

A COMPARATIVE STUDY OF SELF-EFFICACY BETWEEN TEACHERS IN
TRADITIONAL OR ALTERNATIVE CERTIFICATION PATHWAYS

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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ABSTRACT

The purpose of this study was to determine if a significant difference of self-efficacy exists between teachers with traditional or alternative certification pathways. Traditional and alternative pathways differ in curriculum and design toward teacher licensure. The methodology of this study was a quantitative, causal comparative study with 90 sample participants located in a school district in rural central west Georgia. The school district includes 20 schools, which consist of eleven elementary schools, three middle schools, three high schools, one college and career academy, one college and career center, and one alternative learning center. The study was conducted with the 12 question Likert-scale version of the TSES (Teacher Self-Efficacy Scale). The study's independent variable was the certification pathway that was split into two groups consisting of traditional or alternative teacher certification. The dependent variable of this study was the teacher's self-efficacy scores. The results of the MANOVA for self-efficacy indicated that no significant difference exists between teachers with traditional or alternative certification pathways. The results of this study answers to the teacher attrition phenomenon occurring across the United States, specifically Georgia. It can be concluded that if educators resign due to lack of teacher preparation, then self-efficacy can be identified as an influence within professional development in addition to its impact on teacher attrition, teacher shortages, and teacher burnout. It is recommended that further research examine the reasons why traditional and alternative certification pathways differ in preparation methods as well as the validity and effectiveness of both pathways.

Keywords: self-efficacy, traditional teacher certification, alternative teacher certification, teacher attrition, professional development, teacher-student relationship

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Dedication

- Jesus Christ: My provider. For your grace and mercy extend to me without limitation. Forever yours.
- Kamenia: My beautiful wife and my best friend. Thank you for unconditional love in unconditional situations. You make me a better man and for you, I am extremely grateful. Your strength is within me.
- Kamari: My loving son. Thank you for showing Daddy how to be a great man and how to be held accountable. Daddy works so hard because YOU work so hard! Keep being great Tank!
- Nyla: My caring daughter. You are Daddy's motivator and I thank you so much for always checking on me and making sure I have plenty of notes to read to push me through! Keep being awesome Boop-Boop!
- Carolyn: My mother. Thank you for your sacrifices and your teachings. This manuscript is not possible without you dedicating your life and your free time to this 1 pound 6-ounce premature child that you taught to read and write. You are my God send and my angel on earth. I love you beyond words Mama!
- Michael: My father. Thank you for always being present and always holding my hand whether I was fearful or confident. I love you so much for showing me the ways that a man of faith walks and talks. I am cut from your cloth, and I could not be prouder to call you, my father.

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List of Abbreviations

ATP (Alternative Teacher Preparation)

EHA (Education for all Handicapped Children Act of 1975)

ESSA (Every Student Succeeds Act)

GACE (Georgia Assessments for Certification of Educators)

GaDOE (Georgia Department of Education)

GaPSC (Georgia Professional Standards Commission)

GaTAPP (Georgia Teacher Academy for Preparation and Pedagogy)

NCLB (No Child Left Behind)

TPP (Teacher Preparation Programs)

TSES (Teacher Self-Efficacy Scale)

TTP (Traditional Teacher Preparation)

US DOE (United States Department of Education)

CHAPTER ONE: INTRODUCTION

Overview

The purpose of this quantitative, causal comparative study was to determine if there was a difference in student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers with traditional or alternative certification pathways. Chapter One provides a background for the topics of self-efficacy, traditional, and alternative certification pathways. Included in the background is an overview of the theoretical framework for this study. The problem statement examined the scope of the recent literature on this topic. The purpose of this study was followed by the significance of the current study. Finally, the research questions are introduced, and definitions pertinent to this study are provided.

Background

In 2001, NCLB (No Child Left Behind) created new requirements and criteria for new and experienced teachers through its foundation of making teachers “highly qualified;” this caused teachers to have a bachelor’s degree at minimum, obtain full certification or licensure all the while showing proof of content knowledge of each core subject (Green et al., 2020, p. 2). The NCLB Act of 2001 impacts both pathways of teacher certification in Georgia (traditional and alternative) as it provides an outlet or alternative resource for educators to become highly qualified while increasing content knowledge (GOSA, 2021). The increase in alternative routes to teacher certification can be linked to teacher shortages in many subject areas, the lack of male and culturally diverse teachers and the overall task of becoming highly qualified in relation to the NCLB Act (Whitford et al., 2018, p. 672).

TTP (traditional teacher preparation) programs target undergraduate students without prior teaching or work experience, while ATP (alternative certification preparation) programs

target teachers that are already in classrooms looking to obtain certification through accelerated programs (Whitford et al., 2018, p. 672). Traditional and alternative certification can be completed through several routes ranging from a teacher's major, credits, state assessments, state certification, or graduate degree completion (GOSA, 2021). This study strived to answer whether a teacher's certification pathway can determine their level of self-efficacy. Burić et al. (2020) explained that "teacher self-efficacy has been extensively researched in relation to different aspects of teachers' well-being such as burnout, stress and coping, job satisfaction, and professional commitment" (p. 2). The history of alternative certification is vital to understanding its impact on teacher self-efficacy as well as the growth of professional development.

Historical Overview

Green et al. (2020) stated that since the EHA (Education for all Handicapped Children Act) was passed in 1975, a shortage of certified teachers plagued special education (p. 2). Alternative certification programs were created in the 1980s as a response to teacher shortages (Miller et al., 2019, p. 2). In 2015-2016, there were 3.8 million public school teachers and 676,000 teachers who took an alternative pathway to becoming certified (NCES, 2018, p. 1). The percentages of teachers who chose the alternative route were believed to be attributed to "the supply of teachers in the labor market, especially in the context of the declining number of bachelor's and master's degrees awarded in education and persistent teacher shortages in certain subjects and categories of schools" (NCES, 2018, p. 1). The 2015 ESSA (Every Student Succeeds Act) emphasized teachers working with minority and low-income students, quality teacher preparation programs, and the growth of ATP programs (Whitford et al., 2018, p. 672). The ESSA also created academies separate from higher educational systems that could award

degrees to pre-service teachers as they worked alongside veteran teachers while receiving in-classroom training and completing coursework (Whitford et al., 2018, p. 672).

Requirements for teacher preparation programs in Georgia are essential to the foundation of this study as they pertain to the incentive for teaching in addition to the rigor and effectiveness of TTP programs in the state. The law requires that individuals have a minimum 2.5 GPA or a 3.0 cohort average; a waiver is also allowed if admission requirements are not met (NCTQ, 2021, p. 24). The state of Georgia also requires a basic skills test upon entry and applicants can become exempt based on SAT, ACT, or GRE test scores (NCTQ, 2021, p. 24). In 2015, 25 states required a 3.0 GPA or higher to enter a teacher preparation program; this number dropped from 25 to 11 in 2016 (NCTQ, 2021, p. ii). All TTP programs in Georgia are not all accredited as they require GaPSC (Georgia Professional Standards Commission) approval to provide teacher, leadership, and service certification (GaPSC, 2021b). A statewide ATP program used in the state of Georgia is known as GaTAPP or TAPP (Georgia Teacher Academy for Preparation and Pedagogy) (GaPSC, 2021a). GaTAPP “is Georgia’s only alternative route to initial teacher certification that’s designed for those who have earned a bachelor’s degree or higher but have not yet completed a teacher preparation program” (GaPSC, 2021a).

Alternative certification programs were created to add diversity to the educational field all the while growing the number of teachers and targeting those without certification so that they may enter K-12 classrooms at a faster rate (Whitford et al., 2018, p. 672). In an effort to recruit more teachers, alternative certification pathways were created; alternative pathways also created more diverse selections of teacher recruits (Woods, J. R., 2016, p. 1-2). Alternative certification programs are beneficial today because they provide teachers with the necessary tools and resources to be successful in the classroom; this in turn increases teachers’ self-efficacy

levels (Sakiz et al., 2020, p. 596). Research confirms this as “studies have found that better-educated, better-prepared teachers, more-experienced teachers, and those with higher self-efficacy remain in the profession” (Glazer, 2020, p. 2).

Society-at-Large

The issue within this study addressed the teacher attrition phenomenon occurring nationwide in the educational system through the impact of traditional and alternative teacher certification pathways. In 2019, around 90% of the annual teacher demand was significantly correlated to high teacher attrition rates and teacher shortages (Carver-Thomas & Darling-Hammond, 2019, p. 3). Contributors that influence teacher demands range from student enrollment to teacher preparation enrollment, teacher entry rates, and student-teacher ratios (Carver-Thomas & Darling-Hammond, 2019, p. 3). García and Weiss (2019) stated, “teachers in high-poverty schools who end up quitting the profession are more qualified with respect to certification than teachers who in low-poverty schools who quit the profession” (p. 16). This study specifically focused on teacher attrition, teacher shortages, and teacher burnout as they all correlate to self-efficacy; these three factors and more intertwine with self-efficacy through traditional and alternative certification pathways. West and Frey-Clark (2019) explained how “alternative pathways could bring into the profession a new generation of teachers who better reflect the demographic character of the students they teach” (p. 108). ATP programs also “reflect differential certification routes by presenting teacher preparedness at differential levels” (West & Frey-Clark, 2019, p. 108). Certain features of TTP programs such as “coursework content, length and intensity could be linked to a teacher’s perception of preparedness and effectiveness” (West & Frey-Clark, 2019, p. 108). Simply put, self-efficacy is determined by a teacher’s certification pathway which in turn influences professional development and impacts

teacher attrition, teacher shortages, and teacher burnout. Self-efficacy is a key factor in education and further research needs to be conducted for in-service and pre-service teachers (Şen, 2019, p. 2).

Theoretical Framework

The theoretical framework of this study was based on Bandura's social cognitive and self-efficacy theories. In this study, Bandura's social cognitive theory focused on self-efficacy, personal efficacy, perceived coping efficacy and self-regulation, whereas Bandura's self-efficacy theory focused on behavioral change and how one perceives success. All these factors correlate to a teacher's certification pathway through the positive or negative impact of one's self-efficacy, emotional well-being, ability to adapt to change and reliability. According to Bandura's social cognitive theory, intrapersonal influences and one's environment can impact their self-efficacy (Bandura, 2012, p. 11). This study also looked at these intrapersonal influences and how they impact teacher-student relationships, emotional well-being, and one's goal setting. Self-efficacy and self-regulation are both connected to one's goal setting (Bandura, 1991, p. 258). This study also discussed the self-efficacy and performance relationship in which "learners reflect on their performance and use this information when formulating their self-efficacy beliefs" (Talsma et al., 2018, p. 137).

Problem Statement

Teacher attrition has increased within educators' first two years in the field; also causing educators to resign before retirement (Glazer, 2018, p. 62). Educators in urban and high-need schools are impacted heavily by the teacher turnover rate which is "around 50 percent higher than more affluent schools" (Dunn et al., 2017, p. 282). Educators have listed working conditions and varying levels of self-efficacy as reasons for resignation because those factors make it harder

for them to do their jobs (Dunn et al., 2017, p. 282). Educators' identities can also affect their choice of whether they resign because one's self-perception will continuously go through construction and modification over time and change them based on various processes and experiences (Dunn et al., 2017, p. 282).

This study filled the gap in research and literature regarding traditional and alternative teacher certification pathways through teacher-student relationships and other external factors that influence self-efficacy. Self-efficacy in comparison to traditional and alternative certification pathways is important to study because the ESSA has stated how important ATP programs are and assessed their impact on student achievement versus TTP programs' impact on student achievement (Whitford et al., 2018, p. 672). Regarding teacher preparation, ATP programs aren't a focal point of the ESSA (Whitford et al., 2018, p. 672). Self-efficacy impacts one's outcome expectations, goals, sociostructural factors and behavior; these same factors can also impact self-efficacy negatively (Bandura, 2012, p. 14).

How a teacher perceives themselves correlates to their production in the classroom and their competency in many areas of education ranging from lacking collegial support to classroom instruction to having conversations with difficult students and families (Zhang et al., 2020, p. 421). Failures related to ability will lower self-efficacy levels more than failures related to unusual circumstances (Bandura, 1977, p. 201). The self-efficacy theory keys on how one obtains success because success with minimal personal effort will create a high sense of self-efficacy, while success with maximum personal effort could be detrimental to one's self-efficacy level (Bandura, 1977, p. 201). Past empirical studies related to comparing TTP and ATP programs that evaluate their efficiency are scarce, limited, and lack key statistical information (Whitford et al., 2018, p. 683). The problem is that the literature has not fully addressed the

effects of teachers' self-efficacy after obtaining teacher certification, particularly traditional or alternative teacher licensure.

Purpose Statement

The purpose of this quantitative, causal comparative design was to determine if student engagement, instructional strategies, and classroom management teacher self-efficacy scores differed between teachers with traditional or alternative certification pathways. The independent variable in this study was the teacher certification pathway, which is a categorical variable with two levels: traditional teacher certification and alternative teacher certification. Traditional teacher certification applies to students with degrees in academic subjects grades K-12 (Georgia Tech, 2021). Alternative teacher certification is for students or graduates with non-educational backgrounds pursuing state certification while teaching (Georgia Tech, 2021). The dependent variable in this study was the student engagement, instructional strategies, and classroom management teacher self-efficacy scores. Student engagement refers to the relationship between the student and the instructor and the growth of the student's overall experience as it relates to learning, student performance and student development (Trowler, 2010, p. 3). Instructional strategies are actions or procedures aimed at increasing learning or teaching objectives within a lesson (Mijnyawa et al., 2019, p. 79). Classroom management is correlated to the school environment through effective strategies intended to improve student achievement, behavior management, and teachers' work environments; effective classroom management can also impact teacher retention rates (Harlacher, 2015, p. 4). Self-efficacy beliefs are determined by "one's ability to cope with emotional and environmental change (i.e., managing stress)" (Burić et al., 2020, p. 3). The participants in this study consisted of 90 certified teachers employed in a rural school district of a southern state.

Significance of the Study

This study examined the differences between teachers in traditional and alternative certification pathways. This study was deemed significant because it adds value to the educational field through the insight and growth of professional development as well as filling the literature gap regarding the self-efficacy and teacher certification relationship. This study will provide school districts with information and statistical data of teachers' self-efficacy in traditional and alternative certification pathways, specifically connected to their certification pathway. This aspect of the study is vital because it will detail how shortages come from attrition, then how attrition leads to teacher burnout and how teacher burnout is due to factors such as self-efficacy, teacher-student relationships, certification pathways and professional development in traditional and alternative certification pathways. Teacher shortages in various subject areas creates teacher attrition that lessens the improvement level of a quality education (Madumere-Obike et al., 2018, p. 50).

This study's significance is confirmed through an up-to-date response to the 2001 NCLB highly qualified teacher requirement which emphasizes how highly qualified teachers should ultimately benefit students in the long run but will prove to be a difficult task on finding highly qualified teachers who are prepared and ready to enter a classroom (Ford et al., 2020, p. 2). An educator's certification pathway choice effects not only their professional development, but it could impact their tenure and self-efficacy as well. By their fifth year of teaching, teacher retention sits at 50% (Ford et al., 2020, p. 2). Teachers are leaving the profession at such an alarming rate due to the lack of social support which in turn negatively impacts their professional stress, burnout rate, job satisfaction, and self-efficacy (Zhang et al., 2020, p. 420). To further advance and grow teacher preparation programs, it is advised that faculty work collaboratively in

designing and implementing curriculum; it is also advised that teacher preparation programs adopt experiential learning strategies to instruct teachers effectively and efficiently (Bannister-Tyrrell et al., 2018; Landon-Hays et al., 2020).

Research Question

RQ: Is there a difference in the student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in traditional or alternative certification pathways?

Definitions

1. *Alternative certification* – Alternative certification is an option for state certification for teachers while they are employed and working in the same field that they are seeking certification (Georgia Tech, 2021).
2. *Professional Development* – The action of growing and succeeding in a work setting through completing tasks, achieving goals, and obtaining new skills (UCSF, 2022).
3. *Self-efficacy* – Self-efficacy is defined as one’s evaluation of skill and ability to complete performance tasks (Leyser et al., 2011, p. 242).
4. *Teacher attrition* – The forfeiture of teachers from the teaching profession (Madumere-Obike et al., 2018, p. 48).
5. *Teacher attrition rate* – The amount or percentage of teachers leaving the profession within a school term (Madumere-Obike et al., 2018, p. 48).
6. *Teacher burnout* – An educator’s high level of exhaustion and professional commitment deprivation (Madigan & Kim, 2021, pp. 1-2).
7. *Teacher shortage* – The ineffectiveness to fill teaching vacancies with qualified teachers (Sutcher et al., 2016, p. 1).

8. *Traditional certification* – Traditional certification is teacher state certification from grades Kindergarten through 12th; a degree is also obtained pertaining to a school subject (Georgia Tech, 2021).

CHAPTER TWO: LITERATURE REVIEW

Overview

A systematic review of the literature was conducted to explore the problem of teacher attrition, as well as traditional and alternative certification pathways through a moderate frame in correlation to self-efficacy. This chapter will present a review of the current literature related to the topic of study. In the first section, the theories relevant to the social cognitive, and the theory of self-efficacy will be discussed, followed by a synthesis of recent literature regarding teacher attrition through underlying issues of teacher preparation, teacher shortages, teacher burnout and teacher perception of self-efficacy. Related literature will also extend to the discussion of teacher self-efficacy, and the influence of the teacher-student relationship as it plays in the achievement of general and special education teachers. Lastly, literature surrounding the external factors which determine self-efficacy will be addressed. In the end, a gap in the literature will be identified, presenting a viable need for the current study.

Theoretical Framework

Bandura's social cognitive and self-efficacy theories serve as the foundation for this literature review as these theories interrelate to the determination of differences in teacher self-efficacy between teachers with traditional or alternative certification pathways. The social cognitive theory has a foundation built on human functioning and three perspectives of direct personal, proxy, and collective agencies (Griffin, 2021, p. 9). Direct personal agency is when an individual manages their own life and influences themselves whereas proxy agency is when an individual relies on others for influence, and collective agency is when an individual is a member of a group and relies on other members for influence (Griffin, 2021, p. 9). Bandura's (2012) social cognitive theory includes human functioning and interpersonal influences, and these

factors all impact self-efficacy (p. 11). Three environments of social cognitive theory that can affect one's self-efficacy are imposed, selected, and constructed environments; these environments cause humans to react and partake in specific activities with or without certain control (Bandura, 2012, p. 11-12). Social cognitive theory relies on people finding and using influence around them to positively impact self-efficacy; in situations where people lack control, they must use human functioning and personal skills to enhance personal and group productivity (Bandura, 2012, p. 12).

Bandura attributes society-wide success of the social-cognitive theory to the theoretical model, translational and implemental model, and the social-diffusion model (Bandura, 2019, p. 14). The theoretical model shows the reasons needed for psychosocial change and how these reasons came to be (Bandura, 2019, p. 14). The translational and implemental model breaks down how change will occur, and which procedures will be used in the process; it transforms theoretical principles into operational models (Bandura, 2019, p. 14). The social-diffusion model addresses cultural atmospheres through the implementation of psychosocial programs; these programs focus heavily on contrast modeling which allows people to see transitional success of similar skilled individuals to grow their self-efficacy (Bandura, 2019, p. 14). Bandura (2019) exclaimed if people don't have resources or efficient environmental supports then it will be difficult to motivate people to change (p. 14). According to Bandura, the purpose of the social cognitive theory is to bring out the best in others at the individual and social system levels (Bandura, 2019, p. 14).

The social cognitive theory connects to teachers of all experience levels through the perception of self-efficacy, personal efficacy, and perceived coping efficacy (Bandura, 2002, pp. 277-279). How teachers think, motivate, and persevere, are all connected to the social cognitive

theory; these actions also include teachers' emotional well-being and the choices that they make (Bandura, 2002, p. 270-271). How one prioritizes life's obstacles while contributing to changing society will directly impact their perceived collective efficacy and enhance their level of personal efficacy (Bandura, 2002, p. 277). This aspect is essential when discussing a teacher's purpose in correlation to the social cognitive theory because it connects a teacher's purpose for becoming an educator to their perseverance in education as well as their mental, emotional, and physical well-being throughout their tenure.

Regardless of a teacher's experience level, they are tasked with educating students, maintaining relationships with colleagues and student's families, in addition to handling daily occupational duties, which in time can be daunting and overwhelming to one's mental psyche and body. When people find themselves in occupations below their expectation level or beyond their skill level, occupational stress occurs which is closely related to their efficacy perception level; one may find themselves being asked to complete tasks too relaxed or too daunting for their personal liking (Bandura, 2002, p. 279). Personal efficacy and teacher success within the classroom are at best whether achieved individually or with collaborative efforts; when one puts their personal skills to the best collective use it can lead to high levels of success (Bandura, 2002, p. 273). Perceived coping efficacy effects how teachers perceive themselves and is directly related to stress and burnout (Bandura, 2002, p. 279). Berg and Smith (2018) emphasized the idea that a teacher being knowledgeable of what influences or hinders the development of their efficacy beliefs, will ultimately serve as beneficial to their teacher success (p. 531). It is stated to increase perceived efficacy, one must have social support and self-regulation skills which can boost one's satisfaction with home and school life (Bandura, 2002, p. 281-282). Social support

and self-regulation for teachers also fall under the constructs of the social cognitive theory as they relate to anxiety and depression (Bandura, 2002, p. 282).

Self-regulation coincides with social cognitive theory as it includes people's essential beliefs and their confidence in completing and achieving tasks (Bandura, 1991, p. 248). Self-regulation under the social cognitive theory incorporates self-observation, self-monitoring, and self-motivation; these three aspects impact one's behavior and motivation (Bandura, 1991, p. 250-251). Personal standards also play a hand in the social cognitive theory as they pertain to how people view and judge themselves (Bandura, 1991, p. 253). Teachers must self-regulate and hold dear to their personal standards to maintain their perceived self-efficacy because "people respond with self-satisfaction and self-approval when they fulfill their personal standards but negatively when they fall short of, or violate, their standards" (Bandura, 1991, p. 254).

Self-efficacy is vital to self-regulation because one's self-efficacy can impact various aspects of their life such as their choices, dreams, and goals (Bandura, 1991, p. 257). One's self-efficacy also impacts their self-regulation through reactions to stressful situations, coping strategies and behavioral change in difficult situations (Bandura, 1991, p. 257). The self-efficacy theory is directly related to all teachers as "efficacy expectations determine how much effort people will expend and how long they will persist in the face of obstacles and aversive experiences and how long they will sustain effort in dealing with stressful situations" (Bandura, 1977, p. 194).

Bandura (1977)'s self-efficacy theory focused on behavioral change as he felt that efficacy determined people's choices, efforts and reactions to stress (p. 194). He also felt that one's self-efficacy level could be based on "performance accomplishments, vicarious experience, verbal persuasion, and psychological states" (p. 195). Performance accomplishments focus on

personal mastery experiences which correlates to self-efficacy through success and failure (Bandura, 1977, p. 195). Personal mastery experiences are essential skills for the success of all teachers, but more importantly for preservice teachers as they pay close attention to their overall mastery of the range of skills correlated to success (Berg & Smith, 2018, p. 531). The more success one has then the higher their level of mastery expectations and vice versa in terms of failure (Bandura, 1977, p. 195).

Performance accomplishments emphasize the use of participant modeling while vicarious experiences utilize modeled behavior and verbal persuasion and emotional arousal rely heavily on social and emotional persuasion (Bandura, 1977, pp. 195-198). How one perceives success is also a factor in the self-efficacy theory because success with the assistance of aids or support is different than personal success with zero assistance (Bandura, 1977, p. 201). Bandura (1977) explained, “failures would be expected to produce greater reductions in self-efficacy when attributed to ability rather than to unusual situational circumstances” (p. 201). An interesting piece of Bandura’s theory was his take on verbal persuasion and how one’s self-efficacy can be related to whomever is delivering the verbal messages. Bandura (1977) stated, “The impact of verbal persuasion on self-efficacy may vary substantially depending on the perceived credibility of the persuaders, their prestige, trustworthiness, expertise, and assuredness” (p. 201). An example of verbal persuasion would be how preservice teachers are observed in the educational setting by students, mentors, and visitors that all offer feedback (Berg & Smith, 2018, p. 531). Preservice teachers also judge themselves while being critical of the vicarious experiences that are occurring, especially if they fail to identify or connect with the teacher that is modelling the desired behavior or skill (Berg & Smith, 2018, p. 531). This theory of self-efficacy proves to be

vital because it includes an emphasis on one's personal thought process, effort level, actions, and reactions to stressful situations in addition to personal success and failure.

Bandura (1977) explained that “performance success can strengthen self-efficacy but even success experiences do not necessarily create strong generalized expectations of personal efficacy” (p. 200). The idea is basically that one can obtain success from performing well but the accumulation of these events over time will not ensure that one will have a high perceived level of self-efficacy. Berg and Smith (2018) detailed how one's perception, physiological and emotional differences may boost or harm their self-efficacy beliefs based on solely on their own contemplations (p. 531). The self-efficacy theory keys on how one obtains success because success with minimal personal effort will create a high sense of self-efficacy, while success with maximum personal effort could be detrimental to one's self-efficacy level (Bandura, 1977, p. 201).

Related Literature

Teachers from TTP programs rely on self-efficacy and self-motivating techniques, just as educators from ATP programs; teachers must cope emotionally and use self-regulating techniques to do their jobs. This literature will detail how shortages come from attrition, then how attrition leads to teacher burnout and how teacher burnout is due to factors such as self-efficacy, teacher-student relationships, certification pathways and professional development in traditional and alternative certification pathways. The literature intersects in areas related to teacher attrition including teacher shortages and burnout, teacher certification, and the teacher-student relationship and its correlation to teachers' self-efficacy. Literature related to external factors that can determine self-efficacy will also be reviewed in this section. The literature also

discusses teacher self-efficacy, the perception of self-efficacy as well as the importance of professional development.

Teacher Shortages, Attrition, and Burnout

A teacher shortage has been projected for the near future in the United States where the demand for teachers outweighs the supply (Van-Overschelde & Wiggins, 2018, p. 312). Teacher demand is increasing due to the student increase in public schools across the United States; this increase is slated to represent 23,000 teachers per year (Van-Overschelde & Wiggins, 2018, p. 313). This apparent teacher shortage is also connected to the increased percentage of teachers leaving the profession (Van-Overschelde & Wiggins, 2018, p. 312). The teacher attrition rate as a result of this shortage could possibly be determined by how many prospective educators choose alternative certification pathways in comparison to traditional certification pathways in addition to qualified-educator recruitment and retention (Van-Overschelde & Wiggins, 2018, p. 312). To address the teacher attrition phenomenon, school districts must target the teacher shortage of 115,000 teachers while hiring 287,000 teachers each year which consists of addressing the student increase in public schools with hiring 27,000 teachers and replacing the remaining 260,000 which represents the number of teachers who left the profession (US DOE, 2016; Van-Overschelde & Wiggins, 2018). Zhang et al. (2020) stated that teachers are leaving the profession at such an alarming rate due to the lack of social support which in turn negatively impacts their professional stress, burnout rate, job satisfaction, and self-efficacy (p. 420).

Rita Pierson once said, “Every child deserves a champion—an adult who will never give up on them, who understands the power of connection, and insists that they become the best that they can possibly be” (TED Talks Education, 2013). Finding highly qualified teachers according to the NCLB Act of 2001 is a continuous problem in education today (Ford et al., 2020, p. 2).

Teachers are lacking qualifications all over the United States which is ultimately attributing to the teacher shortage (García & Weiss, 2019, p. 1). The National Education Association is a union home to almost 3 million teachers and in January 2022, the NEA surveyed 3,621 teacher-members regarding issues surrounding public education and the COVID-19 pandemic (GBAO Strategies, 2022). Staff shortages were reported as contributors of teacher burnout and shortages which were a result of educators planning to leave teaching early (GBAO Strategies, 2022). Of the 3,621 teachers surveyed, 55% proclaimed that they would leave teaching earlier than planned which included the demographics of 62% Black teachers and 59% Hispanic teachers (GBAO Strategies, 2022; Jotkoff, 2022). Staff shortages appeared as a serious problem to teachers within the study as 80% of the sample reported that “unfilled job openings led to more work obligations for those that remained” (GBAO Strategies, 2022; Jotkoff, 2022). Becky Pringle, the National Education Association President stated:

School staffing shortages are not new, but what we are seeing now, is an unprecedented staffing crisis across every job category. This crisis is preventing educators from giving their students the one-on-one attention they need. It is forcing them to give up their class planning and lunch time to fill in for colleagues who are out due to COVID. And, it is preventing students from getting the mental health supports needed (Jotkoff, 2022).

Teacher shortages have grown and expanded and consequently affected substitute teachers, bus drivers, nurses, food service workers and teachers in math, science, special education, and bilingual education (Jotkoff, 2022).

Not only has it been difficult to find qualified teachers, but it has also been equally hard to find qualified substitute teachers although the educational and licensing requirements for substitute teachers have lowered (Saenz-Armstrong, 2020). Certain states such as Missouri and

Iowa once required bachelor's degrees or a certain number of college credits, but have now since changed their policy and stance (Saenz-Armstrong, 2020). The sample of the Saenz-Armstrong (2020) study consisted of 124 school districts which included 100 of the largest school districts in the country (Saenz-Armstrong, 2020). Sixty percent of those 124 school districts do not require a bachelor's degree to be a substitute teacher while 63% of those school districts do not require a license to substitute teach (Saenz-Armstrong, 2020). Obtaining high-quality substitute teachers would require a larger school district budget (Saenz-Armstrong, 2020). Financial adjustments to teachers' base pay, increases to substitute teacher pay in addition to providing benefits and full-time hours could have positive effect on the nation's school staffing shortage (NEA, 2022).

While financial changes must be made, attention must be paid to teacher recruitment as college freshman are declaring education as a major at varying percentages (Stolzenberg et al., 2019, p. 33). In 2018, the Higher Education Research Institute conducted a nationwide survey examining incoming college freshman and their intended majors and college expectations (Stolzenberg et al., 2019, p. iv-1). Within this survey, 6.2% of the incoming freshman class, from public and private four-year colleges and universities, declared Elementary Education as their intended major (Stolzenberg et al., 2019, p. 33). Only 1.1% of these freshmen declared Special Education as their intended major (Stolzenberg et al., 2019, p. 33).

In Georgia, there has been a mass focus on teacher recruitment and the hiring of qualified teachers since Georgia has a teacher hiring increase since 2019 but no increase in hiring qualified teachers (McKillip & Farrie, 2019, p. 1-2). McKillip and Farrie (2019) placed Georgia school districts into four categories based on race and income to examine the need to attract and retain teachers (p. 2). The districts are as follows: majority white and wealthier districts, other wealthier

districts, majority black and low-income districts, and other low-income districts (McKillip & Farrie, 2019, p. 2). The majority white and wealthier districts consist of 68 districts, the other wealthier districts consist of 18 districts, the majority black and low-income districts consist of 43 districts, and the other low-income districts consist of 51 Georgia school districts (McKillip & Farrie, 2019, p. 2). McKillip and Farrie (2019) stated, “Georgia’s increase in new teacher hires with alternative certification and the decline in teachers with more years of experience are a troubling trend” (p. 3).

McKillip and Farrie’s (2019) research revealed how the majority white and wealthier districts were home to mainly experienced teachers with standard certification; these teachers also had higher salaries than the other categorized school districts (p. 6). The lowest paid salary teachers were found in the majority Black, low-income districts possessing alternative certification (McKillip & Farrie, 2019, p. 6). The majority Black, low-income districts struggle with significant teacher turnover and the lack of more experienced and qualified teachers (McKillip & Farrie, 2019, p. 6). Since experienced and qualified teachers are at such a high need, gaining qualified teachers should be a state priority (McKillip & Farrie, 2019, p. 6).

Nationwide, teacher shortages have caused lawmakers to change the hiring rules of educators (Romo, 2022). From teachers testing positive for COVID to parents’ substitute teaching without educational backgrounds, lawmakers have changed the hiring process and extended substitute teacher contracts in addition to welcoming retired teachers back into the classroom (Romo, 2022). This strategy is evidently needed as emergency licenses are being provided by school districts to assist with teachers and administrators teaching on their breaks and planning periods as well as classes being housed together in cafeterias, auditoriums, or gyms due to no teachers being available (Romo, 2022). In Georgia, Governor Brian Kemp has

addressed teacher shortages through the passing of House Bill 385 which allows retired Georgia teachers to return to teaching while still acquiring a pension (Tagami, 2022). This law also proves to be fruitful as it addresses teacher shortages and the low level of interest in educational centers from college students (Tagami, 2022). House Bill 385 is another solution to educational issues in Georgia as he previously created an alternative certification pathway for military veterans to target more minority college students; the military veterans would also mentor and train these college students (Tagami, 2022).

Teacher retention is defined as the number of teachers who are teaching in the same school in which they taught in the previous school year (IGI Global, 2022). Teacher retention has been a constant focus in Troup County, Georgia as an exit survey in 2017 revealed that “teacher recruitment was the number one reason for leaving and that 87% of the Troup County School System employees were satisfied with their positions” (Troup.org, 2017). In 2019, Troup County continued its focus on teacher retention and went on record to state, “if we don’t recruit the absolute best teachers and retain the best teachers it’s all for naught” (Evans, 2019). The Troup County School System also had a great deal of teachers with less than four years of experience in 2019 (Evans, 2019). Continuing into 2021, the Troup County School System kept its sight on teacher retention by setting the goal of providing retention to all of its employees and not just the school-based employees, approved by the state Governor Brian Kemp (Peralta, 2021). With the continuous goal of teacher retention and proving its importance within education, the Troup County School System hopes to be on the positive and profitable side of teacher shortages, attrition, and burnout.

Traditionally prepared teachers leave the profession at lower rates than alternatively prepared teachers (Boyd et al., 2012, p. 14). Research has confirmed various results in regard to

the demographics of teacher attrition such as white teachers leaving the profession earlier than teachers of color and vice versa (Van-Overschelde & Wiggins, 2018, p. 312). This demographic aspect is interesting because most alternatively prepared teachers are teachers of color (Van-Overschelde & Wiggins, 2018; Yin & Partelow, 2020). Teacher attrition issues may be related, but not limited to developments within the teacher labor market that limits the hiring of and impact of teachers of color and male teachers in comparison to white and female teachers, the concept of selecting a teacher preparation program as it pertains to a teachers' gender and ethnicity, and the differences between which schools educate and prepare traditional and alternative teachers (Van-Overschelde & Wiggins, 2018, p. 312).

Teacher attrition effects student learning and student achievement (Huang et al., 2020, p. 522). Teacher attrition has also been attributed to “low job satisfaction and low occupational commitment”; teacher self-efficacy has been connected to “teacher job satisfaction and occupational commitments” (Huang et al., 2020, p. 522). Huang et al. (2020) conducted a quantitative study in which “a total of 1,424 participants responded to 12 survey questions from Tschannen-Moran and Woolfolk Hoy’s short version of the Teachers’ Sense of Efficacy Scale (p. 528-529). This study strived to answer whether a relationship existed between classroom teaching, teacher-student relationships, and school-decision making and teachers’ job satisfaction and occupational commitment (Huang et al., 2020, pp. 526-529). Teacher job satisfaction is defined as “teachers’ affective reactions to their teaching role and tasks whereas teachers’ occupational commitment is the psychological bonds that teachers have with teaching as a role, an occupation, and an institution” (Huang et al., 2020, p. 526-527). Huang et al. (2020) explained Pianta et al. (2004)’s ideal of how teacher self-efficacy holds a place in teacher-student relationships through “emotional climate, teacher sensitivity, and regard for student

perspectives” (p. 524). Huang et al. (2020) then stated, “teachers feel capable of building an atmosphere of mutual trust in which thoughts and emotions can be freely expressed and the bonds of intimacy can be forged”; this in turn can impact teacher self-efficacy (p. 525).

A possible hinderance of teacher self-efficacy and a contributor to teacher burnout is the COVID pandemic. The COVID pandemic has impacted the world of education through the ever-changing settings of face to face, hybrid, and virtual instruction (Pressley & Ha, 2021, p. 1). Pressley and Ha (2021) surveyed 361 teachers from urban, suburban, and rural areas of the United States, while comparing their instructional and engagement teacher self-efficacy scores (p. 4-5). This study collected data with the instrumentation of the TSES, while reporting significant differences in instruction type and no significant differences for instructional and engagement efficacy regarding instructional levels (Pressley & Ha, 2021, p. 6-7). Teachers from urban, suburban, and rural areas also displayed no significant differences in instructional and engagement efficacy, which could imply that a teacher’s instructional approach could increase their self-efficacy (Pressley & Ha, 2021, p. 7). There are various other factors that contribute to low teacher self-efficacy and teacher burnout which were not explored in-depth within the previous study.

Bozgeyikli (2018) stated that other factors that affect Special Education teacher burnout are success, relationship, autonomy, and dominance (p. 289). As teachers experience less mental strain and psychological needs, their compassion level rises along with the decrease of burnout and compassion fatigue (Bozgeyikli, 2018, p. 293). The need for teachers to be mentally stable and healthy is critical in their life as an educator. Without being psychologically sound, a teacher will burnout quickly and the areas of success, relationships, autonomy, and dominance will fall. Bozgeyikli (2018) suggested that autonomy and dominance could increase for teachers with

them being able to have freedom in goal selection, classroom management and professional development; if teachers are able to choose their own strategies and opportunities then they will have higher job and compassion satisfaction levels (p. 293). Teachers need more control in their resources, classroom management and support from staff to feel successful in the workplace; these factors affect self-efficacy and assist in the need to build a teacher-student relationship because when an educator feels unworthy or disrespected, all other work areas will lack in productivity.

The Teacher-Student Relationship and External Factors that Determine Self-Efficacy

Difficulties in relatability leads to the overall problem of negative teacher-student relationships and low teacher self-efficacy levels. Spilt et al. (2011) wrote:

People have a basic desire for pleasant interactions with others in a personal caring context and readily develop social bonds when they are simply exposed to each other...poor relationships go against this need for relatedness and make teachers vulnerable for personal failure and rejection by students (p. 465).

Positive teacher-student relationships are the foundation of student development and the need for teachers and students to have common ground and desire to learn more with one another and about one another is highly critical. Aldrup et al. (2018) emphasized the importance of the teacher-student relationship and how it relates strongly to the teacher's well-being and professional identity: "establishing a caring relationship with one's students is inherent to the teaching profession and at the core of teachers' professional identity...teachers strive to connect with their students and to feel valued, respected and liked" (p. 127). Without relatability and sincerity, a teacher may not reach the student to grow them academically or in relation to

behavioral development; a hindrance in the teacher-student relationship may also lead to issues with self-efficacy and possibly teacher burnout.

Self-efficacy relates closely to one's emotions and places value in one's relationships through goal setting and achieving tasks in the workplace. Koenen et al. (2018) stated, "sensitive teachers can help students to feel safe to explore the environment and to cope with the demands of school, thereby impacting students' learning behaviors and development" (p. 1). Koenen et al. (2018) conducted a study using a Teacher Relationship Interview (TRI) tool that is aimed at assessing teachers' mental representations of dyadic teacher-student relationships (p.1). The study was a sample of special education students with mild to severe attachment problems. Koenen et al. (2018) stated, "teachers in special education may attribute student problem behavior to stable and unintentional student behavior whereas teachers in regular education may be more inclined to attribute student problem behavior to students' negative intent" (p.9). Koenen et al. (2018) then stated special education teachers are more aware of the problems of their students and are more open to talk about the "conflictual teacher-student interactions and the negative emotions that come along with these behavioral problems" (p.10). This study shows how vital the interpersonal aspect is to the teacher and its overall influence on the teacher's competency and knowledge (factors that can directly affect a teacher's self-efficacy and perception of themselves).

Krane and Klevan (2018) explained how important the teacher-student relationship is noticed by student's parents; a parent exclaimed, "You notice if the mutual chemistry and respect is present, that teachers and students have respect for each other, then it's a lot of easier for the teacher to teach and for the student to learn" (p.77). These same parents also stated that they respect and admire the teacher's role along with acknowledging their importance in promoting a

positive teacher-student relationship (p.77). Teachers exuding positivity to students and parents will produce positive results. This will in turn help teachers feel good about themselves and their jobs; job satisfaction is key to a teacher's perceived self-efficacy. Teachers spending time to grow and develop relationships with their students will be worthwhile and increase self-efficacy, student engagement, and engagement efficacy (Pressley & Ha, 2021, p. 8).

Corry and Stella (2018) researched teacher self-efficacy in online education from 2003 through 2018 (p. 1). Teacher self-efficacy was reviewed in three specific areas which consisted of teacher self-efficacy in online education, the comparison of demographic data to teacher self-efficacy as well as changes on teacher self-efficacy (Griffin, 2021, p. 1). Corry and Stella (2018) stated, "Teacher efficacy has been found to affect student outcomes; however, teacher efficacy differs from teacher self-efficacy...In other words, teacher efficacy is based on expectations of efficacy, while teacher self-efficacy is based on expectations of outcomes" (p. 8). Although these two terms appear to be similar, they both hold their own concrete definition and purpose. One's personal efficacy is not relatable to their teacher efficacy.

Bandura (2012) explained that there are four sources of self-efficacy which are mastery experiences, social modeling, social persuasion, and choice processes (p. 13). Mastery experiences are the successes, failures and events that add up to "mastering" a task, social modeling is when a person sees a person of similar caliber succeeding at similar tasks because they have similar capabilities and social persuasion is how one's environment makes them see and believe in themselves (Griffin, 2021, p. 4). Choice processes is how a person makes a choice during a difficult time (Griffin, 2021, p. 4). Bandura (2012) stated:

Those of high self-efficacy set even higher goals for themselves and mount a vigorous effort to realize these goals; those of somewhat lower efficacy believe they can achieve

the original goal, stick to it, and work a bit harder; and those who distrust their efficacy to even repeat what they had accomplished lower their goals and slacken their efforts (p. 18).

Self-efficacy impacts one's outcome expectations, goals, sociostructural factors and behavior; these same factors can also impact self-efficacy negatively (Bandura, 2012, p. 14). How a teacher perceives themselves correlates to their production in the classroom and their competency in many areas of education ranging from lacking collegial support to classroom instruction to having conversations with difficult students and families.

Teaching is a stressful occupation, and it relies heavily on the relationship and interaction between the teacher and student (Spilt et al., 2011, p. 458). It is highly assumed that the more experience a teacher has then the more they are experienced in building relationships with students in addition to having high self-efficacy levels. The influence of the teacher-student relationship is extremely vital in the personal progress of the student and the teacher. Oberle and Schonert-Reichl (2016) stated that a positive teacher-student relationship is a protective factor in school failure and an educator's occupational stress, emotional exhaustion and depersonalization from students greatly affects their interaction with students, which causes more stressful and less positive school environments (p. 31). These factors tie in with the teacher-student relationship through school climate because without a fruitful and positive environment that promotes learning, growth and sincerity, an educator will not see success in their student's grades and behavior and in time they too will become emotionally and physically weary.

Many students with disabilities are often ignored during instruction and some teachers possess a low competency level in this portion of teaching (which can limit self-efficacy) and lead to students not receiving the appropriate amount of instruction (Ruppar et al., 2016, p. 282).

Zolkoski (2019) conducted a study on the importance of teacher-student relationships with EBD students that were placed in an alternative program. The results were listed as the “teachers impacted the participants positively and negatively...at their regular schools, participants had an overall feeling that their teachers did not care about them and did not care if they were learning anything” (Zolkoski, 2019, p. 238). The students stated that this was very frustrating to deal with and they also believed that the teachers were not there to help them learn (Zolkoski, 2019, p. 238). Students that transferred to the alternative program from regular schools felt as if their new teachers cared about them and wanted to help them (Zolkoski, 2019, p. 238). Zolkoski (2019) stated, “This had a huge effect on them. They wanted to try hard for their teachers and do well” (Zolkoski, 2019, p. 238). Teachers’ actions are noticed as the foundation of positive teacher-student relationships and by improving these interactions it will also improve the learning environment in addition to positively influencing outcomes for students (Zolkoski, 2019, p. 240). The more that a teacher cares and shows this then the more a student will be apt to behave well, follow instruction and be engaged with an educator, which will positively impact a teacher’s sense of worth and belonging.

Other factors that can determine self-efficacy are factors such as resilience, instructional quality, occupational commitment, job satisfaction, teaching performance and teacher burnout can be attributed to teacher self-efficacy (Pfitzner-Eden, 2016, p. 1). Educators must feel confident in themselves to place confidence in students and have students in turn experience self-gratitude. According to Mahler et al. (2018), research has shown that teacher self-efficacy is related to teachers’ professional engagement, effective instructional strategies, and an openness to demanding students (p. 2). An educator’s impact in the classroom goes without saying; an effective teacher is one that is competent within their field in addition to being relevant and

relatable to their students. Mahler et al. (2018) believed that successful teaching relies on teacher enthusiasm and student performance (p. 13-14).

Student Engagement, Instructional Strategies and Classroom Management

Tschannen-Moran and Woolfolk Hoy's 2007 study into the possible derivation of teacher self-efficacy in relation to novice and experienced teachers serves as a monumental foundation of teacher self-efficacy, theoretically and experimentally. This study proved its stature by examining Bandura's mastery experiences within teachers' satisfaction levels to determine a possible correlation to efficacy, as well as measuring efficacy in relation to student engagement, instructional strategies, and classroom management (Tschannen-Moran & Woolfolk Hoy, 2007, p. 948). Bandura's mastery experiences were identified in the experienced teachers' level of support received from resource support and verbal persuasion from administration, colleagues, parents, and the community, which increased their overall professional performance satisfaction, but did not affect their self-efficacy (Tschannen-Moran & Woolfolk Hoy, 2007, p. 953). Mastery experiences are seen less in novice teachers who draw more importance from vicarious experiences, verbal persuasion, and emotional arousal (Tschannen-Moran & Woolfolk Hoy, 2007, p. 953).

Instrumentation in this study was conducted with the 24-item scale TSES inventory that was created in 2001 by Tschannen-Moran and Woolfolk Hoy. This study boasted a 0.93 reliability score for the 24-item scale survey, 0.84 for student engagement, 0.87 for instructional strategies, and 0.88 for classroom management subscales (Tschannen-Moran & Woolfolk Hoy, 2007, p. 950). The results of this study confirmed that experienced teachers reported higher self-efficacy scores than novice teachers in overall self-efficacy, instructional strategies, classroom management, interpersonal administrative support, teaching resources and professional

performance satisfaction (Tschannen-Moran & Woolfolk Hoy, 2007, p. 950). On the other hand, novice teachers reported no significant differences than experienced teachers in student engagement, and the perceptions of interpersonal colleague, parental and community support (Tschannen-Moran & Woolfolk Hoy, 2007, p. 950). Tschannen-Moran and Woolfolk Hoy's 2007 study proved fruitful to the academia and is still prevalent in today's educational field.

Teaching virtually and learning virtual platforms has caused teacher self-efficacy to decrease for elementary school teachers during the COVID-19 pandemic as these teachers had little to no experience using the various virtual platforms (Pressley, 2021, p. 1619). Pressley (2021) stated that new and experienced teachers will benefit from extra instructional support and engagement during the COVID-19 pandemic (p. 1619). Pressley (2021) researched how elementary teachers' instructional and engagement efficacy would be influenced on teaching during COVID-19 (p. 1619). Results of the TSES showed that virtual teachers had the lowest instructional and engagement efficacy scores while hybrid teachers came next and the highest instructional and engagement efficacy scores came from teachers with in-person instruction (Pressley, 2021, p. 1619).

Students also play a role in teacher self-efficacy. Sawyer et al. (2020) examined the roles of not only teachers but students and their effects on one another's efficacy and impact on learning behaviors (p. 1). While sampling 37 special education teachers and 114 students, this study was completed using the "*Student-Specific Teacher Self-Efficacy Scale*" (SSTES) which derives from Tschannen-Moran and Woolfolk-Hoy's (2001) TSES, in addition to using the "*Preschool Learning Behaviors Scale*", which is a Likert scale survey measuring children's learning behaviors (Sawyer et al., 2020, p. 4). The implementation of the SSTES was vital to this study's results as teachers and students scored themselves in the following areas: instructional

strategies, behavior management, emotional support, and student engagement (Sawyer et al., 2020, p. 4). Students had such an impact on teacher self-efficacy through student engagement and instructional support which included students with and without disabilities as they both effected teacher self-efficacy levels (Sawyer et al., 2020, p. 5-6).

Teacher self-efficacy levels varied based on students' disability status, children's characteristics and learning behaviors (Sawyer et al., 2020, p. 9). In fact, teacher self-efficacy was lower for students without disabilities (Sawyer et al., 2020, p. 10). Teacher self-efficacy in behavior management and student engagement was tied to attention and persistence while teachers' ratings on learning strategies were tied to teacher self-efficacy in emotional support (Sawyer et al., 2020, p. 9). This study also revealed that teachers' self-efficacy levels changed from the fall to the spring possibly because teachers felt more comfortable and competent; these teacher experiences could also be correlated to mastery and vicarious experiences (Sawyer et al., 2020, p. 10).

Teacher self-efficacy beliefs can be seen through mastery experiences (Kiran, 2021, p. 53). Kiran (2021) set out to determine if mastery experiences, vicarious experiences, verbal persuasions or one's emotional state could foretell pre-service science teachers' self-efficacy in student engagement, instructional strategies, and classroom management (p. 50). Bandura's mastery experiences were indeed connected to teacher self-efficacy as the science teachers' self-efficacy increased as their mastery experiences increased (Kiran, 2021, p. 53). Bandura's source of one's emotional state was negatively connected to teacher self-efficacy as teachers' worrying, sweating, or stomach-aches caused teacher self-efficacy in student engagement to decrease (Kiran, 2021, p. 53). Teacher self-efficacy in student-engagement was not significant to vicarious experiences or verbal persuasions for the pre-service science teachers (Kiran, 2021, p. 53).

Mastery experiences were connected to teacher self-efficacy in instructional strategies while emotional states were negatively connected (Kiran, 2021, p. 53-54). Teacher self-efficacy in classroom management showed correlations to mastery experiences and verbal persuasions while once again, emotional states was negatively connected to predicting teacher self-efficacy in this area (Kiran, 2021, p. 54).

Hettinger et al. (2021) stated teacher self-efficacy within classroom management can strengthen teacher-student interactions and classroom management overall (p. 2). Teacher self-efficacy has ties to classroom management through the structure and organization of the classroom as well as the students' academic outcome (Hettinger et al., 2021, p. 1). Student perception is an underlying factor of classroom management due to student-perceived classroom management and support correlating to student interest and enjoyment (Hettinger et al., 2021, p. 2). Hettinger et al. (2021) conducted a study in which student-perceived monitoring was examined in relation to classroom management and teaching quality and the possible connection to student enjoyment (Hettinger et al., 2021, p. 1). This study also focused on mathematics and its bearing on student motivation and enjoyment (Hettinger et al., 2021, p. 1). The results of this study were obtained at the beginning and middle of the school year through the instrumentation of adapted assessments consisting of Tschannen-Moran and Woolfolk-Hoy's 2001 TSES, a 3-item scale to assess student-perceived monitoring, a 4-item scale to assess student-perceived social relatedness and a scaled survey that measured student enjoyment (Hettinger et al., 2021, p. 3-4).

Teacher self-efficacy in classroom management was connected student-reported class-level monitoring and social relatedness at the beginning and middle portion of the school year; this implies that teachers' self-efficacy in classroom management is connected to student

enjoyment, and it varies over time due to student-perception of teachers' classroom behavior (Hettinger et al., 2021, p. 5). Students who perceive their teachers competent to class manage feel that their teachers' can provide a positive school-climate and are conscientious of their behaviors and needs (Hettinger et al., 2021, p. 7). Teachers feeling self-confident in their abilities allows teachers to affect student classroom behavior as well as the learning environment which creates positive student achievement emotions because students enjoy learning (Hettinger et al., 2021, p. 7).

Traditional and Alternative Certification Pathways

The pathway to teacher certification varies from state to state. On a basic level, traditional certification involves prospective educators obtaining certain education, completing state approved teacher preparation programs in addition to passing state certified exams (GaPSC, 2022f). TPPs prepare prospective educators for traditional and alternative certification (US DOE, 2022, p. 13). The requirements to enter and exit these programs may vary by institution and state; most programs require a transcript and a minimum GPA for entry and a minimum number of courses, credit hours and minimum GPA for exit (US DOE, 2022, p. 18-19). In 2019, there were 1,466 traditional programs with an enrollment of 455,332 students compared to 705 alternative programs with an enrollment of 153,330 students (Yin & Partelow, 2020). Teacher preparation programs, traditional and alternative, may require clinical or student teaching, or possibly both (US DOE, 2022, p. 23). More supervised clinical experience hours must be completed before student teaching in traditional teacher preparation programs versus alternative preparation programs (US DOE, 2022, p. 23). Traditional teacher preparation programs also require more student teaching hours to be completed than those of alternative preparation programs (US DOE, 2022, p. 23).

In the state of Georgia, not all teacher preparation programs are state-approved or lead to teacher licensure (GaPSC, 2022f). Traditional pathways to certification involve being enrolled in a college or university and traditional certification routes are split into three categories consisting of bachelor's degree programs, advanced degree programs and certification-only programs (GaPSC, 2022f). A bachelor's degree is a minimum requirement for teacher certification in Georgia; if one does not have a bachelor's degree and wishes to teach then certification may be acquired through a TPP that results in a bachelor's degree (GaPSC, 2022f). Advanced degree and certification-only programs are possible pathways to traditional certification if a bachelor's degree is already achieved (GaPSC, 2022f). Advanced degree programs usually embody Master of Arts in Teaching or Master of Education programs that lead to initial certification (GaPSC, 2022f). Certification-only programs are programs that contain coursework needed for initial certification (GaPSC, 2022f). Prospective educators may teach up to 3 years while completing a master's degree (Advanced degree program) or a Certification-only program; if either of these options are chosen then one is considered of taking an alternative route to teacher certification (GaPSC, 2022f).

Alternative certification is broken down into two types: alternative certification at an institution of higher education (alternative IHE) and alternative certification not based at an institution of higher education (alternative non-IHE) (US DOE, 2022, p. 1). Alternative non-IHE programs include schools, school districts, RESAs, charter schools, IHE partners, for-profit and non-profit organizations (US DOE, 2019; Yin & Partelow, 2020). There are alternative non-IHE programs in 32 states including Washington, D.C.; there are six states with only one alternative non-IHE program and seven states with 10 or more (Yin & Partelow, 2020). In fact, for-profit organizations produce more than half of all students who complete an alternative non-IHE

program (Yin & Partelow, 2020). Individual schools, school districts, and RESAs produce the most alternative non-IHE certified teachers followed by for-profit organizations and non-profit organizations (Yin & Partelow, 2020).

Alternative pathways to certification in Georgia requires prospective educators to meet the requirements of having a bachelor's degree at minimum with a minimum 2.5 GPA, acceptance into a GaPSC TPP, passing score on the GACE content and Program Admission exams, as well as completion of the Georgia Educator Ethics exam (GaPSC, 2022f). Alternative certification is a 3-year non-renewable certification that is issued once after one is hired in a Georgia school to teach (GaPSC, 2022f). TPP are included in the alternative pathway to certification but must also be completed within 3 years (GaPSC, 2022f). After one obtains the alternative certification requirements, certification will transfer from Provisional to Induction or Provisional to Professional certification (GaPSC, 2022f).

On July 1, 2014, GaPSC started a 5-tiered teacher certification system to create continuous growth for teachers (GaPSC, 2022g). The tiered certification system was intended to improve student learning while targeting pre and existing teachers' development and career advancement (GaPSC, 2022g). Benefactors of this system are its focus on teacher retention, use of expert teachers on peers when mentoring and coaching as well as recognizing successful teacher performance (GaPSC, 2022g). Tiered certification consists of the following levels: Pre-Service, Provisional, Induction, Professional and Advanced/Lead Professional (GaPSC, 2022g).

The Pre-Service certification target group are those completing field experiences or doing student teaching; these individuals must be enrolled at a college, university or be a part of a teacher preparation program (GaPSC, 2022c). Additional requirements are a criminal background check and completion of the GACE Ethics exam (GaPSC, 2022c). It is important to

note that this certification is only valid for 5 years and is not a professional teacher certificate (GaPSC, 2022c).

Provisional certification targets individuals who already have a bachelor's degree or higher with a minimum 2.5 GPA that wish to transition into education (GaPSC, 2022e). These individuals qualify for Provisional certification by obtaining a passing score on the GACE Program Admission, content areas and Educator Ethics exam (GaPSC, 2022e). Provisional certification allows Special Education teachers to pass their content areas within an allotted amount of time, usually 1 to 3 years (GaPSC, 2022e). The Provisional certification is valid for 3 years and can be renewed (GaPSC, 2022e).

Induction certification may be obtained on a 5-year or 3-year basis (GaPSC, 2022b). In-state individuals who complete a TPP and field experience will qualify as long as they pass the GACE content and Educator Ethics exams in addition to passing a class in identifying and teaching exceptional education children (GaPSC, 2022b). Out-of-state individuals must meet the same requirements as well as completing a TPP or show proof of an out-of-state educator certificate (GaPSC, 2022b). A 3-year induction certificate is awarded to those holding a 5-year induction certificate that are in teaching areas out of field (GaPSC, 2022b). The induction certificate is typically non-renewable but may be removed under specific exceptions (GaPSC, 2022b).

Professional certification can be achieved through Standard or Performance-Based certification (GaPSC, 2022d). Standard certification is intended for individuals who have not completed a performance-based program and have not been evaluated for 3 years under Georgia's Teacher Keys Effectiveness System (TKES) (GaPSC, 2022d). To obtain a Standard Professional certificate, one must have 3 years of teaching experience (GaPSC, 2022d). To

obtain a Standard Professional Educational Leadership certificate, one must complete an Educational Leadership program that is GaPSC-approved or is an approved out-of-state program (GaPSC, 2022d).

The Advanced Professional certificate targets teachers with 10 years of teaching experience in which at least 3 years must have been earned in Georgia out of the last 5 years (GaPSC, 2022a). To also qualify, these teachers must meet one of the following requirements: advanced degree in teaching field, certificate in Curriculum and Instruction or Instructional Technology, or have NBPTS certification (GaPSC, 2022a). The Lead Professional targets in mentoring and leadership roles with high ratings on performance evaluations, a passing score on the GACE Teacher Leadership exam and an Advanced Professional certificate or 5 years of teaching experience (at least 3 years earned in Georgia out of last 5 years) (GaPSC, 2022a). To obtain certification, these teachers must also meet one of the following requirements while being a Teacher Leader, Coach or Teacher Support: Teacher Leadership certification, advanced degree in teaching field, certificate in Curriculum and Instruction or Instructional Technology or have NBPTS certification (GaPSC, 2022a). Advanced and Lead Professional certificates are valid for 5 years and can be renewed under specific requirements (GaPSC, 2022a).

Certification issues have been so prevalent in Georgia that GaPSC created flexibility guidelines due to COVID-19 addressing the following areas and more: pre-service certificates, induction certificates, professional out-of-state certificates, and professional certificates (GaPSC, 2020). Slay et al. (2020) examined 19 states where teacher preparation programs adjusted their standards for pre-service teachers to complete certification requirements (p. 1). Teacher preparation programs made changes to exam requirements, and clinical teaching requirements (Slay et al., 2020, p. 1). Deans for Impact (2020) suggested that “providing meaningful clinical

experiences, supporting novice teachers and expanding the educator workforce” will effectively and efficiently prepare future educators (p. 1-2). Although these changes were made in response to COVID-19, it is safe to say that these changes could become future guidelines within teacher preparation.

Self-Efficacy and Professional Development

More flexible school districts regarding policies revolving around teacher lesson planning, administering tests, and student attendance could possibly increase teacher self-efficacy as it would allow teachers to focus on teaching instead of feeling overwhelmed with district policies (Pressley & Ha, 2021, p. 7). Langher et al. (2017) detailed improving supportive environments in hopes of eliminating teacher burnout in Special Education. Langher et al. (2017) stated, “Promoting professional development may represent a key-factor for lowering feelings of depersonalization by supporting teachers’ perceived competence in the classroom and leading them to appreciate and value their work more” (p. 138). To lower the rate of teacher burnout, this article suggests on boosting professional development such as workshops, teacher meetings, mentoring programs, team-teaching and online communities; this frequent support will deem effective for teachers and ease emotional exhaustion (Langher et al., 2017, p. 138). Pressley and Ha (2021) suggested that educator-led trainings, early school year feedback from administrative staff in addition to continuous feedback throughout the school year will boost professional development (p. 7). Collaborative lesson planning, virtual and hybrid instructional training, and positive recognition from administrative staff has also been notated as possible growth areas of self-efficacy and professional development (Pressley & Ha, 2021, p. 7). Teacher resignation or job transferal seems to occur after continuous failed efforts at building teacher-student relationships without plausible results. Professional development to frequent team meetings to

possible mental health days when educators do not have students can largely alter an educator's outlook on the workload, the children, the staff, the parents, and all other educational contributors (Pressley & Ha, 2021, p. 7-8).

Teachers are lacking true support systems from their school districts regarding classroom management and are left feeling uneasy when time to instruct students, talk to parents, handle the workload and other arenas. The multi-tasking aspect of the profession along with the large workload leads teachers to feeling stress, anxiety, and depression. Teachers may feel more accomplished and at ease as they achieve goals on a prioritized basis; more success may be seen if tasks were broken down to last throughout the week (Pressley & Ha, 2021, p. 8). Chesnut and Burley (2015) stated, "teachers with a stronger sense of self-efficacy had better levels of planning and organization, were more resilient when classroom strategies did not go well, were more open to experimentation, and were less critical of students" (p. 3). The difference of a teacher's knowledge and the extent of their abilities has been an argument from the start of teacher preparation (Kauffman et al., 2017, p. 33). Teachers that possess high levels of self-efficacy can adapt professionally in many ways.

Teacher preparation programs are failing to produce new teachers into the teaching profession which in time is a factor of the teacher shortage (Peyton et al., 2020, p. 5). To address the emotional toll that teaching can cause, teacher preparation programs should take a closer look at micro-taught and teaching practice courses (Kiran, 2021, p. 55). Microteaching is a professional development tool used to train teachers and enhance their teaching skills by a trainee teacher planning a lesson, teaching it to a small group of students for 5 to 20 minutes while being recorded (Reddy, 2019, p. 65). Successful microteaching will refine "teachers' pedagogical skills, competencies, self-confidence, beliefs and attitudes while providing those

teachers with productive teaching experiences” (Reddy, 2019, p. 65). Increasing the number of lived teaching experiences could help teachers’ monitor and address emotional concerns and increase teacher self-efficacy (Kiran, 2021, p. 55). Teacher preparation programs could also benefit from having more experienced mentor teachers to assist and teach pre-service teachers (Kiran, 2021, p. 55).

Instructional and engagement efficacy should be supported by schools and their districts to ensure that instructional approaches are addressed for virtual teachers’ efficacy, as they have been influenced greater than hybrid or in-person teachers in correlation to teachers’ efficacy (Pressley, 2021, p. 1620). Providing adequate professional development in relation to instructional and engagement efficacy during COVID-19 will enhance teachers’ virtual instructional approaches while also supporting their teacher efficacy through vicarious experiences (Pressley, 2021, p. 1620-1621). The COVID-19 pandemic has caused administrators to be more aware of teachers’ anxiety and stress levels and possibly increasing teaching efficacy through mental health days and providing child care (Pressley, 2021, p. 1621).

School districts and administrative staff must place emphasis on evidence-based professional development strategies that call for educators and faculty to be trained effectively and efficiently. McDowell (2017) detailed how special education teachers “learning to cope with stress while receiving collegial and parental support will avoid burning out and becoming better prepared to create quality IEPs and help their students meet their IEP goals” (p. 123). Klassen and Tze (2014) explained how “diverse models of professional development including models that support individuals, mentoring models, and collaborative and cooperative models can be offered to help build the self-efficacy of new and experienced teachers” (p. 73). Some educators have reported feeling their compassion and job satisfaction levels drop while teaching due to

certain circumstances. With proper training and collegial support, teachers will not only feel prepared in the classroom, but they will also feel confident and passionate about their work.

Young (2018) explained how beginning special education teachers feel unprepared as pre-service teachers: “beginning special education teachers report challenges in aligning their teacher education experiences with their classroom practices, where they initially find themselves operating in survival mode” (p. 223). Special education teachers are lacking self-efficacy as pre-service teachers due to lack of preparation, low quality preparation, or even issues with competency. Teachers in special education “identified challenges in behavior management, curriculum development, communication/collaboration, particularly where relationships with general educators affect special education teachers’ success with collaboration” (Young, 2018, p. 224). Gidlund (2018) stated the goal of special education is: “to secure educational progress of students with special needs, never to exclude them” (p. 444). Special education teachers are consistently faced with a great deal of job responsibilities on top of collaborating alongside general education teachers.

Berg and Smith (2018) conducted a quantitative study that investigated the self-efficacy beliefs of preservice teachers and its impact on each teachers’ practicum experience (p. 530). Data was collected using the TSES long version Likert scale survey in addition to the NTSES (Norwegian Teacher Self-Efficacy Scale) English version; pre-service teachers’ pre and post teaching self-efficacy was compared using these two surveys (Berg & Smith, 2018, p. 534). The results of this study explained how great a post practicum experience impacted a pre-service teachers’ self-efficacy through the offering of support, verbal persuasion, role models and the ultimate opportunity to grow one’s personal self-efficacy (Berg & Smith, 2018, p. 537-538).

Summary

Teacher attrition has heavily impacted education through continuous differences in teacher preparation, teacher burnout and teacher perception of self-efficacy. Now more than ever, teacher preparedness programs are being brought to question as to their influence or hindrance of the success of its educators. The nation is facing a teacher shortage year after year, not only in urban school settings, but also other public and private institutions. Educators are trained through traditional and alternative teacher preparation programs in addition to school staff, then forced to support themselves whether they are experienced or not, which in time leads to emotional breakdowns and lack of self-belief in their capabilities. As a result of this, educators then feel handicapped and unprepared in the classroom in addition to fulfilling work-related duties. This uneven emotional state causes physical stress to educators causing them to leave the profession within the first few years of teaching.

These educators are also resigning early due to many external factors that effects their self-efficacy, such as collegial and administrative support, the overwhelming workload, lack of training, classroom management and more. These external factors range from minimal fixes to adequate support and autonomy from co-workers; resilience is also a major factor that can affect a teachers perceived self-efficacy. This study also delves into teachers' perception levels in accordance with their personal tolerance and definition.

The concept of self-efficacy can affect teacher attrition positively and negatively; when teachers feel more confident in themselves success is soon to follow, but this is also true for a teachers' negative feelings. The perceived level of a teachers' self-efficacy can also be compared to their certification pathway. The purpose of this study was to determine if one's perceived self-efficacy level is correlational to their teaching certification pathway. Little is known about an educator's perceived self-efficacy in relation to their pathway of teacher certification. A gap

exists in the literature addressing traditional and alternative teacher certification pathways through teacher-student relationships and other external factors that influence self-efficacy.

CHAPTER THREE: METHODS

Overview

The purpose of this quantitative, causal-comparative study was to determine if a significant difference of student engagement, instructional strategies, and classroom management teacher self-efficacy scores existed between teachers who participate in traditional or alternative certification pathways. This chapter begins by introducing the design of the study, including full definitions of all variables. The research questions and null hypotheses follow. The participants and setting, instrumentation, procedures, and data analysis plans are presented.

Design

To determine if differences exist in student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in traditional or alternative certification pathways, a quantitative, ex-post facto, causal-comparative design was used. Ex-post facto research designs are used to “observe relationships between naturally occurring variations in the independent and dependent variables” (Gall et al., 2007, p. 306). Gall et al. (2007) defined causal-comparative research as a “nonexperimental investigation that is used to identify cause-and-effect relationships while determining if the present or absent independent variable differs from the dependent variable” (p. 306). The first step in a causal-comparative research design study is to determine which possible factors are a result of the phenomenon of interest (Gall et al., 2007, p. 311). Once the researcher determines the phenomenon’s cause and effects, they are then combined with the research problem; the research problem is presented as a hypothesis, question, or objective (Gall et al., 2007, p. 311). The researcher will state and test which hypotheses provides better reasoning for the differences between the two control groups (Gall et al., 2007, p. 311). Certain research results and theories

can prove or disapprove certain hypotheses (Gall et al., 2007, p. 311). The researcher then selects which comparison group to utilize; the comparison groups range from the extreme-groups technique to matching; both groups provide precise results so that the study can be interpreted correctly and efficiently (Gall et al., 2007, p. 311).

Causal-comparative research contains no researcher experimental manipulation, but the researcher does in fact select two groups of one or more independent variables that differ while comparing them to one or more dependent variables (Creswell & Guetterman, 2019, p. 313). The observation of these variables is vital in the causal-comparative research design because “one group may have one characteristic that the other group does not, or the groups may differ in some amount or to some degree” (Creswell & Guetterman, 2019, p. 313). The causal-comparative research design measures independent variables as nominal or ordinal categories; it is also correlational and comparative (Gall et al., 2007, p. 307). The researcher selects two groups that are different in some regard, and they are then compared to one or more dependent variables; the groups resemble the independent variables, while the dependent variable represents the outcome (Creswell & Guetterman, 2019, p. 313). A causal-comparative research design was appropriate for this study because the research design addresses “additional phenomena’s through the study of cause-and-effect relationships;” the independent variable is not manipulated when comparing its effect or impact on the dependent variable (Gall et al., 2007, p. 306). A causal-comparative research design was also appropriate for this study because random sampling was impossible to utilize due to the pre-existing (naturally occurring) groups in which this study examined.

The purpose of this study was to investigate if differences exist in student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers

who participate in traditional or alternative certification pathways. Self-efficacy has been linked to teacher efficacy; teacher efficacy also has connections to student achievement, motivation, and student self-efficacy (Tschannen-Moran & Woolfolk Hoy, 2001, p. 783). Efficacy affects teachers through their investment levels, effort, and goal setting (Tschannen-Moran & Woolfolk Hoy, 2001, p. 783).

The researcher conducted a quantitative, ex-post facto causal-comparative research design study that included categorical independent variables and continuous dependent variables; this was done by conducting a multivariate analysis of variance (*MANOVA*). The categorical independent variable in this study was the teacher certification pathway which included two groups consisting of traditional and alternative certification pathways. Traditional teacher certification applies to students with degrees in academic subjects grades K-12 (Georgia Tech, 2021). Alternative teacher certification is for students or graduates with non-educational backgrounds pursuing state certification while teaching (Georgia Tech, 2021).

The dependent variable in this study was the student engagement, instructional strategies, and classroom management teacher self-efficacy scores. Self-efficacy is defined as one's evaluation of skill and ability to complete performance tasks (Leyser et al., 2011, p. 242). Student engagement refers to the relationship between the student and the instructor and the growth of the student's overall experience as it relates to learning, student performance and student development (Trowler, 2010, p. 3). Instructional strategies are actions or procedures aimed at increasing learning or teaching objectives within a lesson (Mijnyawa et al., 2019, p. 79). Classroom management is correlated to the school environment through effective strategies intended to improve student achievement, behavior management, and teachers' work environments; effective classroom management can also impact teacher retention rates

(Harlacher, 2015, p. 4). Self-efficacy beliefs are determined by “one’s ability to cope with emotional and environmental change (i.e., managing stress)” (Burić et al., 2020, p. 3).

Research Question

RQ: Is there a difference in the student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in traditional or alternative certification pathways?

Hypothesis

The null hypothesis for this study is:

H₀: There is no significant difference in student engagement, instructional strategies, and classroom management teacher self-efficacy scores as measured by the Teacher Self-Efficacy Scale between teachers who participate in either traditional or alternative certification pathways

Participants and Setting

This section provides a background on the topics of the population, the participants, the sampling technique, and sample size. The setting of this study took place in a school district in rural central west Georgia. The school district includes 20 schools, which consist of 11 elementary schools, three middle schools, three high schools, one college and career academy, one college and career center, and one alternative learning center.

Population

The participants for the study were drawn from a convenience sample of certified teachers located in a Georgia school district. This school district sits in a county with a population of 69,922 and a median income amount of \$45,649 (Şen, 2019; United States Census Bureau, 2019). The school district was in a rural central west area of the state. The school district includes 20 schools in which all schools were chosen for the study; the 20 schools were chosen

using a convenience sample. Although a convenience sample was used for the study, the researcher's goal was to acquire a sample that is representative of the southern school district.

Participants

For this study, the number of participants sampled was 90 which exceeded the required minimum when assuming a large effect size. According to Gall et al. (2007), 51 teachers is the required minimum for a multivariate analysis of variance (MANOVA) when assuming a large effect size with statistical power of .7 at the .05 alpha level (p. 145). The sample came from 20 schools within the district where all participants were selected through convenience sampling. Creswell and Guetterman (2019) confirmed why convenience sampling is the most appropriate for this study, "the researcher selects participants because they are willing and available to be studied" (p. 143). The sample consisted of 15 males and 75 female teachers from the southern school district that ranged from age 23 to 63. See Table 1 for a description of participants.

Table 1

Description of Participants

Participants	<i>N</i>	%
Gender		
Male	15	17
Female	75	83
Prefer Not to Say	00	0.0
Other	00	0.0
Age		
18-19	00	0.0
20-29	18	20
30-39	27	30
40-49	25	28
50-59	18	20
60-69	2	2
70-79	00	0.0
80-89	00	0.0

Note. *N* = 90

The racial demographics of the teachers within this school district were 69.44%

White/Caucasian, 28.9% Black/African American, 00% American Indian/Alaska Native, 0.55% Asian/Asian American, 1.11% Hispanic/Latino, 00% Native Hawaiian/Other Pacific Islander, and 00% Other. See Table 2 for a description of ethnicities.

Table 2

Description of Ethnicities

Race	<i>N</i>	%
White/Caucasian	62.5	69.44
Black/African American	26	28.9
American Indian/Alaska Native	00	0.0
Asian/Asian American	0.5	0.55
Hispanic/Latino	1	1.11
Native Hawaiian/Other Pacific Islander	00	0.0
Other	00	0.0

Note. *N* = 90

The educational level of each participant's parent was also described within the study.

See Table 3 for a description of parent educational levels.

Table 3

Description of Parent Educational Levels

	<i>N</i>	%
Education Level of Mother		
High School	38	42.23
Associate's Degree	9	10
Undergraduate/College Degree	11	12.22
Vocational/Technical Degree	9	10
Graduate Degree	20	22.22
Unknown	3	3.33
Education Level of Father		
High School	46	51.11
Associate's Degree	9	10
Undergraduate/College Degree	16	18
Vocational/Technical Degree	8	8.89
Graduate Degree	9	10
Unknown	2	2

Note. *N* = 90 (per category)

The educational level of all participants was also identified. See Table 4 for a description

of participants' educational levels.

Table 4

Description of Participants Educational Levels

Educational Level	<i>N</i>	%
Bachelor's	24	26.66
Master's	52	57.79
Doctorate/PhD	14	15.55

Note. *N* = 90

Education as a first career choice was detailed within the study; this portion of the study was specifically correlated to a participant selecting a certification pathway. See Table 5 for a description of education as a first career choice.

Table 5

Description of Career Choice

Education as First Career Choice	<i>N</i>	%
Yes	59	65.56
No	31	34.44

Note. *N* = 90

Whether a participant was employed at a Title 1 school was included in the study in addition to the grade level taught. See Table 6 for a description of Title 1 schools in comparison to which grade level participants taught.

Table 6

Description of Title 1 Schools and Grade Level Taught

	<i>N</i>	%
Employed at a Title 1 School		
Yes	70	78
No	20	22
Grade Level Taught		
Elementary	28	31.11
Middle School	30	33.33
High School	26	28.9
Vocational	1	1.11

Other	5	5.55
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Note. $N = 90$ (per category)

The study's independent variable was the certification pathway that was split into two groups consisting of traditional and alternative teacher certification.

Traditionally Certified Participants

The sample came from 20 schools within the district where all participants were selected through convenience sampling; 72% of the sample were traditionally certified teachers. The sample consisted of 10 males and 55 female teachers from the southern school district that ranged from age 23 to 62. The racial demographics of the teachers within this school district were 71% White/Caucasian, 28% Black/African American, 0% American Indian/Alaska Native, 0% Asian/Asian American, 1% Hispanic/Latino, 0% Native Hawaiian/Other Pacific Islander, and 0% Other. See Table 7 for a description of traditionally certified participants.

Table 7

Description of Traditionally Certified Participants

	<i>N</i>	%
Gender		
Male	10	15
Female	55	85
Prefer Not to Say	00	0.0
Other	00	0.0
Age		
18-19	00	0.0
20-29	15	23
30-39	18	28
40-49	17	26
50-59	14	21
60-69	1	2
70-79	00	0.0
80-89	00	0.0
Race		
White/Caucasian	46	71
Black/African American	18	28
American Indian/Alaska Native	00	0.0

Asian/Asian American	00	0.0
Hispanic/Latino	1	1
Native Hawaiian/Other Pacific Islander	00	0.0
Other	00	0.0
Education Level of Mother		
High School	29	45
Associate's Degree	8	12
Undergraduate/College Degree	9	14
Vocational/Technical Degree	5	7
Graduate Degree	12	19
Unknown	2	3
Education Level of Father		
High School	34	52
Associate's Degree	7	11
Undergraduate/College Degree	12	19
Vocational/Technical Degree	4	6
Graduate Degree	7	11
Unknown	1	1
Education Level of Participant		
Bachelor's	18	27
Master's	36	56
Doctorate/PhD	11	17
Education as First Career Choice		
Yes	47	72
No	18	28
Employed at a Title 1 School		
Yes	54	83
No	11	17
Grade Level Taught		
Elementary	25	38
Middle School	20	31
High School	16	25
Vocational	0	0.0
Other	4	6

Note. $N = 65$ (per category)

Alternatively Certified Participants

The sample came from 20 schools within the district where all participants were selected through convenience sampling; 28% of the sample were alternatively certified teachers. The sample consisted of 5 males and 20 female teachers from the southern school district that ranged from age 23 to 63. The racial demographics of the teachers within this school district were 66%

White/Caucasian, 32% Black/African American, 0% American Indian/Alaska Native, 2% Asian/Asian American, 0% Hispanic/Latino, 0% Native Hawaiian/Other Pacific Islander, and 0% Other. See Table 8 for a description of traditionally certified participants.

Table 8*Description of Alternatively Certified Participants*

	<i>N</i>	%
Gender		
Male	5	20
Female	20	80
Prefer Not to Say	00	0.0
Other	00	0.0
Age		
18-19	00	0.0
20-29	3	12
30-39	9	36
40-49	8	32
50-59	4	16
60-69	1	4
70-79	00	0.0
80-89	00	0.0
Race		
White/Caucasian	16.5	66
Black/African American	8	32
American Indian/Alaska Native	00	0.0
Asian/Asian American	0.5	2
Hispanic/Latino	00	0.0
Native Hawaiian/Other Pacific Islander	00	0.0
Other	00	0.0
Education Level of Mother		
High School	9	36
Associate's Degree	1	4
Undergraduate/College Degree	2	8
Vocational/Technical Degree	4	16
Graduate Degree	8	32
Unknown	1	4
Education Level of Father		
High School	12	48
Associate's Degree	2	8
Undergraduate/College Degree	4	16
Vocational/Technical Degree	4	16

Graduate Degree	2	8
Unknown	1	4
Education Level of Participant		
Bachelor's	6	24
Master's	16	64
Doctorate/PhD	3	12
Education as First Career Choice		
Yes	12	48
No	13	52
Employed at a Title 1 School		
Yes	16	64
No	9	36
Grade Level Taught		
Elementary	3	12
Middle School	10	40
High School	10	40
Vocational	1	4
Other	1	4

Note. $N = 25$ (per category)

Setting

The setting of this study was in an offline environment. Participants completed surveys in multiple settings. Teachers completed surveys online; this was useful for teachers across the school district to complete as time permitted. Creswell and Guetterman (2019) stated, “this is a convenience sample because the participants are convenient to the researcher and are available for the study” (p. 143).

Instrumentation

The instrument used in this study was the TSES inventory developed by Tschannen-Moran and Woolfolk Hoy in 2001. See Appendix A for instrument and Appendix B for the permission to use the instrument. Data collection for a causal-comparative research design can derive from any measuring instrument ranging from standardized tests, questionnaires, interviews, and naturalistic observations that portray cause-and-effect relationships (Gall et al., 2007, p. 314). The purpose of using this instrument in this study was to evaluate if there was a

difference in the student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participated in traditional or alternative certification pathways. The instrument used within causal-comparative research design is essential as it provides validity of the study and connection to the desired phenomena (Gall et al., 2007, p. 329). Tschannen-Moran and Woolfolk Hoy (2001) developed this instrument “to propose a new measure of teacher efficacy along with validity and reliability in regard to teacher efficacy” (p. 783).

The instrument was used in numerous studies (Berg & Smith, 2018; George et al., 2018; Morris et al., 2017; Wilhelm & Berebitsky, 2019). The TSES is commonly used for research purposes and is highly useful when measuring teacher self-efficacy beliefs (Berg & Smith, 2018; Morris et al., 2017). George et al. (2018) stated, “this is the most widely used measure of teachers’ self-efficacy since it was published, and it has been identified as a superior measure compared to existing measures of teacher self-efficacy” (p. 223). The TSES scale is commonly used “in its original form, which is domain general, although some have adapted it to assess teaching self-efficacy in particular content areas” (Morris et al., 2017, p. 818). Wilhelm and Berebitsky (2019) conducted a quantitative study to measure self-efficacy levels of mathematics teachers (p. 29). Wilhelm and Berebitsky (2019) sought out to find validity and reliability of the TSES instrument regarding their study through using the short survey version of the instrument and coded transcripts of semi-structured interviews while providing evidence based on test content, response processes, internal structure, and relations to other variables (p. 29-30).

The TSES instrument was modified for exclusivity toward mathematics teachers (Wilhelm & Berebitsky, 2019, p. 29). This study contained “12 items of Cronbach alpha level of 0.902” (Wilhelm & Berebitsky, 2019, p. 38). The instrument consisted of 12 questions and used

a nine-point Likert scale that ranged from Nothing to A Great Deal. Responses were as follows: Nothing= 1/2, Very Little= 3/4, Some Influence= 5/6, Quite A Bit= 7/8, and A Great Deal= 9 (Tschannen-Moran & Woolfolk Hoy, 2001, p. 2). The instrument scored efficacy in student engagement, instructional strategies, and classroom management (Tschannen-Moran & Woolfolk Hoy, 2001, p. 3). The reliability of the short form of this instrument is as follows: Overall scale .90, Engagement .81, Instruction .86, and Management .86 (Tschannen-Moran & Woolfolk Hoy, 2001, p. 3). Efficacy in student engagement was tested on items 2, 3, 4, and 11, efficacy in instructional strategies was 5, 9, 10, and 12, and efficacy in classroom management was 1, 6, 7, and 8 (Tschannen-Moran & Woolfolk Hoy, 2001, p. 3). The lowest possible score on the TSES short scale survey is 12 and the highest possible score is 108 (Tschannen-Moran & Woolfolk Hoy, 2001, p. 2).

Procedures

See Appendix A for instrument and Appendix B for the permission to use the instrument. IRB permission was obtained from Liberty University and the school district in order to survey teachers. Twenty principals were contacted to offer the survey link to certified teachers and staff via e-mail. The survey was utilized on Survey Monkey and all participants completed the short version of the TSES online individually. Data was then gathered by the researcher and participants were entered into a raffle for a gift card. All participants submitted surveys anonymously and signed consent forms before answering the survey. Data and scores were exported onto an Excel spreadsheet before being entered into SPSS. Data was analyzed and results were reported. Thank you letters were sent to all principals and schools in the school district.

At all stages of data collection, all information that could identify the participants was

protected. Data was stored securely and only the researcher had access to records. Data was stored on a password protected jump drive. When not being utilized, the jump drive was stored in a locked filing cabinet. The data will be retained for a period of five years after the completion of this research study.

Data Analysis

Data for this study was analyzed using a MANOVA. A MANOVA has one or more independent variables that are categorical and multiple continuous dependent variables that compares means across groups (Warner, 2021, pp. 573, 599). A MANOVA can be measured to determine if there are patterns of means, or main and interaction effects (Warner, 2021, p. 507). Main effects are defined as the impact that each independent variable has on the dependent variables (Creswell & Guetterman, 2019, p. 315-316). Interaction effects occur when one independent variable impacts another independent variable (Creswell & Guetterman, 2019, p. 316). A MANOVA was appropriate for this study because multiple outcome variables could be measured to determine if there were patterns of means, or main and interaction effects (Warner, 2021, p. 507).

Data was screened while looking for inconsistencies and missing data, such as teachers with missing data or multiple answers. Box and whisker plots were utilized for each group to detect extreme outliers of the dependent variable. Scatterplots were used to “examine the relationship between variables prior to doing statistical analyses” when testing for differences (Warner, 2021, p. 126). The Assumption of Normality was tested using Kolmogorov-Smirnov’s formula because the sample size was greater than 50 (Warner, 2021, p. 148). The Assumption of Multivariate Normal Distribution was tested by plotting a scatterplot matrix for each group of the independent variable which was the certification pathway that consists of traditional and

alternative certification pathways. The researcher looked for the “cigar shape” on the scatterplot matrix of each group of the independent variable in addition to looking for a linear relationship between each pair of dependent variables; the linear relationship provided information on the direction of the association of the variables as well as the strength (Warner, 2021, p. 235). If the variables were not linearly related, then the power of the test was reduced. To test the Assumption of Homogeneity of Variance-Covariance matrices the researcher used Box’s M test of equality of covariance; if the data fails this assumption ($p < .05$) then the researcher will then use Levene’s test of homogeneity to find where the problem may lie. To address the absence of multicollinearity, all the dependent variables should be moderately related, but any correlation over .80 would prove a concern for multicollinearity. The null hypothesis of this study was rejected at the 95% confidence level while the effect size will be reported using partial eta-squared η^2 .

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative, ex-post facto causal-comparative research was to determine if differences existed in student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in traditional or alternative certification pathways. The independent variable in this study was the teacher certification pathway which was a categorical variable with two levels: traditional teacher certification and alternative teacher certification. The dependent variable in this study was the student engagement, instructional strategies, and classroom management teacher self-efficacy scores. The results reported in this chapter are the research findings of the TSES survey and the resulting analysis.

Research Question

RQ: Is there a difference in the student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in traditional or alternative certification pathways?

Null Hypothesis

The null hypothesis for this study is:

H₀: There is no significant difference in student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in either traditional or alternative certification pathways as measured by the Teacher Self-Efficacy Scale.

Descriptive Statistics

Descriptive statistics were obtained on the dependent variable (student engagement, instructional strategies, and classroom management teacher self-efficacy scores) for each group.

Descriptive statistics are found in Table 9. Participants in this study included 90 teachers in which these participants represented 72% traditionally certified teachers and 28% alternatively certified teachers. Participants in this study all served in schools within the west central Georgia region, located near the researcher. After completing the survey, participants were entered into a gift card drawing.

The dependent variables for student engagement, instructional strategies, and classroom management teacher self-efficacy scores were investigated through the instrumentation of the TSES. The maximum score to be achieved in each teacher self-efficacy category was 36. A summary of the TSES scores in this study can be seen in Table 9.

Student engagement test responses ranged from 1.0 to 9.0 with a mean of 26.90 ($SD = 4.99$) for teachers with traditional certification and a mean of 26.12 ($SD = 4.34$) for teachers with alternative certification. Instructional strategies test responses ranged from 1.0 to 9.0 with a mean of 30.27 ($SD = 4.18$) for teachers with traditional certification and a mean of 30.56 ($SD = 3.20$) for teachers with alternative certification. Classroom management test responses ranged from 1.0 to 9.0 with a mean of 28.18 ($SD = 5.42$) for teachers with traditional certification and a mean of 30.20 ($SD = 3.89$) for teachers with alternative certification.

Table 9

Descriptive Statistics

Dependent Variable: Teacher
Self-Efficacy Scores

	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Student Engagement	1-Traditional	65	26.9077	4.99913
	2-Alternative	25	26.1200	4.34281

Instructional Strategies	1-Traditional	65	30.2769	4.18893
	2-Alternative	25	30.5600	3.20260
Classroom Management	1-Traditional	65	28.1846	5.42532
	2-Alternative	25	30.2000	3.89444

In the instructional strategies and classroom management domain, alternatively certified participants ($M = 30.56$, $S.D. = 3.20$ and $M = 30.20$, $S.D. = 3.89$) indicated higher teacher self-efficacy scores than traditionally certified participants ($M = 30.27$, $S.D. = 4.18$ and $M = 28.18$, $S.D. = 5.42$). However, in the student engagement domain, alternatively certified participants ($M = 26.12$, $S.D. = 4.34$) indicated lower values than traditionally certified participants ($M = 26.90$, $S.D. = 4.99$).

Results

Data Screening

Data screening was conducted on the dependent variables for each group. The researchers scanned for data entry errors and inconsistencies. The researcher removed five incomplete participant survey entries. Box and whisker plots were used to detect outliers in the dependent variable. There were no univariate outliers in the data, as assessed by inspection of a boxplot (see Figures 1-3 for box and whisker plots).

Figure 1

Box and Whisker Plots (Student Engagement Teacher Self-Efficacy Scores)

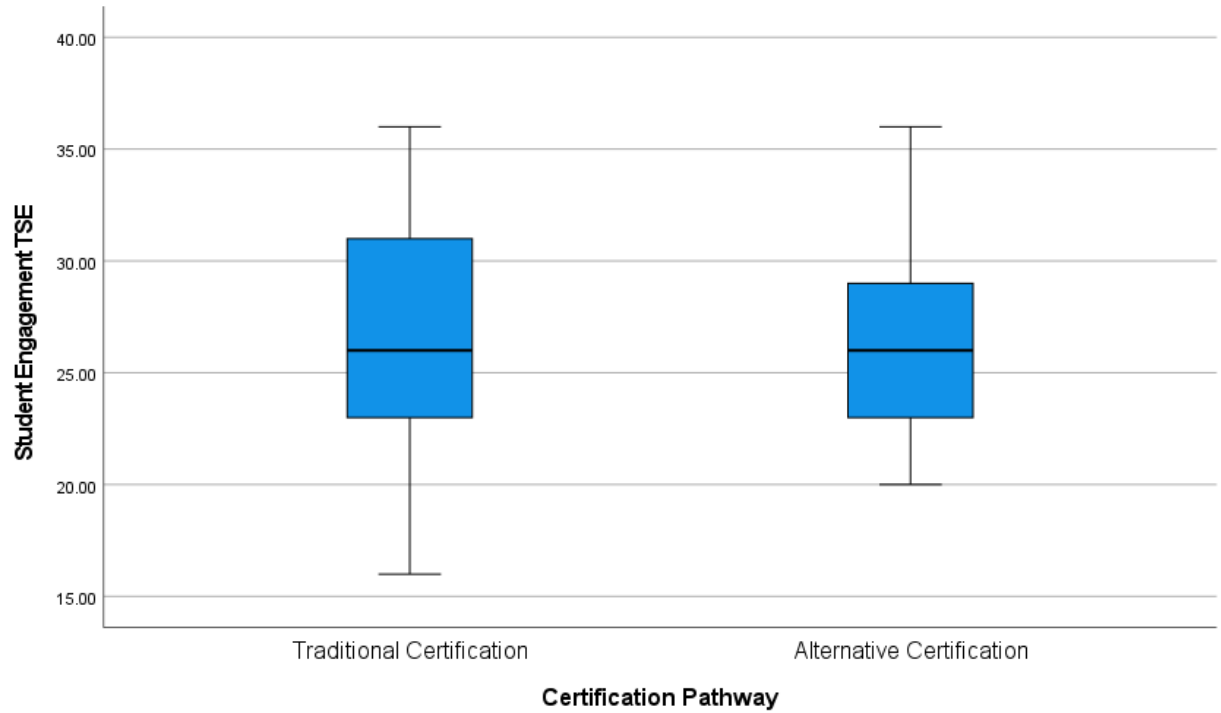


Figure 2

Box and Whisker Plots (Instructional Strategies Teacher Self-Efficacy Scores)

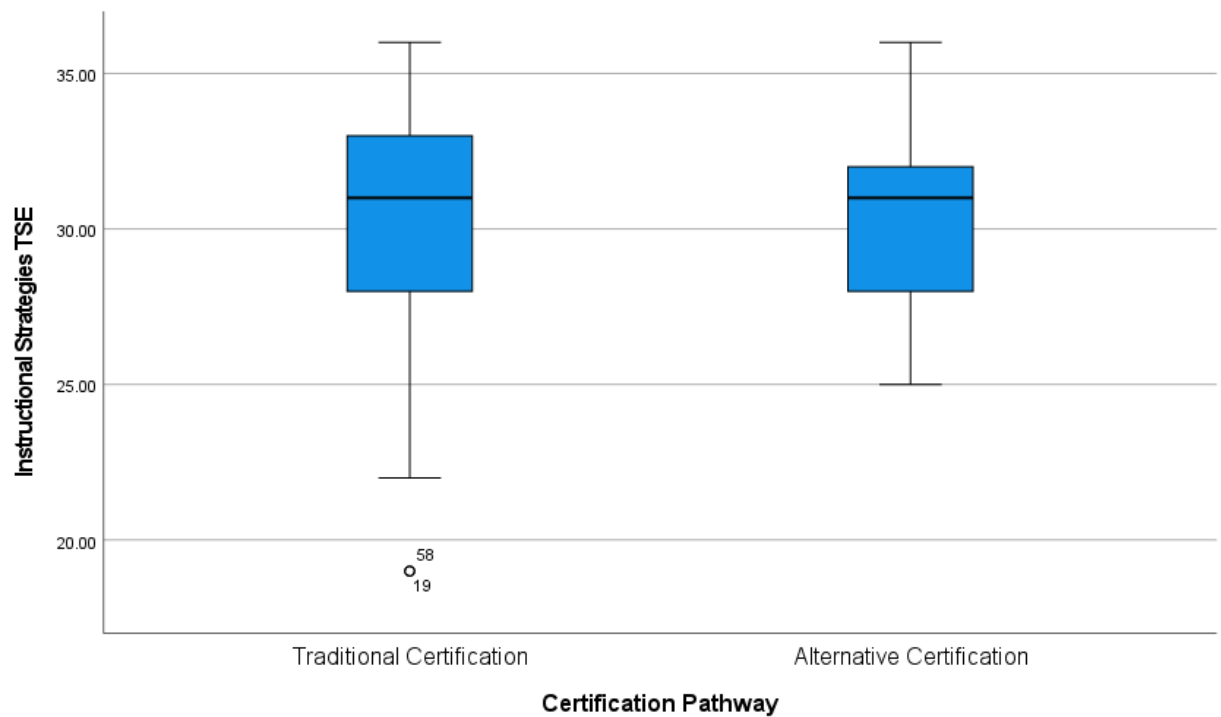
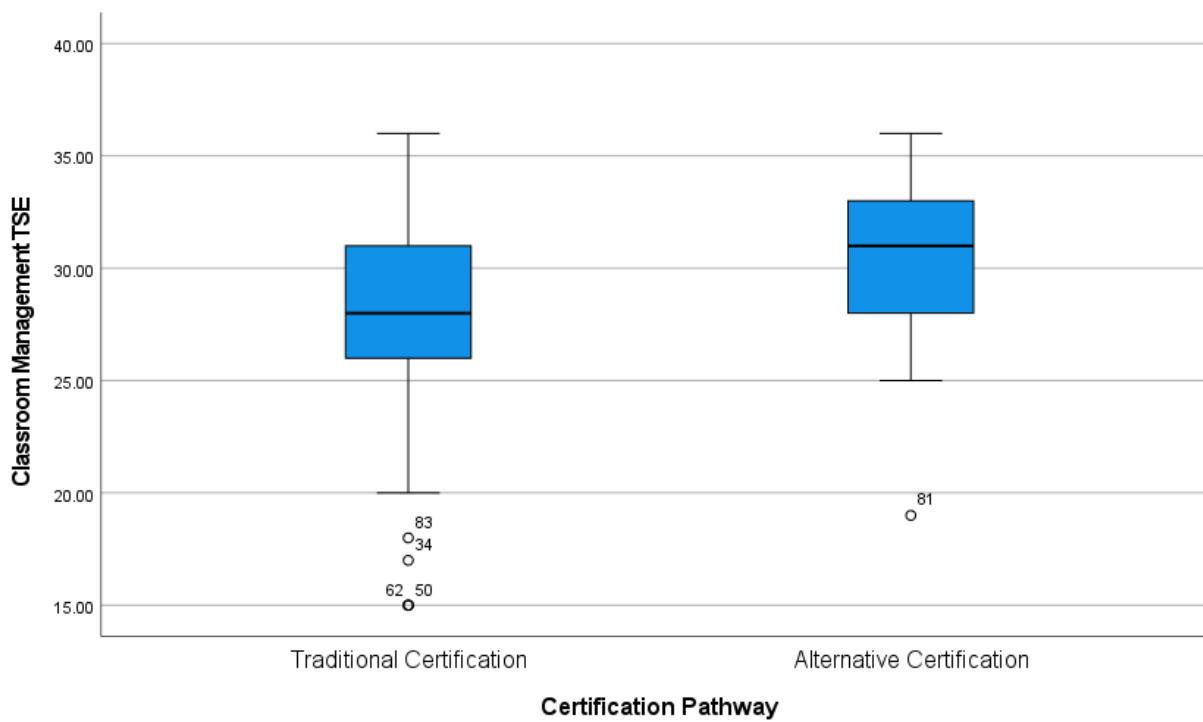


Figure 3

Box and Whisker Plots (Classroom Management Teacher Self-Efficacy Scores)



Assumptions

A Multivariate Analysis of Variance (MANOVA) was conducted to test the null hypothesis that looked at the difference in self engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers in traditional and alternative certification pathways. A MANOVA requires that the assumptions of normality, Kolmogorov-Smirnov, the Assumption of Multivariate Normal Distribution, and the homogeneity of variance-covariance matrices are met.

Normality was examined using a Kolmogorov-Smirnov test. Kolmogorov-Smirnov was used because the sample size was more than 50. Two violations of normal distribution occurred in the instructional strategies and classroom management domains, both from traditionally certified participants and both with values of .004. The MANOVA was robust enough to be used

with minor violations of normality, so the researcher decided to continue with the analysis (Warner, 2021). See Table 10 for Tests of Normality.

Table 10

Tests of Normality

Kolmogorov-Smirnov ^a				
	Group	Statistic	df	Sig.
Student Engagement TSE	1-Traditional	.108	65	.057
	2-Alternative	.164	25	.082
Instructional Strategies TSE	1-Traditional	.137	65	.004
	2-Alternative	.154	25	.132
Classroom Management TSE	1-Traditional	.137	65	.004
	2-Alternative	.120	25	.200 *

* This is a lower bound of the true significance

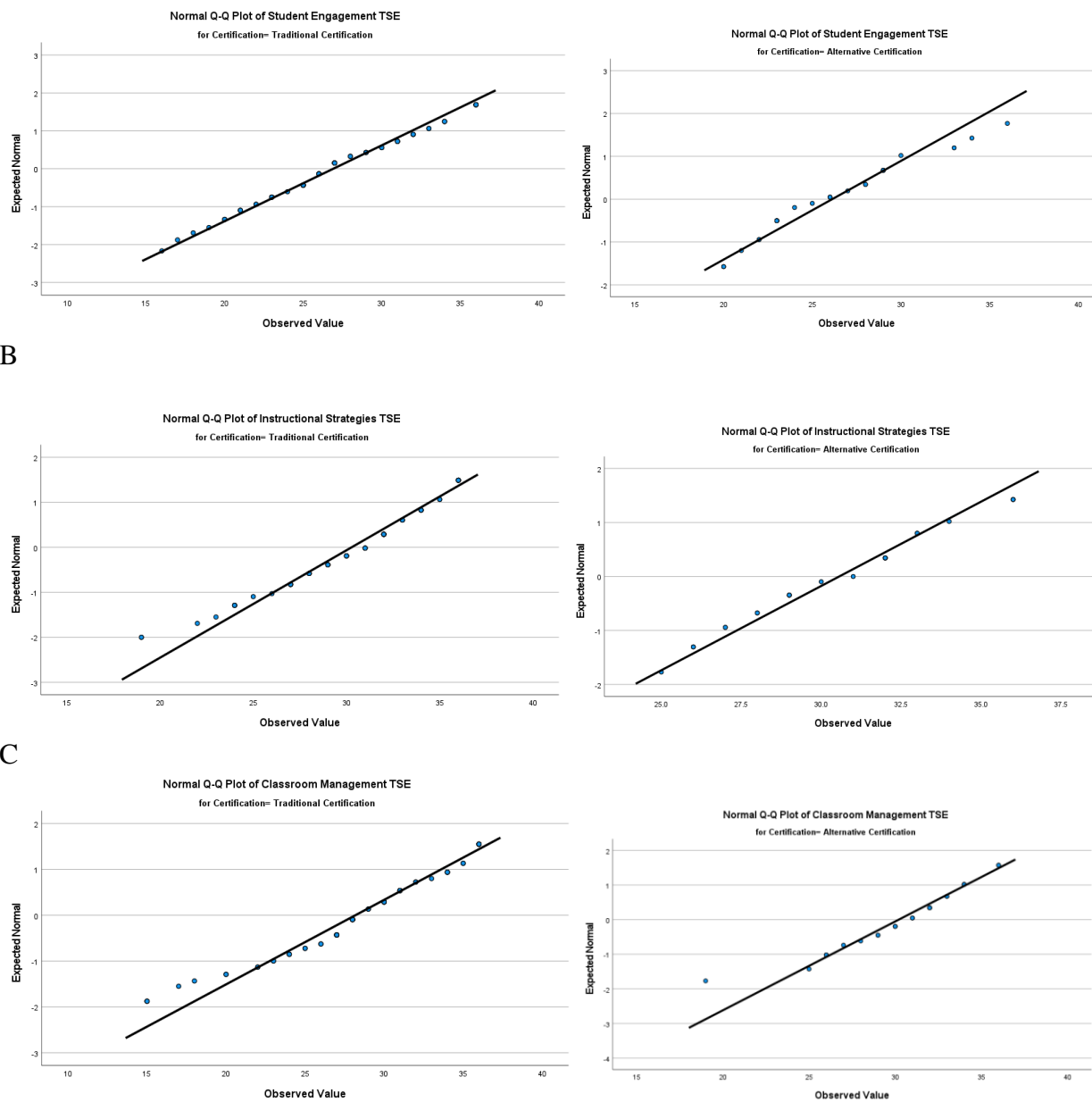
^a Lilliefors Significance Correction

The researcher used a series of scatterplots to test the assumption of multivariate normal distribution. A scatterplot matrix was plotted for each group of dependent variables (student engagement, instructional strategies, and classroom management). The scatterplot for student engagement, instructional strategies, and classroom management showed multivariate normal distribution; therefore, this assumption was not violated (see Figure 4).

Figure 4

Student Engagement, Instructional Strategies and Classroom Management Teacher Self-Efficacy Score Scatterplots

A



Note. Panel A: Q-Q Plot for comparing the student engagement teacher self-efficacy scores of traditional and alternatively certified participants. Panel B: Q-Q Plot for comparing the instructional strategies teacher self-efficacy scores of traditional and alternatively certified participants. Panel C: Q-Q Plot for comparing the classroom management teacher self-efficacy scores of traditional and alternatively certified participants.

The assumption of homogeneity of variance was examined using Levene's test of homogeneity. There was homogeneity of variances, as assessed by Levene's Test of Homogeneity of Variance ($p < .05$). No violation was found where $p = .047$ (see Table 11).

Table 11

Levene's Test of Equality of Error Variances^a

Dependent Variable: Teacher Self-Efficacy Scores

		Levene Statistic	df1	df2	Sig.
Student Engagement	Based on Mean	.347	1	88	.558
	Based on Median	.319	1	88	.574
	Based on Median and with adjusted df	.319	1	84.047	.574
	Based on trimmed mean	.367	1	88	.546
Instructional Strategies	Based on Mean	1.558	1	88	.215
	Based on Median	1.210	1	88	.274
	Based on Median and with adjusted df	1.210	1	80.633	.275
	Based on trimmed mean	1.434	1	88	.234
Classroom Management	Based on Mean	2.127	1	88	.148
	Based on Median	2.126	1	88	.148
	Based on Median and with adjusted df	2.126	1	83.384	.149
	Based on trimmed mean	2.259	1	88	.136

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

^a Design: Intercept + Certification

Multicollinearity was tested using a Pearson Correlation. The instructional strategies and classroom management teacher self-efficacy scores showed a high degree of collinearity ($r = .533$). Also, the student engagement and classroom management teacher self-efficacy scores showed a high degree of collinearity ($r = .624$). In addition, the student engagement and instructional strategies teacher self-efficacy scores were justifiable ($r = .576$). See Table 12 for the correlations among the dependent variables.

Table 12

Correlations

Dependent Variable:
Teacher Self-Efficacy
Scores

		Student Engagement TSE	Instructional Strategies TSE	Classroom Management TSE
Student Engagement TSE	Pearson Correlation	1	.576**	.624**
	Sig. (2-tailed)		<.001	<.001
	N	90	90	90
Instructional Strategies TSE	Pearson Correlation	.576**	1	.533**
	Sig. (2-tailed)	<.001		<.001
	N	90	90	90
Classroom Management TSE	Pearson Correlation	.624**	.533**	1
	Sig. (2-tailed)	<.001	<.001	
	N	90	90	90

**Correlation is significant at the 0.01 level (2-tailed).

Results for Null Hypothesis

A one-way MANOVA was conducted to determine if there was a difference in student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who participate in traditional or alternative certification pathways. A Wilks' Lambda statistic was used. The result of the MANOVA was not significant at an alpha level of .05, where $F(3, 86) = 2.756$, $p = .047$, partial $\eta^2 = .088$, suggesting there are no significant differences on the dependent variables (student engagement, instructional strategies, and classroom management) by teachers in traditional or alternative certification pathways. Therefore, the null hypothesis failed to be rejected. Because the null failed to be rejected, post hoc analysis was not required.

CHAPTER FIVE: CONCLUSIONS

Overview

This chapter will outline the results of this quantitative, ex-post facto, causal comparative study of teacher self-efficacy between teachers who participate in traditional and alternative certification pathways. The researcher will outline the implications of the findings of this study and clarify the limitations of the study. Finally, the researcher will make recommendations for further research based on these findings.

Discussion

The purpose of this causal-comparative study was to determine if a significant difference of student engagement, instructional strategies, and classroom management teacher self-efficacy scores existed between teachers who participate in traditional or alternative certification pathways. Twenty schools participated in the study in which 15 participants were male and 75 were female. All participants completed a teacher certification pathway, demographic survey, and the Teachers' Sense of Efficacy Scale Inventory. The collected data was analyzed using a MANOVA with the categorical independent variable being the teacher certification pathway which included two groups consisting of traditional and alternative certification pathways. The dependent variable in this study was the student engagement, instructional strategies, and classroom management teacher self-efficacy scores. The research question for this study sought to determine if there was a student engagement, instructional strategies, and classroom management teacher self-efficacy score difference between teachers who participated in traditional or alternative certification pathways. There was not a statistically significant difference between student engagement, instructional strategies, and classroom management teacher self-efficacy scores between teachers who obtained certification via traditional pathways

and teachers who obtained certification via alternative pathways. Therefore, the null hypothesis failed to be rejected.

An aspect that deserves to be discussed is the lack of and nearly non-existent literature regarding teacher self-efficacy in comparison to traditional and alternative certification. Past empirical studies related to comparing TTP and ATP programs that evaluate their efficiency are scarce, limited, and lack key statistical information (Whitford et al., 2018, p. 683). The problem is that the literature has not fully addressed the effects of teachers' self-efficacy after obtaining teacher certification, particularly traditional or alternative teacher licensure. This study remedies that issue.

In the instructional strategies and classroom management domain, alternatively certified participants ($M = 30.56$, $S.D. = 3.20$ and $M = 30.20$, $S.D. = 3.89$) indicated higher teacher self-efficacy scores than traditionally certified participants ($M = 30.27$, $S.D. = 4.18$ and $M = 28.18$, $S.D. = 5.42$). However, in the student engagement domain, alternatively certified participants ($M = 26.12$, $S.D. = 4.34$) indicated lower values than traditionally certified participants ($M = 26.90$, $S.D. = 4.99$). This is supported in the literature as Chesnut and Burley (2015) stated, "teachers with a stronger sense of self-efficacy had better levels of planning and organization, were more resilient when classroom strategies did not go well, were more open to experimentation, and were less critical of students" (p. 3). The difference of a teacher's knowledge and the extent of their abilities has been an argument from the start of teacher preparation (Kauffman et al., 2017, p. 33).

At first glance, the results of this study appear to contradict the study of Huang et al. (2020, p. 34) who found a significant and positive difference with classroom teaching and teacher-student relationships regarding school-decision making and teachers' job satisfaction and

occupational commitment. The results of Huang et al. (2020) were ($\chi^2(655) = 4711.54, p < .0001, CFI = 0.919, RMSEA = 0.066$) and derived from the same instrumentation as this study (Tschannen-Moran and Woolfolk Hoy's short version of the Teachers' Sense of Efficacy Scale). In support, the current study focused on student engagement, instructional strategies, and classroom management teacher self-efficacy scores in correlation to teachers who participate in traditional or alternative certification pathways. Although the current study did not show a significant difference between teacher self-efficacy scores and teacher certification pathways, traditional and alternative participants in this study felt strongly about classroom teaching and teacher-student relationships in connection to teacher self-efficacy. This is seen through the TSES score responses: student engagement responses had a common score of "7" with a mean of 26.68 and a standard deviation of 4.81, while the instructional strategies subscale had a common score of "8" with a mean of 30.35 and a standard deviation of 3.92 and lastly, the classroom management subscale had a common score of "8" as well with a mean of 28.74 and a standard deviation of 5.10. The current study supports the study of Huang et al. (2020) through teachers' responses which demonstrates their belief that classroom teaching and teacher-student relationships are positively correlated to school-decision making and teachers' job satisfaction and occupational commitment.

This study supports the findings of Pressley and Ha (2021), who surveyed 361 teachers from urban, suburban, and rural areas of the United States, while comparing their instructional and engagement teacher self-efficacy scores (p. 4-5). Pressley and Ha (2021) collected data with the instrumentation of the TSES but reported no significant differences for instructional and engagement efficacy regarding instructional levels (Pressley & Ha, 2021, p. 6-7). Teachers from urban, suburban, and rural areas were the target of Pressley and Ha (2021), which is similar to

the setting of this rural study. Comparing instructional levels and educator success to instructional and engagement efficacy sparked motivation for the current study; the researcher sought to determine if certain demographic information and efficacy beliefs, which will be discussed in detail later, had any impact on instructional and engagement teacher self-efficacy scores. This study also adds to the study of Pressley and Ha (2021) by delving into various other factors that contribute to low teacher self-efficacy and teacher burnout which were not explored in-depth within the previous study; these factors are but not limited to educator identities, teacher student relationships and educator's success. Educators have listed working conditions and varying levels of self-efficacy as reasons for resignation because those factors make it harder for them to do their jobs (Dunn et al., 2017, p. 282). Educators' identities can also affect their choice of whether they resign because one's self-perception will continuously go through construction and modification over time and change them based on various processes and experiences (Dunn et al., 2017, p. 282).

Bandura's social cognitive theory and self-efficacy theory are vital as the foundation of this research. Bandura's thoughts and teachings are the reasons why traditional and alternatively certified teachers selected their responses, whether it was for the perception of self-efficacy, personal efficacy, coping efficacy and the like. The results of this current study align perfectly with Albert Bandura's social cognitive theory and self-efficacy theory. Social cognitive theory relies on people finding and using influence around them to positively impact self-efficacy; in situations where people lack control, they must use human functioning and personal skills to enhance personal and group productivity (Bandura, 2012, p. 12). How teachers think, motivate, and persevere, are all connected to the social cognitive theory; these actions also include teachers' emotional well-being and the choices that they make (Bandura, 2002, p. 270-271).

The self-efficacy theory is directly related to all teachers as “efficacy expectations determine how much effort people will expend and how long they will persist in the face of obstacles and aversive experiences and how long they will sustain effort in dealing with stressful situations” (Bandura, 1977, p. 194). The self-efficacy theory keys on how one obtains success because success with minimal personal effort will create a high sense of self-efficacy, while success with maximum personal effort could be detrimental to one’s self-efficacy level (Bandura, 1977, p. 201). When traditional and alternatively certified teachers step into their classrooms, they must have a level of self-confidence, trust in their personal abilities, trust in their school system and functionality and dependability and accountability with their students, families, and coworkers. These factors will grow, sustain, and retain teachers within the profession and the results of this study can ultimately provide key insight as to the “how.”

A finding of notable importance is the impact of the demographic context within this study. Each certification pathway answered demographic questions regarding gender, age, race, education level of mother, education level of father, education level of participant, education as a first career choice, Title 1 employment and grade level taught. The demographic categories of gender, age and race are representative of the southern school district as well as national averages. The national average for the teaching profession displays a 77% female and 2% black male representation in comparison to this study’s 83% female and 27% black male representation (US DOE, 2022). The national averages for traditional certification programs are 77% females, 21% males and 1.3% not reporting (US DOE, 2022). Those numbers in comparison to the results of this study are 85% female and 15% male representation. The national averages for alternative IHE programs are 66% females, 31% males and 3.6% not reporting (US DOE, 2022). Those numbers in comparison to the results of this study are 80%

female and 20% male representation. The age demographic of this current study was evenly distributed between both certification pathways with the majority being in their thirties and forties age wise. Most alternatively prepared teachers are teachers of color (Van-Overschelde & Wiggins, 2018; Yin & Partelow, 2020). The results of this study also boasted a 50% person of color representation for alternative certification which included 1 multiracial participant.

Forty-five percent of the mothers of traditionally certified participants highest achieved academic level was high school in comparison to 52% of the fathers' high school demographic; alternative certified participants' mothers and fathers highest level achieved was also high school with 36% and 48% representation. The most popular educational levels of both traditional and alternatively certified participants were high school, undergraduate, and graduate levels. These numbers compared to the highest academic level achieved by each participant and education as a first career choice are truly interesting. This survey's participants educational levels were as follows: 24% bachelors, 64% masters and 12% doctoral level in comparison to 48% of the study's participants choosing education as a first career choice. This study also displayed a 64% Title 1 employment statistic and a 40% representation of teaching in both middle and high school.

Implications

The purpose of this study was to determine if one's perceived self-efficacy level was correlational to their teaching certification pathway. Little is known about an educator's perceived self-efficacy in relation to their pathway of teacher certification. A gap exists in the literature addressing traditional and alternative teacher certification pathways through teacher-student relationships and other external factors that influence self-efficacy. A major benefit of this current study is quite simple: it is one of a kind. Not only is this study significant, but it also

adds value to the educational field through the insight and growth of professional development, fills the literature gap regarding the self-efficacy and the teacher certification relationship in addition to being the first study of its type to be researched in Troup County, Georgia. The uniqueness of this study expands over a broad range of categories; there is so much room for further research and academic opportunity which will all be discussed later.

The results of this study go hand in hand with professional development; professional development programs can be based on this study's results. School districts can apply this study within their district themselves while using these results to find trends, strengths and weaknesses in their districts and implement professional development programs as needed. Professional development is essential because it serves as the base for each teacher's professional foundation; it can hinder and help an educator, regardless of their certification pathway. When an educator selects a certain certification pathway, that choice impacts their professional development, tenure, and self-efficacy. This data is essential because teachers are leaving the profession at such an alarming rate due to the lack of social support which in turn negatively impacts their professional stress, burnout rate, job satisfaction, and self-efficacy (Zhang et al., 2020, p. 420). By their fifth year of teaching, teacher retention sits at 50% (Ford et al., 2020, p. 2).

The results of this study may have shown no significance between teacher self-efficacy scores and one's certification pathway but what has shown significance is the implied data. This specific data applies to the behind-the-scenes thoughts and actions of the participants of this study. Out of the 90 teacher participants of this study it can be assumed that all these teachers are committed to the profession due to their answers; this implied data also applies to each participant's level of self-confidence and attitude toward success. The average scores of each teacher within this school district adds to the educational field while showing a positive trend in

teacher recruitment, hiring and teacher retention. In Georgia, there has been a mass focus on teacher recruitment and the hiring of qualified teachers since Georgia has a teacher hiring increase since 2019 but no increase in hiring qualified teachers (McKillip & Farrie, 2019, p. 1-2). While the length of each participant's tenure is unknown, the information that stands out is this study's results and its connection to this school districts commitment to teacher retention. In 2019, Troup County continued its focus on teacher retention and went on record to state, "if we don't recruit the absolute best teachers and retain the best teachers it's all for naught" (Evans, 2019). Continuing into 2021, the Troup County School System kept its sight on teacher retention by setting the goal of providing retention to all of its employees and not just the school-based employees, approved by the state Governor Brian Kemp (Peralta, 2021).

Other aspects of this study that contribute to the educational field and society are the external factors that impact self-efficacy. These factors ranged from relatibility, the teacher-student relationship, personal efficacy, teacher efficacy, and Bandura's four sources of self-efficacy (Aldrup et al., 2018; Bandura, 2012; Corry & Stella, 2018; Pfitzner-Eden, 2016; Spilt et al., 2011). Similar factors that can determine self-efficacy are factors such as resilience, instructional quality, occupational commitment, job satisfaction, teaching performance and teacher burnout can be attributed to teacher self-efficacy (Pfitzner-Eden, 2016, p. 1). Educators must feel confident in themselves to place confidence in students and have students in turn experience self-gratitude. According to Mahler et al. (2018), research has shown that teacher self-efficacy is related to teachers' professional engagement, effective instructional strategies, and an openness to demanding students (p. 2). Simply put, the results of this study have shown how shortages come from attrition, then how attrition leads to teacher burnout and how teacher

burnout is due to factors such as self-efficacy, teacher-student relationships, certification pathways and professional development in traditional and alternative certification pathways.

Limitations

Practical limitations to the study population and study design may have caused threats to the external validity of this study. The external validity of this study was threatened by the lack of sample size and the length of time to complete the survey. There were 20 schools in this southern rural district and the sample consisted of only 90 participants; this may have weakened the study. Participant participation may have been low due to only having three weeks allotted to complete the researcher's survey. Great efforts were made by the researcher to include participants throughout the entire school district and increase survey participation.

This study was conducted in a geographical location that included school districts within rural central west Georgia. Although the participant sample met all recommendations from Gall et al. (2007), the participants are all from this one geographical region. Requirements for traditional and alternatively certified participants varies from state to state, therefore limitations to the researcher's implications for application may apply since all participants reside in Georgia.

The data gathered from this study was obtained from anonymous teacher survey responses and is limited to quantitative analysis of the rating scales within the survey. The knowledge gained from this study is limited by the selected methodology. The researcher recommends further qualitative study to gain a new understanding and perspective on the analysis of comparing teacher self-efficacy between teachers in traditional and alternative certification pathways.

Recommendations for Future Research

As this comparative research regarding teacher self-efficacy between teachers in traditional and alternative certification pathways addresses a gap currently found within the research field, there are many recommendations for further study. This researcher has opened the door regarding the comparing analysis of teacher self-efficacy between traditional and alternatively certified teachers, but there is more to be educated about the teacher attrition phenomenon as well as the differences to improve traditional and alternative certification professional development programs and the overall impact on teacher attrition, teacher shortages and teacher burnout. Recommendations for further research include the following:

1. Larger sample size.
2. Increase of the sample size to a larger geographic area.
3. Qualitative analysis of teacher experiences within both certification pathways to learn more about the differences of student engagement, instructional strategies, and classroom management teacher self-efficacy.
4. Qualitative analysis on the impact of the demographic information including but not limited to gender, age, race, education level of mother, education level of father, education level of participant, education as a first career choice, Title 1 employment and grade level taught.
5. Further study examining the reasons why traditional and alternative certification pathways differ in preparation methods as well as the validity and effectiveness of both pathways.
6. Further study comparing traditional and alternative professional development programs regarding self-efficacy before, during and after enrollment.

7. Further study into pre-service teacher self-efficacy and selection of certification pathway.
8. Comparative analysis of the same study but limited to private schools, faith-based schools, etc.
9. Qualitative analysis of the same study but limited to private schools, faith-based schools, etc.
10. Comparative analysis of parent educational level to teacher self-efficacy and certification pathway.

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APPENDIX A

Teachers' Sense of Efficacy Scale¹ (short form)

Teacher Beliefs		How much can you do?								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.		Nothing	Very Little	Some Influence	Quite A Bit	A Great Deal				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Efficacy in Instructional Strategies Items: 7, 10, 11, 17, 18, 20, 23, 24

Efficacy in Classroom Management Items: 3, 5, 6, 13, 15, 16, 19, 21

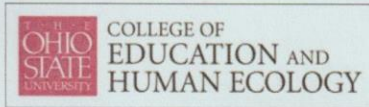
Short Form

Efficacy in Student Engagement Items: 2, 3, 4, 11

Efficacy in Instructional Strategies Items: 5, 9, 10, 12

Efficacy in Classroom Management Items: 1, 6, 7, 8

APPENDIX B



ANITA WOOLFOLK HOY, PH.D.

PROFESSOR
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy the scoring instructions can be found at:

<http://u.osu.edu/hoy.17/research/instruments/>

Best wishes in your work,

A handwritten signature in cursive script that reads "Anita Woolfolk Hoy".

Anita Woolfolk Hoy, Ph.D.
Professor Emeritus