether it is the story of a teacher candidate, or an entire cohort of teacher preparation program graduates. Similar to a previous study, researchers Ronfeldt and Campbell, (2016), expressed in an article that among those concerns is the fact that students are not randomly assigned to teachers, so utilizing student achievement to measure teachers who work with struggling students may be deemed unfair. Another concern centers on the fact that most student achievement evaluation is targeted towards teachers who teach in tested grade levels, which excludes teachers who are in non-tested grade levels (Ronfeldt \& Campbell, 2016). This aligns with the emphasis districts place on the selection of teachers for specific content and grade level assignments. The effectiveness of a teacher is often evaluated by the extent to which they influence achievement gains (Henry et al., 2014).

Research question number four, Does the type of teacher preparation program and teacher performance influence student achievement, controlling for years of experience?, was directed towards ascertaining if the type of teacher preparation program and teacher performance influenced student achievement, controlling for years of experience. Due to the small sample size for "developing" and "distinguished" teacher performance ratings, only the ratings for "proficient" and "accomplished" were used in the analysis. The results of the regression analysis indicated the type of teacher preparation program and teacher performance did not influence student achievement, controlling for years of experience for DRA and mathematics STAAR scores. For reading STAAR scores, the results indicated the type of teacher preparation program and teacher performance did influence student achievement controlling for years of experience. The current study indicates approximately $23 \%$ of the variation in reading STAAR scores can be attributed to the type of teacher preparation program; however, current research findings revealed teacher performance did not influence student achievement, controlling for years of experience.

This is consistent with previous research by von Hippel (2018), which concluded most differences between teacher preparation programs is too small to make a difference in relation to teacher performance. The constant debate over utilizing measures of teachers' student academic performance to assess teacher preparation programs is an extension of the contention over this information being utilized to assess individual teachers' performances. Research and the current study are aligned in indicating the teacher preparation program and teacher performance do not influence student achievement, controlling for years of experience.

Research question number five, Does teacher performance moderate the relationship between the type of teacher preparation and student achievement?, was
answered using regression techniques. This research question was designed to determine if teacher performance moderated the relationship between the type of teacher preparation and student achievement. Findings from the regression analysis indicated teacher performance did moderate the relationship between the type of teacher preparation and student achievement for STAAR reading scores. For STAAR mathematics scores, the regression analysis indicated teacher performance did not moderate the relationship between the type of teacher preparation and student achievement.

For DRA scores, the results of the regression analysis indicated the teacher performance did not moderate the relationship between the type of teacher preparation program and student achievement. For STAAR reading scores the results indicated teacher performance did moderate the relationship between the type of teacher preparation and student achievement. For mathematics STAAR scores, the results of the regression analysis indicated teacher performance did not moderate the relationship between the type of teacher preparation and student achievement.

Similar to research question number four, the findings suggest the teacher preparation program does not moderate the relationship between teacher performance and student achievement. These results align with research that supports the previous ideology from researchers Osborne, Lincove, and Mills (von Hippel, et al., 2016), which determined a similar conclusion about teacher preparedness. This research suggests whether a teacher's pathway to credentialing is traditional or alternative, all teacher preparation programs must review a variety of variables associated with effective teacher performance. The quality of classroom instruction is a critical measurement tool for educational transformation (Kim et al.,2019). There is still a great deal unknown as they relate to what actually takes place in the classroom (Kim et al.,2019).

Research question number six, What are teachers' perceptions regarding the influence of teacher preparation programs on teacher performance and student achievement?, was answered by utilizing thematic coding process to address the openended responses of ten participants. The participants' responses indicated an overwhelming response to the importance of student teaching being an integral part of teacher preparedness. The participants were adamant that having student teaching experience prior to entering the classroom had a great impact on teachers' confidence.

The study further revealed participants who completed a traditional teacher preparation program had direct correlation and reflective responses regarding coursework they deemed relevant while enrolled in the traditional teacher preparation program. Participants who completed an alternative certification program seemed to have difficulty ascertaining relevant pedagogy/coursework they deemed beneficial as part of their teacher preparation program. The study revealed $100 \%$ of the participants included in their interview responses their reason for entering the profession. Although there were differences in the responses and who or what influenced their reason for entering the profession, the important item to note is this impacted their self-efficacy as it relates to the teaching profession. The following statement demonstrates how important participants felt student teaching was to teacher preparedness.

I believe the experience I was afforded during my student teaching was directly tied to my success when I entered the classroom. I mentor novice teachers today and one in particular is an ACP candidate. There are some basic pedagogical lessons I received during student teaching and during the time I was enrolled in my teaching program, my mentee has not been taught. There is a great deal of on-the-job training taking place, which is not always feasible for the new teacher.

There was very little consistency on participants' responses as to the whether the teacher preparation program prepared them, ultimately reflecting their performance within an evaluative tool. There was, however, the notion that the performance evaluation tool is very subjective in nature. Regardless of the teacher preparation program, the participants did not feel they were totally prepared via their teacher preparation program for the performance evaluation tool utilized to assess their performance in the classroom. As highlighted in a previous study by authors Duncan and Tooley (2016), a single measure cannot convey the entire teacher performance story, whether it is the story of a teacher candidate, or an entire cohort of teacher preparation program graduates. There is still a need to determine whether teacher preparation programs need to be professionalized or deregulated (Goldhaber, 2019).

## Implications

As a result of this study's investigation of the dynamics that exist among teacher preparation programs, student achievement, and teacher performance, implications for all stakeholders associated with the teacher preparation program (i.e., traditional and alternative preparation programs) process of preparing individuals for a teaching career emerged. Previous research and the findings of this study imply there is a need for traditional teacher preparation and alternative certification program leaders to closely review the overall program content utilized to prepare individuals who are seeking a teaching career. The findings of this study indicate the teacher preparation program should align the preparation program content with the needs of the EC-12 national, state, and local educational goals and objectives. This would assist with fostering teacher preparedness skills in those entering the teaching profession.

## Teacher Preparation Program Leaders

A significant amount of the overall investment is in the development of publicschool teachers; approximately seven-billion dollars per year is allocated to the preparation program prior to them becoming teachers (Goldhaber, Krieg, Naito, \& Theobald, 2020). Despite the identified limitations of this study, the findings have important implications and can provide teacher preparation programs with information deemed beneficial to address the importance of equipping schools with highly qualified teachers.

Many aspects of teacher preparation, including the level of focus on student teaching, the alignment between the preparation program's coursework, and whether the teacher was required to complete a student teaching placement are all positively predictive of their teacher preparedness upon entering the workforce (Boyd et al., 2009). It is critical that our educational system move forward in retaining teacher preparation and supporting prospective teacher candidates as they move from teacher preparation to the classroom (DaBoll-Levoie, 2021). It would be beneficial for teacher preparation program leaders to connect with district/campus administrators and teachers to obtain feedback on program content needed to align coursework with field experience. The key is to ensure there is adequate representation of teacher preparation program stakeholders, as well as district/campus administrators, and teachers.

## District/Campus Leaders

All students deserve access to well-prepared teachers with a strong foundation in their content area(s), instructional skills needed to accelerate learning, and the passion to support and inspire students' academic achievement. Teacher quality is the most important in-school factor contributing to students' academic success; therefore, policymakers cannot afford to ignore the crucial issue of teacher preparation (Putnam \&

Walsh, 2021). District/campus leaders need to collaborate with teacher preparation program leaders to assist with ensuring the following systems are in place; (a) rigorous learning standards are included in the preparation program coursework; (b) adequate support for teacher candidates to exhibit their mastery of the learning standards is provided; and (c) ensure meaningful feedback is provided to teacher candidates.

Additionally, collaboration of both entities would address the possible disconnect from the current traditional teacher preparation program and career-ready standards teachers need to know. School districts should advocate for coursework that is balanced between theory-based pedagogy and one that addresses practical skills teachers need daily. Perhaps ascertaining school districts' staffing needs on a regular basis would also prove beneficial. This would create a system of alignment between the teacher preparation program and the school district. The ultimate focus should be on sparking innovative practices that will yield stellar educator pipelines.

## Recommendations for Future Research

Several recommendations are suggested for future research. Despite some areas of limitation, this study encapsulates awareness of the need for teacher preparation programs to expand and invest in their programs to meet the demands for teacher candidates. While there are many uncertainties, it is evident that if educational programs are scaled back or terminated, the national teacher shortage will be exacerbated. One future research recommendation would be to expand the study to include a comparison of teacher preparation program content with actual content required by school districts to discover the need for alignment. This would provide the opportunity to focus on the redesign of current systems for preparing teachers and supporting teachers' preparedness.

There is limited research on the influence the teacher preparation program has on teacher performance. A second recommendation for this program would be to include a
component to the teacher preparation program that focuses on training potential candidates on performance evaluation templates, to increase their awareness of the intricacies of performance evaluation tools. This would lead to a much more coordinated human capital system. Additionally, it would provide an opportunity for teacher preparation programs to measure how well programs are preparing prospective candidates to meet district needs. Since research shows a slight correlation between STAAR reading and the type of teacher preparation and teacher performance, and student achievement, controlling for years of experience, the study could be expanded to obtain information that compares the difference between candidates who teach reading, as opposed to, mathematics. Enlarging the study to increase the sample size is another recommendation. Including mobility rate, and teacher retention rate to this study would also be beneficial. Researching why teacher performance has a statistically significant influence on reading STAAR scores and not on mathematics STAAR scores is another recommendation.

A final recommendation would be to have alternative certification programs redesign their program content to include student teaching. This is an integral facet of teacher preparedness. Preservice experiences impact teacher confidence and feeling of preparedness in the classroom. Student teaching allows prospective teacher candidates to connect important values and goals to concrete practices. Additionally, student teaching provides a platform to inspire teacher candidates as they develop their craft as a teacher.

## Conclusion

Teachers are the most integral in-school factor for students learning (Almy, et al., 2013). Education preparation is not a theoretical exercise; it is a driving factor that influences the types of opportunities and education our nation's students will receive. It is imperative that we ensure better results derive from the organizations that train educators.

This study researched the dynamics that exist among the teacher preparation program, student achievement, and teacher performance. Archived assessment data and teacher performance evaluation data from one hundred thirty-three teachers were utilized in this study. Additionally, ten teachers were interviewed to ascertain their viewpoint regarding the influence of teacher preparation programs on teacher performance and student achievement.

Results were analyzed using paired t-tests, bivariate regression, multiple regression analysis, and the Chi-square test. Findings revealed the teacher preparation program did not directly influence student achievement or teacher performance. The analysis of interviews indicated the need for all teacher preparation programs to ensure student teaching is an integral part of their preparation program. Additionally, there is a need for preparation programs and school districts to align their efforts to ensure teacher candidates are prepared for the classroom.

Teacher preparation programs must do a better job of consulting with school districts about their anticipated teacher needs and design their recruitment and selection process accordingly (Almy et al., 2013). Research shows that an inspiring and knowledgeable teacher is an important school-related factor influencing student achievement; therefore, it is critical to be focused upon comprehensive and strategized training and support for prospective teachers. Teacher preparation programs must create constant and intentional platforms for prospective teachers to experience working in classrooms, so they are able to build relationships with students, gain an understanding of students' needs and differences while demonstrating the ability to deliver instruction that increases academic achievement.

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## APPENDIX A: INFORMED CONSENT TO PARTICIPATE IN RESEARCH

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study, or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. You are being asked to read the information below carefully and ask questions about anything you don't understand before deciding whether or not to participate.

Title: The Dynamics That Exist Among Teacher Preparation Program (TPP), Student Achievement, and Teacher Performance

Principal Investigator: Marva Rasberry, M.Ed
Faculty Sponsor: Antonio Corrales, Ed.D.

## PURPOSE OF THE STUDY

The purpose of this study is to is to examine the dynamics that exist among the TPP, student achievement, and teacher performance.

## RISKS OF PARTICIPATION

There are no anticipated risks associated with participation in this project.

## BENEFITS TO THE SUBJECT

There is no direct benefit received from your participation in this study, however, your participation will assist the researcher better understand whether or not the teacher preparation training you received influences your sense of efficacy.

## CONFIDENTIALITY OF RECORDS

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, but you will not be identified by name. For federal audit purposes, the participants' documentation for this research project, will be maintained and safeguarded by Marva Rasberry, for a minimum of five years after the completion of the study. After that time, the participant's documentation may be destroyed.

## FINANCIAL COMPENSATION

There is no financial compensation to be offered for participation in the study.

## INVESTIGATOR'S RIGHT TO WITHDRAW PARTICIPANT

The investigator has the right to withdraw you from this study at any time.

## CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

The investigator has offered to answer all of your questions. If you have additional questions during the course of this study about the research or any related problem, you may contact the Principal Investigator, Marva Rasberry, M.Ed, at 713-405-0908 or by email at RasberryM8776@uhcl.edu.

## SIGNATURES:

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time by contacting the Principal Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name:
Signature of Subject:
Date:

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.
Printed name and title
Signature of Person Obtaining Consent:
Date:

THE UNIVERSITY OF HOUSTON-CLEAR LAKE (UHCL) COMMITTEE FOR PROTECTION OF HUMAN SUBJECTS HAS REVIEWED AND APPROVED THIS PROJECT. ANY QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UHCL COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (281-283-3015). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT UHCL AREGOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT. (FEDERALWIDE ASSURANCE \# FWA00004068

## APPENDIX B:

## INDIVIDUAL INTERVIEW QUESTIONS

1. Participant demographics:
a. How long have you been teaching?
b. What is your highest degree earned?
c. Did you complete your certification in a traditional or alternative certification program?
2. What relationship is there between teacher preparation programs and student achievement?
3. What relationship is there between teacher preparation programs and teacher performance?
4. Does the type of teacher preparation program influence teacher performance?
5. If answered "Yes" to the previous question - How do you feel the teacher certification training, you received, impacted your teacher performance and therefore, built your confidence in your students' academic performance?
6. As you reflect on your teaching experience(s), what specific recommendations do you have for enhancing teacher preparation programs to ensure the preparedness of the teacher entering the profession? Describe in detail, the changes you would make and expand on why you would make the proposed changes.
7. How has the T-TESS impacted your effectiveness as a teacher?
8. Do you have any additional questions?
