

UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

A NEEDS ANALYSIS STUDY OF NON-STANDARD CERTIFIED OKLAHOMA CAREER
TECHNOLOGY CENTER TEACHERS' IMPRESSIONS OF SELF-EFFICACY IN
CLASSROOM MANAGEMENT

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF EDUCATION

By

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Norman, Oklahoma

May 2025

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A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

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Dedication

I dedicate the efforts of this dissertation to my favorite person. For almost four decades she's supported and loved me through every endeavor, academic or otherwise. She listened to my complaints, soothed my aches and celebrated my victories. Thank you, Sherilyn Herndon, for being my better half always, and for helping me understand what I'm capable of.

Also, to my parents for instilling in me the importance of education, and the confidence to pursue those things I find worthy.

Acknowledgments

This endeavor would not have been completed without Dr. Sarah Guthery, my committee chair, who helped me recognize application and significance within my research. Without her support and encouragement, I would forever be ABD. I also could not have successfully undertaken this journey without my defense committee, Dr. Curt Adams, Dr. Rebecca Borden and Dr. Timothy Ford, who generously provided time, knowledge, and expertise to guide and enrich this enterprise. Additionally, I would also like to acknowledge the impact of Dr. William Frick, for guiding me to recognize my internal motivations for seeking a doctoral degree, as well as all the faculty at the Jeannine Rainbolt College of Education. And finally, thank you Michael Jenkins for smoothing the administrative path through OU's Ed. D. program.

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Abstract

This needs analysis, cross-sectional, observational study examined the relationship between Oklahoma Career Technology Center instructors' certification type, standard vs. non-standard, and self-efficacy in classroom management. Thirty CTE teachers in nine of the twenty-nine Oklahoma Career Tech districts were surveyed using an adapted form of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). Results indicate non-significant but conforming results for the classroom management portion of the TSES, Teachers' Sense of Efficacy Scale among standard and non-standard Oklahoma Career Tech instructors. Though significance was not established, trends in these results align with broader findings in the field associated with K-12 teachers, and support implementation of programs to retain these second-career and/or non-standard certification teachers (SC/NCTs).

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Chapter 1 Introduction

A 2019 survey of high school seniors and college undergraduates revealed perceptions of esteem and pay were deterrents to young people pursuing a career in education (Klimek, 2019). A career field plagued with low pay relative to educational training requirements, poor working environments, lack of opportunities for professional growth, and a decline in prestige has seen crippling problems with worker attrition resulting in two-thirds of U.S. school districts reporting a shortage of teachers (Hise, 2022; Research: Tackling the Teacher Shortage, 2022). This observation by Mark Lieberman, a reporter for Education Week, sums up the less-than-optimal working environment found within school walls, “Teachers and other school workers who are in school buildings are getting burned out and fed up with having to cover for absent or departed colleagues on top of their regular duties, all while getting paid a suboptimal wage” (Beaudry, 2022, p. 3). In a worsening trend, teachers are paid less than their nonteacher college-educated counterparts with similar education levels and years of experience (Allegretto, 2022). Jennifer Beaudry of Lattice’s Magazine for HR Professionals speaks of the career world awaiting educators outside an ailing public system, “Private employers are offering higher wages and better benefits, sometimes in roles that are less demanding or more flexible,” (Beaudry, 2022, p. 5).

In a 2019 survey of principals, parents, and teachers, 4 of 5 teachers felt the expectations placed on educators were unreasonable (Harris et al., 2019). This is not a new trend, over two decades ago, a 2001 analysis concluded teacher shortages were not due to an insufficient supply of qualified teachers but rather the reluctance of those teachers to remain in the job due to its unreasonable demands (Ingersoll, 2001). Adding to the issues, insufficient materials and supplies, poorly maintained facilities and high student-to-teacher ratios contribute to teacher

erosion (Klimek, 2019). Due to these factors and others, each year the education profession loses around 9% of its teachers (Goldhaber & Theobald, 2021). With this continuing teacher crisis in America, second-career and/or non-standard certified teachers (SC/NCT), lacking formal training in pedagogy and classroom experience, have become more common in the classroom (Bowen et al., 2019; Heubeck, 2022; Korth, 2022; Mobra & Hamlin, 2020; Neumann, 1994).

Statement of the Problem

Furthering the challenge of school staffing, for SC/NCTs, the profession-wide annual 9% attrition number doubles (Bailey et al., 2020; García et al., 2022; Heubeck, 2022; Neumann, 1994; Troesch & Bauer, 2020). In Oklahoma the one-year attrition rate for beginning SC/NCTs increases to 26.4%, making first-year SC/NCTs almost 3 times more likely to leave the classroom than the average U. S. teacher, with 5-year attrition data showing a similar relationship (New Report Reveals 30,000 Educators Have Left Profession in 6 Years, 2019). Seemingly, the first year isn't a hard and fast litmus test, a North Carolina study found retention rates for non-traditionally prepared teachers indicated attrition was not only significantly higher than traditionally prepared teachers after the first year, but also after years 2 and 6 (Zhang & Zeller, 2016).

Job satisfaction is a strong predictor of teacher retention (Aydogmus & Serçe, 2021; Preechawong et al., 2021; Zincirli, 2021), so it can be assumed, increasing SC/NCTs' job satisfaction is a potential strategy for retaining those novice teachers at a higher rate than currently experienced. With the significant positive relationship between teacher-student relationship and job satisfaction (Ertürk, 2022; Kaya & Selvitopu, 2019; Marzano et al., 2003; O'Connor, 2008; O'Shea, 2021; Türker & Kahraman, 2021), trainings that enhance a teacher's ability to establish and maintain such relationships should be a valuable tool in increasing job

satisfaction and thus teacher retention. Self-efficacy of classroom management has a positive correlation with teacher-student relationship (Agyekum, 2019; Aldrup et al., 2018; Booker, 2021; Chen et al., 2021; Duong et al., 2019; Iwuagwu & Aiwuyo, 2017; Tipton-Fisler et al., 2020), allowing self-efficacy related to classroom management as a tool to gauge teacher job-satisfaction.

There are many similarities between Oklahoma CTE teachers and their public-school counterparts. When considering teachers in either system, instructors with non-standard certifications will suffer a lack of pedagogical skills leading to deficiencies in classroom management and instructional skills. (Bottoms et al., 2013).

Research Question

In hopes of shedding light on first year second-career and/or non-standard certified teachers' attrition (Bailey et al., 2020; García et al., 2022; Heubeck, 2022; Neumann, 1994; Troesch & Bauer, 2020), this study examines the impact of Oklahoma Career Tech teacher certification method on perceptions of self-efficacy associated with classroom management. Is there a statistical difference in perceived self-efficacy between traditionally certified and non-traditionally certified teachers in the Oklahoma Career Tech system?

With research indicating teachers' self-efficacy in classroom management being positively correlated to job satisfaction (Ertürk, 2022; Kaya & Selvitopu, 2019; Marzano et al., 2003), and job satisfaction having a positive relationship with teacher retention, this study's importance lies in identifying training needs that enhance teacher job satisfaction, in hopes of offering support for teacher retention interests in the future. Another factor contributing to the study's importance is expanding the knowledge base beyond currently known reasons for teacher

dissatisfaction such as compensation, working environments, professional growth opportunities, and prestige (Hise, 2022; Research: Tackling the Teacher Shortage, 2022). Additionally, if this research could provide insight into practices that encourage teacher retention, it could result in enhanced student learning (Holloway, 2006).

Previous research justifies the use of measures of perceptions of self-efficacy in classroom management as a measure of impact on teacher job satisfaction (Ertürk, 2022; Kaya & Selvitopu, 2019; Marzano et al., 2003) and job satisfactions negative relationship with the intention of teachers to leave their profession (Kasalak & Dagyar, 2020; OECD, 2018).

Significance of the Study

If the method of Oklahoma CTE teacher certification proves to have a relationship to perceptions of self-efficacy in classroom management, it could have an immediate impact on second-career and/or non-standard certified teacher training. Were this to be the case, practitioners would have a nearly immediate training focus to use in the retention of this statistically difficult to retain teaching population. This could prove particularly useful in Oklahoma where, “teaching vacancies are among the highest in the country and use of emergency certification to fill these vacancies has increased rapidly in recent years” (Mobra & Hamlin, 2020, p. 14).

Additionally, the results of this study could positively impact the quality of life for a sector of educators, SC/NCTs, that predominantly chose to enter education for intrinsic and altruistic reasons similar to those commonly expressed by traditionally trained teachers (Backes & Burns, 2008; Mobra & Hamlin, 2020; Thomson & Palermo, 2018; Wagner & Imanuel-Noy, 2014). Common reasons for SC/NCTs to enter the career include student focused reasons such as

to be a positive role model (Thomson & Palermo, 2018), work with young people (Backes & Burns, 2008; Thomson & Palermo, 2018), and ensure students have reliable teachers (Mobra & Hamlin, 2020). “On the whole, the willingness of teachers to undertake transitions to full-time classroom teachers seemed to be driven by a desire to ensure that children had reliable classroom teachers” (Mobra & Hamlin, 2020, p. 11). Society centered reasons were also cited, such as to help society (Thomson & Palermo, 2018; Wagner & Imanuel-Noy, 2014) and give back for what education has given them (Backes & Burns, 2008; Mobra & Hamlin, 2020). Additionally, personally centered reasons such as fulfilling a lifelong desire to teacher (Backes & Burns, 2008; Mobra & Hamlin, 2020; Wagner & Imanuel-Noy, 2014) were common among SC/NCTs. Backs and Burns (2008) sum up the importance of this type of work for individuals potentially impacted by pointing out non-traditionally trained teachers, “want to be successful teachers. Administrators also want them to be there and want them to be successful so that they will remain in the classroom” (Backes & Burns, 2008, p. 111).

Chapter 2 will address prior literature in this area, revealing a web of positive correlation among teacher/student relationship, self-efficacy, classroom management, job satisfaction, and choosing to remain employed for educators, and the problematic attrition rate associated with education in general. It will support the suggestion that it is reasonable to dedicate means to effectively address attrition may lie in those correlated areas.

Chapter 2 Review of the Literature

Teacher Workforce Characteristics

The following is a review of teacher workforce characteristics including hiring, gender and ethnicity, age characteristics, years of experience, weekly hours worked, and formal education.

Examining teacher workforce characteristics, the most recent data from the National Center for Education Statistics comes from the 2017-18 school year or the 2020-21 school year, depending on topic. In 2020-21, in the U. S. the number of full and part-time public-school teachers had reached 3.764 million, and the number of private school teachers had reached 466,000 (“Table 209.10, Teacher Characteristics, Class Sizes, and Assignments,” 2022). These numbers compared to the 1999-2000 school year represent a 25% increase in full and part-time public-school teachers from 3.0 million, and an increase of 3.8% in the number of private school teachers from 449,100.

On a percentage basis, private schools hire approximately three-fold more new teachers each year than public schools. But while private school new hire rates remained the same between 1999-2000 and 2020-21, public schools hired proportionally one-fourth fewer new teachers in 2020-21. The number of new teachers projected to be hired in public schools in 2020-21 was 211,000, or 5.6% of total public school teacher numbers. The number of new teachers projected to be hired in private schools in 2020-21 was 87,000, or 19% of total private school teacher numbers. The number of new teachers hired in public schools in 1999-2000 was 222,000, or 7.4% of total public school teacher numbers. The number of new teachers hired in private schools in 1999-2000 was 83,000, or 18% of total private school teacher numbers (“Table 208.20

Teacher Characteristics, Class Sizes, and Assignments,” 2021) reported that among public schools, high poverty schools were more significantly impacted, experiencing a 350% gain between 1987–88 and 2011–12 of new teachers, rising from 41,000 to 189,400.

Teacher gender has remained steady over the past two decades with a consistent three-fourths of public and private school teachers being female (Taie & Lewis, 2022). In public schools in 2020-21 teacher gender was 23.2% male and 76.8% female. Teacher gender was similar in private schools with 24.7% male and 75.3% female. This represents a slight change from 1999-2000 where teacher gender in public schools was 25.1% male and 74.9% female and in private schools was 23.9% male and 76.1% female (“Table 209.10, Teacher Characteristics, Class Sizes, and Assignments,” 2022). Teachers have become more racially/ethnically diverse since 1999 as the growth rate of non-White teachers has been more than twice the growth rate of White teachers (Ingersoll et al., 2017). More specifically, over the past two decades ethnicity trends would show a proportional decrease in White, Black and Indigenous teachers, although an actual increase in numbers of nearly half a million White teachers, the number of Black teachers staying steady near a quarter-million and a decrease of ten thousand Indigenous teachers from 26,000 to 16,000 from 1999-2000 to 2020-21. During the same time the proportional increase in Hispanic and Asian teachers in both public and private schools reflect an increase of around two-fold in the actual number of teachers from 169,000 and 48,000 respectively to 355,000 and 89,000 (“Table 209.10, Teacher Characteristics, Class Sizes, and Assignments,” 2022). Examining the ethnicity of the teacher workforce in the 2020-21 school year and comparing to 1999-2000 numbers, the majority of teachers in both public and private schools in 2020-21 were white, 79.9% of public-school teachers and 83.3% of private school teachers comparatively down from 84.3% and 89.5% in 1999-2000. Hispanic teachers represented 9.4% of public-school

teachers and 8.2% of private school teachers in 2020-21, comparatively up from 5.6% and 4.7% in 1999-2000. Black teachers represented 6.1% of public-school teachers and 3.7% of private school teachers in 2020-21, falling from 7.6% in public schools but remaining steady at 3.7% in private schools from 1999-2000. Asian teachers represented 2.4% of public-school teachers and 2.5% of private school teachers in 2020-21, expanding from 1.6% in both public and private schools in 1999-2000. Native Indian and Alaska Native teachers as a combination dropped in both categories, declining from .9% of public-school teachers in 1999-2000 to .4% in 2020-21 and declining from .6% of private school teachers in 1999-2000 to .2% in 2020-21. The number of Pacific Islander and Two or more race teachers combined isn't comparable due to incongruous data between 2020-21 and 1999-2000 in this category ("Table 209.10, Teacher Characteristics, Class Sizes, and Assignments," 2022). From 1987–88 to 2011–12, high-poverty public schools had a higher percentage of minority teachers than other public schools, a ratio that has trended up over time (Ingersoll et al., 2017).

For the 2020-21 school year the median age of public-school teachers was forty-two, while the median age of private school teachers was forty-five (Taie & Lewis, 2022). The age scale of public-school teachers for 2020-21 shows 14.2% of teachers were under 30 years of age down from 17.0% on 1999-2000, 27.0% were 30 to 39 up from 22.0% in 1999-2000, 28.5% were 40 to 49 down from 31.8% in 1999-2000, 22.3% were 50 to 59 down from 26.2% in 1999-2000, and 8.0% were 60 and older up from 3.1% in 1999-2000. The age scale of private school teachers for 2020-21 shows a decrease to 13.6% of teachers under 30 years of age from 19.3% in 1999-2000, 22.7% were 30 to 39 similar to 22.4% in 1999-2000, 25.0% were 40 to 49 showing a slight decrease from 29.2% in 1999-2000, 21.8% were 50 to 59 showing a slight decrease from

23.5% in 1999-2000, and a significant increase to 16.9% were 60 and older compared to 5.7% in 1999-2000 (“Table 209.10, Teacher Characteristics, Class Sizes, and Assignments,” 2022).

Concerning teacher experience, for the 2020-21 school year, both public and private school teachers have an average of 15 years’ experience with the past 8 years at the same school (Taie & Lewis, 2022). The years of teaching experience for public school teachers in 2020-21 showed 7.3% had less than 3 years compared to 10.8% in 1999-2000, 29.1% had 3 to 9 years similar to 29.1% in 1999-2000, 37.3% had 10 to 20 years, up from 29.1% in 1999-2000 and 26.3% had over 20 years compared to 28.8% in 1999-2000. The years of teaching experience for private school teachers in 2020-21 showed 12.9% had less than 3 years, down from 16.3% in 1999-2000, 28.1% had 3 to 9 years, down from 32.0% in 1999-2000, 31.8% had 10 to 20 years, up from 30.6% in 1999-2000 and 27.3% had over 20 years, showing an increase from 21.2% in 1999-2000 (“Table 209.10, Teacher Characteristics, Class Sizes, and Assignments,” 2022).

In the 2020-21 school year both public and private schools averaged 52 hours per week on all school-related activities. Public school teachers averaged 25 hours weekly delivering instruction to students while private school teachers averaged 24. Public school teachers’ contracts required an average 38-hour work week while private school teachers’ contracts required 39 (Taie & Lewis, 2022). Public school teachers experienced a 15.9/1 pupil/teacher ratio while private school teachers experienced a lower 11.4/1 ratio in the 2019-20 school year. These ratios have remained somewhat static since 2000 for public school but reflect a downward trend from a 14.3/1 ratio in private schools in 2000 (Ingersoll et al., 2017; “Table 208.20 Teacher Characteristics, Class Sizes, and Assignments,” 2021). Due to effects of the Covid-19 pandemic including the largest decline in student enrollment since World War II, public school pupil/teacher ratio experienced its greatest single-year decrease in four decades, dropping to

15.4/1 in the 2020-21 school year (Snyder, 2022), however, the permanence of this change is difficult to predict due to the impact of the Covid-19 pandemic. There was a large discrepancy in teacher base pay between public and private school teachers reported for the 2020-21 school year. Public teachers averaged \$61,600 while private school teachers averaged just \$46,400. Additionally, 40% of public-school teachers had earnings from extracurricular activities compared with private schools at 26% (Taie & Lewis, 2022).

Both in 2020-21 and 1999-2000 private school teachers had less formal education than public school teachers, with private schools having six to seven times more teachers lacking a bachelor's degree and having over ten percent fewer teachers with advanced degrees during both time periods ("Table 209.10, Teacher Characteristics, Class Sizes, and Assignments," 2022). Prior to their first year of teaching, lower percentages of private school K–12 teachers had taken college courses related to teaching, including classroom-management techniques, learning assessment, lesson planning, serving students from diverse economic backgrounds, serving students who are limited-English proficient or English-language learners, serving students with special needs, and using student performance data to inform instruction (Taie & Lewis, 2022). Both public school and private school teachers show an increase in educational level between 1999-2000 and 2020-21. The highest degree earned by public school teachers in 2020-21 showed that 0.8% had less than a bachelor's degree compared to 0.7% in 1999-2000, 38.2% had a bachelor's degree, down from 52.0% in 1999-2000, 51.2% had a master's degree, up from 41.9% in 1999-2000, 8.4% had an education specialist degree/certification, compared to 4.7% in 1999-2000, and 1.4% had a doctoral degree, compared to 0.7% in 1999-2000. The highest degree earned by private school teachers in 2020-21 showed that 5.0% had less than a bachelor's degree, down from 7.3% in 1999-2000, 45.2% had a bachelor's degree, down from 57.5% in

1999-2000, 40.7% had a master's degree, up from 30.3% in 1999-2000, 5.8% had an education specialist degree/certification, up from 3.1% in 1999-2000, and 3.3% had a doctoral degree, up from 1.8% in 1999-2000 ("Table 209.10, Teacher Characteristics, Class Sizes, and Assignments," 2022). In the National Teacher and Principal Survey (NTPS), 2017-18, concerning the previous school year (2016-17), 99.4% of public-school teachers reported to have participated in professional development, while fewer, 94.5% of private school teachers reported that they participated in professional development (Taie & Goldring, 2020).

Summarizing teacher workforce characteristics using the most current data reflecting numbers from the 2020-21 school year, there are approximately 4.25 million teachers, both public and private, in the U. S. workforce with 300,000 projected to be new teachers. Although there's a slightly increasing portion of female teachers, the ratio has remained around 3:1, female to male for the past half century. The teacher workforce remains predominantly white with 79.9% of public-school teachers and 83.3% of private school teachers, while the general population in the U. S. is only 61.6% white (Jones et al., 2021). Hispanic teachers represented 9.4% of public school and 8.2% of private school teachers while representing 18.7% of the U. S. population. Black teachers represented 6.1% of public school and 3.7% of private school teachers while representing 12.4% of the U. S. population. Asian teachers represented 2.4% of public school and 2.5% of private school teachers and 7.2% of the total U. S. population. Pacific Islander, American Indian, Alaska Native and Two or more race teachers combined represented 2.2% of public-school teachers and 2.2% of private school teachers and 1.3% of the U. S. population ("Table 209.10, Teacher Characteristics, Class Sizes, and Assignments," 2022). In 2020-21 the median age of public-school teachers was forty-two, while the median age of private school teachers was forty-five, and both public and private school teachers have an average of 15

years' experience with the past 8 years at the same school (Taie & Lewis, 2022). Public school teachers, on average, have more education than their private school counterparts ("Table 209.10, Teacher Characteristics, Class Sizes, and Assignments," 2022).

Teacher Attrition/Retention Factors

Research associated with teacher compensation, voice, career advancement, resources and environment, and public perception, as well as impact of teacher attrition are examined in the following section.

Far and away, the greatest challenge to this labor sector is a labor shortage (Allegretto, 2022; Carver-Thomas & Darling-Hammond, 2017; Corrente et al., 2022; Darling-Hammond et al., 2016; Elyashiv, 2019; Espel et al., 2019; García et al., 2022; Harris et al., 2019; Lindsey et al., 2021; Olson Stewart et al., 2021; Pivovarov & Powers, 2022; Podolsky et al., 2016; Ramos & Hughes, 2020; Shuls & Flores, 2020; Solomonson et al., 2019; The Role of Principals in Addressing Teacher Shortages, 2017; Zhang & Zeller, 2016). At the heart of the labor shortage is teacher attrition. The 5-year attrition rate for teachers is 30%, compared to non-teaching professional attrition rates of 19% for nurses and lawyers, 16% for engineers, and 14% for pharmacists (García et al., 2022). Additionally, attracting students to teacher preparation programs has become increasingly difficult (Klimek, 2019; Podolsky et al., 2016).

Teacher attrition is the result of several factors. Teacher compensation is often perceived as the primary contributing factor to teacher retention and attrition issues. When compared to non-teacher professionals with equivalent educational achievement and years of experience, teachers suffer a financial penalty for participating in their chosen vocation in both weekly wages and total compensation (Allegretto, 2022). In 1996 the teacher wage penalty was 6.1%, (a teacher earned 6.1% less than their nonteacher counterpart per unit of time worked). That gap

has increased five-fold to 32.9% in 2021 nationwide. This change is reflected in the inflation adjusted general increase in wages since 1996. From 1996 to 2021 teachers' wages remained relatively unchanged, seeing an inflation adjusted 2% increase over the twenty-five-year period, while other college graduates during the same twenty-five-year period saw a 28% increase in inflation adjusted wages nationally. Rhode Island, Wyoming, and New Jersey reflected the smallest wage gap, with teachers making 3.4%, 4.0% and 4.5% less than their nonteacher counterparts, while Colorado, Oklahoma and Virginia teachers suffered the greatest wage gap at -35.9%, 32.8% and 32.7%. Teachers tend to receive a higher share of total compensation as benefits such as retirement plans and health insurance, as compared to non-teacher professionals. Data dating back to 1993 teachers experienced a total compensation gap of -2.7%. In 2021 that gap had expanded to -14.2% in total compensation (Allegretto, 2022). This compensation deficit is proving particularly difficult to overcome in the current highly competitive labor market. Teachers face non-education jobs offering higher wages and better benefits, often in less demanding, more flexible positions (Beaudry, 2022). In a study done in Michigan, teachers offered a salary increase had a 3.1% higher probability of continuing to teach than teachers not provided annual salary increases (Lindsey et al., 2021). A study of teacher mobility and attrition in Colorado, Missouri, and South Dakota revealed an increase in the likelihood of teachers leaving schools with lower annual salaries (Espel et al., 2019). Among other factors, in a study of rural teacher attrition, low salary was reported as an important reason for teacher turnover (Nguyen, 2020). In a report done by the Learning Policy Institute it was revealed turnover rates were lowest in the Northeastern states where teacher wages are higher and higher in the South where teacher wages are lower (Carver-Thomas & Darling-Hammond, 2017). In a separate Learning Policy Institute article, it was reported that in 30 states, experienced teacher, head-of-

households with two or more children often qualified for government subsidies such as children's health insurance and free and reduced school meals (Podolsky et al., 2016). While salary inequities exist among states, they can also exist within states due to unequal school-funding systems. Poorer districts are at a strong disadvantage when providing teacher compensation compared to wealthier districts that may be nearby. While lower paying states will claim throwing money at the problem won't fix it, states such as Connecticut and North Carolina have increased salaries while raising standards for preparation at the same time, reducing teacher shortages and increasing teacher quality (Podolsky et al., 2016).

Factors outside of wages affect teacher retention and attrition. Studies show a strong teacher voice significantly reduces teacher attrition (García et al., 2022; Podolsky et al., 2016). Having a voice in schoolwide decisions shows a large positive relationship with teacher retention, with the effects being greater for novice teachers than experienced teachers, as young teachers desire to have greater control over their classrooms and seek to influence school policies. Beginning teachers seek to feel valued for their input and insights, particularly by their administrators (Olson Stewart et al., 2021) Administrators collaborating with teachers in setting goals for that teachers' evaluation has been positively associated with teacher retention (Lindsey et al., 2021). Employing leadership teams, interview teams, and site-based management teams to make school-based decisions, fosters collaboration and creates a broader sense of ownership (The Role of Principals in Addressing Teacher Shortages, 2017). Three Connecticut school districts studied by University of Missouri – St. Louis researchers reported creating a collaborative culture in which teachers felt an increased voice in district-wide and building-wide decision making by creating building and district level committees, populated by teachers, whose recommendations were allowed to strongly influence policy (Shuls & Flores, 2020). Reduction

of top-down initiatives in leu of collaborative decision making between building leaders and teachers provides teachers with a voice and is a strong tool to overcome a culture of disconnect between administration and teacher (DeWitt, 2019). Reaching beyond just the classroom and district, a sense of voice can be provided to teachers through encouraging participation in and providing release time to attend community events like chamber of commerce meetings and city council meetings as representatives of the school, stretching teacher voice beyond the district into the community and creating a greater feeling of inclusion (Klimek, 2019). “Teachers’ job satisfaction—and therefore career decisions—are shaped by their connectedness to a team working toward a common shared purpose” (Podolsky et al., 2016, p. 41).

With a common reason for teachers to leave a school or district being to advance their careers, leadership opportunities are considered an important part of teacher retention programs (Podolsky et al., 2016; Shuls & Flores, 2020; The Role of Principals in Addressing Teacher Shortages, 2017). Teaching, unlike many professions, has a relatively “flat” professional progression, a teacher might well be doing the same job, teaching the same subject their first and last years of their career. Teachers seeking to move up often must move out of the classroom into a related career such as counseling or administration. While there are career progression moves that allow teachers to stay in the classroom, such as mentor, coach, or department chair, these are mostly limited and associated with only a small increase in salary. Teachers in districts with career ladder programs (programs that allow teachers to gain advancement and compensation but remain in the classroom) were more likely to remain not just in the profession, but in their districts, than teachers in those without (Podolsky et al., 2016). In a Michigan study, teachers provided time-off to attend professional development expressed a 6.2% increase in intention to stay at their school compared to those not offered time off (Lindsey et al., 2021). Professional

development activities including mentoring, peer observation, and coaching have shown positive correlations to teacher job satisfaction, although these consist of less than a third of professional development (Renbarger & Davis, 2019). Professional development programs focused on the teachers' personal growth were associated with greater job satisfaction (Shuls & Flores, 2020).

A positive educational environment with supportive administrators and adequate resources is associated with teacher satisfaction (Corrente et al., 2022; Holmes et al., 2019; Lindsey et al., 2021; Ramos & Hughes, 2020). Autonomy is associated with a positive educational environment. With the release of control from administration to teachers, professional collaborations are strengthened, problem solving is bolstered and a more positive educational environment is achieved (Kaiser & Thompson, 2021). In a positive environment, where teachers are valued both inside and outside the classroom, where there is a culture of openness and trust, and where teachers are afforded academic freedom, a boost in teacher retention has been shown (Shuls & Flores, 2020). Another aspect of educational environment, student-to-teacher ratios that are lower, is associated with lower turnover rate (Carver-Thomas & Darling-Hammond, 2017; Podolsky et al., 2016). Administrators have a significant impact on the educational environment of a school (Elyashiv, 2019; Holmes et al., 2019; Kaiser & Thompson, 2021; The Role of Principals in Addressing Teacher Shortages, 2017). Although salary is often thought to be the top influencer, administrative support is frequently identified by teachers as a primary reason for leaving or staying at a location and in the profession (Ford et al., 2018; Harris et al., 2019). Administrators impact school support from outside influences, determine the 'volume' or input of teacher voice, manage school problems ranging from building maintenance to student issues to faculty interactions to community school relations, impact teacher workload, and have an influence on school culture, all these factors influencing teacher moral and, thus,

teacher retention (García et al., 2022; Kaiser & Thompson, 2021). A 2013 study done by the National Center for Educational Statistics of voluntary leavers, teachers leaving their teaching positions, showed only 13% felt salary was among top concerns, while dissatisfaction with their administrator was among top concerns for 21% (Podolsky et al., 2016). In fact, lack of administrative support has the strongest relationship with teacher turnover according to a model which, controlling for other factors, found that teachers who feel strongly their administration is unsupportive were more than twice as likely to leave their school or teaching than teachers who strongly agree their administration is supportive (Carver-Thomas & Darling-Hammond, 2017; The Role of Principals in Addressing Teacher Shortages, 2017). The impact on teacher attrition by quality of administration is amplified in schools with large proportions of low-income and minority students. Traits of administrators that muted attrition in these at-risk schools were effectively managing the school by providing adequate resources, facilitating communication, providing effective instructional leadership by strategic hiring of teachers and staff, effectively using teacher evaluation, placing an emphasis on teacher improvement, facilitating inclusive decision-making by engaging teachers' in change decisions, and allowing teachers' classroom autonomy (Simon & Johnson, 2015; Shuls & Flores, 2020). Unfortunately, low-achieving, high poverty, and minority schools that have the most difficult time hiring and retaining teachers also tend to have less experienced principals who tend to have a poorer impact on student outcomes than their more experienced counterparts (Holmes et al., 2019; Nguyen, 2020; The Role of Principals in Addressing Teacher Shortages, 2017). Pertaining to the importance of supervisory relationship for principals looking to support teacher retention, as teachers' trust in their supervisor grows, they became more forthright in communicating their needs and concerns, making time spent being visible and present by administrators a bridge to productive

conversations (Kaiser & Thompson, 2021; Lindsey et al., 2021). In fact, the most important factor in demonstrating support for teachers was being an advocate and visible presence for them (Holmes et al., 2019). A highly effective tool to retain a teacher that might otherwise leave is one-on-one personal conversations with administrators, allowing the building of professional interpersonal relationships (Elyashiv, 2019). Teachers' mental health is an important factor for administrators to consider. Teaching is a significantly stressful job making systemic management of teacher stress important. Providing teachers with emotional support, mental health resources, and facilitating healthy relationships with administration, school boards and involved community partners positively affects educational environment and reduces teacher stress (Corrente et al., 2022). Administrators that advocate for their teachers, that provide resources that buffer them from stressful job demands, and that collaborate with them promote teacher efficacy and job satisfaction (Kaiser & Thompson, 2021; Nguyen, 2020). Stressors such as workload, district and state mandates, and student behaviors can influence teacher mental well-being but administrators that nurture a culture of support and collaboration among staff reduce teacher stress (Holmes et al., 2019; Kaiser & Thompson, 2021). Leadership styles that encourage collaboration and buffer job demands play an important role in promoting teacher efficacy, a positive perspective of the working environment, and job satisfaction. In addition to teacher retention, nurturing teachers allows them to focus on effectively caring for their students (Olson Stewart et al., 2021). Implementing factors (methods, policies, and procedures) that enhance educational environment and reduce teacher stress, works to increase teacher retention (Lindsey et al., 2021). Providing emotional support can be enhanced by providing instructional support. Teacher turnover is shown to be reduced with the improvement of instructional resources, teaching materials, and professional development opportunities (Lindsey et al., 2021). Reasonable classroom budgets

that provide for the learning needs of students is associated with reduced teacher attrition (The Role of Principals in Addressing Teacher Shortages, 2017). A survey of public-school teachers showed that those whose schools provided sufficient instructional resources had a 12.0% higher probability of staying in their position than teachers whose resources were inadequate (Lindsey et al., 2021). Sufficient instructional supplies, safe and well-maintained facilities, lower student-to-teacher ratios, and adequate non-instructional task support positively affect teacher retention rates (Podolsky et al., 2016).

Contributing to teacher shortages and teacher dissatisfaction, public perception of teachers and teaching as a career, is an issue detrimental to the profession. While the most prevalent reason for a lack of interest in teaching by college students and their parents is salary (Allegretto, 2022), public perception is a significant contributor to the lack of new workforce entering teaching. “Over the last few decades there has been a concerted effort to make teachers look as though they chose teaching because they could not do anything else. Whether it be in political rhetoric or through the media and television programs, our dialogue has not been kind, and it has led to a negative perception of teachers (DeWitt, 2019, pp 4).” In a 2019 study 1,127 U.S. high school seniors and college undergraduates were polled on their perceptions of teaching’s prestige, status, and esteem. While the perceptions of teaching’s status didn’t discourage participants from contemplating teaching as a career, perceptions of esteem and financial reward proved prohibitive (Klimek, 2019). In a 2018 survey of 2003 public school teachers, 495 parents and 93 school administrators it was revealed that while administrators have a much rosier perception of the current educational situation than teachers, parents’ perceptions mimicked teachers’. 27% of principals agree, “teachers are compensated adequately for their work,” while 7% of teachers and 5% of parents agreed with the statement. 56% of principals

agreed with the statement, “expectations of teachers are reasonable,” but only 20% of teachers and just 10% of parents agreed. There is a definite disconnect between the perceptions of principals versus those of teachers and parents when considering working conditions. Harris et al. (2019) concluded, simply, parents do not see teaching as an attractive career for their children.

Effects of teacher retention and attrition challenges in the United States include reduced student learning and poorer outcomes (Carver-Thomas & Darling-Hammond, 2017; Shuls & Flores, 2020), staffing shortages for most public schools (Allegretto, 2022; Elyashiv, 2019; Carver-Thomas & Darling-Hammond, 2017; Darling-Hammond et al., 2016; Espel et al., 2019; Ramos & Hughes, 2020; Shuls & Flores, 2020; Solomonson et al., 2019), less experienced teachers in the classroom (Carver-Thomas & Darling-Hammond, 2017; Corrente et al., 2022; Lindsey et al., 2021; Pivovarov & Powers, 2022; Renbarger & Davis, 2019; *The Role of Principals in Addressing Teacher Shortages*, 2017), and placing the nation’s vital interests at risk by limiting the abilities of public schools to evolve and meet the demands of the future (Klimek, 2019). Teacher retention and attrition’s effects on student populations, and effects of student populations on teacher retention and attrition, are closely related. Because student behavior directly impacts the classroom environment, student behaviors and associated discipline is a significant source of stress for teachers, contributing to negative feelings related to safety and instructional effectiveness (Kaiser & Thompson, 2021). A study of 206 Arizona public school teachers and 35 parents found student discipline concerns were an important consideration for teachers contemplating leaving their current positions (Ramos & Hughes, 2020). Teacher retention is particularly challenging in urban and rural schools with significant numbers of traditionally marginalized students (Beck et al., 2020). Teachers were more likely to leave their positions in schools with a higher proportion of minority students and low achieving students

(Espel et al., 2019; Lindsey et al., 2021; Nguyen, 2020). In a study of Missouri teachers either leaving or staying in their positions between the 2015-16 school year and the 2016-17 school year, proportion of students scoring proficient or better on the state English language arts assessment was positively associated with teachers staying in their positions, while proportion of minority students was negatively associated with teachers staying in their positions (Espel et al., 2019). The same study discovered South Dakota teachers were more apt to leave their positions between the 2015-16 school year and the 2016-17 school year if they taught higher percentages of minority students, English language learners, and students qualifying for reduced school lunch programs. Analysis of the 2012 Schools and Staffing Survey (*Teacher Questionnaire: Schools and Staffing Survey. 2011-12 School Year. SASS-4A.*, 2023) and the 2013 Teacher Follow-up Survey (*Teacher Follow-up Survey, 2012-13*, 2016) reveal that Title I schools with a higher percentage of low-income students suffer 50% higher teacher turnover. (Carver-Thomas & Darling-Hammond, 2017). The same stressors that affect teacher retention and attrition, simply because they affect teacher retention and attrition, negatively impact student learning (García et al., 2022). Teacher attrition and retention, specifically the instability it creates in the classroom, diminishes teacher effectiveness, negatively affecting student achievement (Corrente et al., 2022; Lindsey et al., 2021). The previously mentioned 2012 Schools (*Teacher Questionnaire: Schools and Staffing Survey. 2011-12 School Year. SASS-4A.*, 2023) and Staffing Survey and the 2013 Teacher Follow-up Survey (*Teacher Follow-up Survey, 2012-13*, 2016) also revealed that not only do high turnover rates negatively affect achievement of students whose classrooms are directly affected, they negatively affect students in the entire school. (Carver-Thomas & Darling-Hammond, 2017). While the relationship between high minority and low-income students and teacher attrition is concerning, research suggests it is not the students that teachers are fleeing, it

is the poor working conditions that make teaching more difficult that teachers seek to escape (Simon & Johnson, 2015).

Federal Interventions

Looking at the policies that have led to the current state of education is important to understand why significant teacher workforce issues exist. In 1965 the *Elementary and Secondary Education Act (ESEA)* was created as part of President Johnson's Great Society. ESEA provided over \$1 billion annually to assist in educating disadvantaged students (Levitt, 2017). These dollars provided grants to school districts for books and special education centers, scholarships for low-income college students, and grants to state educational agencies for the improvement of elementary and secondary education (Klein, 2015). Significantly, this legislation opened the door for the federal government to influence K-12 educational policy (Levitt, 2017), local control of schools had been impacted.

In 1983, *A Nation at Risk: The Imperative For Educational Reform. An Open Letter to the American People. A Report to the Nation and the Secretary of Education* was published as a report that, "(1) investigates the declining state of the educational system in America, as measured by high school student performance in the United States and other countries; (2) identifies specific problem areas; and (3) offers multiple recommendations for improvement" (Gardner, 1983, pp. 1). The report made recommendations related to content, standards and expectations, time, teaching and leadership and fiscal support. Concerning content, more 'core' classes were recommended as a graduation requirement. Standards and expectations were addressed with strategically timed standardized testing. Longer and more school days were recommended. Competitive teachers' pay and requirements for teachers to show competence in their discipline were recommended. Leadership and fiscal support recommendations brought the

Federal Government into the role of supporting and regulating compliance of recommendations (Gardner, 1983).

Early this century, 2001, the *No Child Left Behind Act (NCLB)* mandated schools receiving federal funding to administer statewide annual progress tests to all students. States that didn't comply with *NCLB* risked losing their federal Title 1 funds originally created by *ESEA* in 1965 (Klein, 2015). Factors such as race, ethnicity, primary language, socioeconomic status, and learning disabilities were not allowed consideration for test exemption. The tests were used to monitor student growth which was measured against a formulated expected annual growth called Adequate Yearly Progress (AYP), with the threat of stringent penalties associated for schools that fell short (Levitt, 2017). *NCLB* is considered the beginning of 'teaching to the test' by some, a practice that lessened the anonymity of teacher practice, moving teaching more to a scripted process.

In 2009 President Obama Introduced *Race to the Top (RTTT)*, a state and local grant program to promote school improvement. With improving assessments, increasing the rigor of school standards, support for teachers and staff, improved methods of tracking students, and resources to turn failing schools around as emphasis, states were offered the opportunity to request *RTTT* funds (Chen, 2022; *Race to the Top*, 2012). The same year the National Governors Association announced *Common Core Standards* to clarify what students were expected to learn with standards that were "designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers" (Alismail & McGuire, 2015, pp.151). Much controversy has surrounded *Common Core* as it has become politically associated (Edgerton, 2019). Initially, forty-six states passed laws adopting *Common Core* with Minnesota only partially adopting by using *Common Core* English standards. Those

states that did not adopt were Virginia, Texas, Alaska, and Nebraska. Arizona, Indiana, Oklahoma, and South Carolina have since withdrawn from *Common Core* and twelve other states are in the process of withdrawing (Common Core States 2023, 2023). With *Common Core*, penalties associated with underperformance shifted to school administrators and teachers (*Every Student Succeeds Act (ESSA)* | U.S. Department of Education, 2015).

In 2015 the *Every Student Succeeds Act (ESSA)* was signed into law. Shifting the obligation to use federally imposed requirements, *ESSA* placed the responsibility of measuring student performance with states (Levitt, 2017). A State Report Card was required with data on testing performance, per pupil expenditures, graduation rates, discipline, truancy, teacher qualifications and other pertinent information (*Every Student Succeeds Act (ESSA)* | U.S. Department of Education, 2015). *ESSA* gave states more capacity to determine standards but required submission of plans to the federal government outlining assessment, monitoring, accountability, and support (Levitt, 2017).

Results of two decades of significant federal intervention in education have had a negative influence on teacher job satisfaction. A National Education Association (NEA) survey in 2015 revealed impacts of *NCLB* high stakes testing on teachers included increased stress from district and administrators, and nearly a third of teacher time spent on conducting standardized tests, preparing students for those tests, and analyzing the results of the tests (Walker, 2016). “This testing environment appears to have had a profoundly negative effect on teachers, contributing to their dissatisfaction and the possibility that they will abandon the teaching profession” (Levitt, 2017, pp. 5).

First year, Second-career and/or Non-standard Certified Teachers (SC/NCT)

Long term federal policy has led to significant teacher shortages. Policy reaction since the issue has arisen can be largely summarized as a lowering of standards to obtain teaching credentials. A common response to the ongoing teacher shortage across the U.S. has been to offer emergency certificates to degreed candidates that lack formal education in pedagogy and classroom experience (Heubeck, 2022; Mobra & Hamlin, 2020). Not a new solution, in 1984, when the American Association of Colleges for Teacher Training released the findings of their Task Force on Teacher Certification, at least 46 states had some provision for emergency teaching certificates, over twenty of which didn't require a bachelor's degree (Williamson & And Others, 1984). Partially because of the task force paper, by 1990 at least 33 states had enacted alternative certification programs that altered standard certification requirements but largely did not require states to change their policies associated with training and licensing. Alternative certifications require some content area and pedagogical training prior to entering the classroom (Oklahoma Alternative Placement Program for Teacher Certification, n.d.). The Oklahoma Emergency Certification, Online Emergency Request Process form provides instruction for school administrators requesting emergency certification for unqualified teacher candidates. On the form is a notice, "Emergency certification should only be requested when the district has exhausted every option to find an appropriately certified person for the open position," (Emergency Certification (Administrator Use Only), n.d.), indicating emergency certification should be used only as a last resort. This notice is consistent with the findings of Neumann almost three decades earlier suggesting, "that many teachers with emergency certificated are ill-prepared for their assignment, receive inadequate guidance and support, and experience considerable difficulty performing their duties," (Neumann, 1994, pp. 89-90). Having

little to no prior teaching experience, second-career teachers gain classroom credentials through emergency certification. Though qualifications for emergency certification of teachers by state fluctuate, commonly a bachelor's degree and background check are all that are required (Heubeck, 2022; Mobra & Hamlin, 2020; Neumann, 1994). Emergency certification generally does not require the passing of a subject matter test and often not a basic skills test (Emergency Certifications, 2022; Neumann, 1994). For more than a decade the use of Emergency Certification teachers has grown throughout the United States (Heubeck, 2022). Oklahoma issued only 32 Emergency Certifications in 2011-12, but that number has increased over 100-fold to 3,914 within a decade (*Emergency Certifications*, 2022). During a two-year period, from the 2015-16 school year to the 2017-18 school year, while Oklahoma Emergency Certifications increased by well over half, from 1,063 to 1,851, Arizona's issuance increased almost five-fold from 644 to 3,286 (Heubeck, 2022). During that same 2-year period, Arizona saw a 9% decrease in Standard Certifications.

Compared Standard Certification Teachers

Second-career and/or non-standard certified teachers (SC/NCT) share many workforce characteristics with the general teaching workforce. Similar to the general teaching workforce, attrition rates among SC/NCTs is a concern, however, in this subgroup the attrition rate is about double that of all K-12 teachers (Bailey et al., 2020; García et al., 2022; Heubeck, 2022; Neumann, 1994; Troesch & Bauer, 2020). In a North Carolina study, retention rates for “lateral Entry” (non-traditionally prepared) teachers were significantly lower after the first year, but also after years 2 and 6 (Zhang & Zeller, 2016). This becomes particularly important with the abundance of evidence pointing to teacher turnover being detrimental to school success with years of teacher experience being directly correlated to teacher effectiveness, regardless of

certification type (Bowsher et al., 2018). In addition, teachers with emergency certifications start their careers at a disadvantage in abilities (Heubeck, 2022; Mobra & Hamlin, 2020). In a 2010 study, a negative association between emergency certified teachers with math and reading scores was observed in North Carolina (Clotfelter et al., 2010). A deficit in classroom management preparedness is typical of all beginning teachers, regardless of training route (Dicke et al., 2015; Junker et al., 2021; Özen & Yildirim, 2020), but a 2019 study showed a significant deficit in classroom management preparedness for non-traditionally prepared, beginning teachers compared to traditionally prepared teachers (Bowen et al., 2019). This becomes a greater concern when considering that effective classroom management is positively associated with highly effective teaching (Kavrayici, 2021; Kaya & Selvitopu, 2019; Lay, 2021; Özen & Yildirim, 2020). Additionally, research shows classroom management is consistently named as a stressor for all levels of teachers and leads to career burnout (Aldrup et al., 2018; Collie, 2021; Davis, 2017; Kaya & Selvitopu, 2019). Though a commonly held argument, second-career emergency certification teachers cumulative career knowledge and experiences appear to have little or no effect on the challenges associated with entering teaching (Troesch & Bauer, 2020). That is not to say that knowledge and experiences won't come into play later in the teaching career if the second-career teacher doesn't succumb to attrition in the early years. It is worth mentioning, previous career knowledge is going to be immediately utilized by most vocational school instructors, but that knowledge is associated with their curriculum and does not contribute to other pedagogic abilities (Bottoms et al., 2013). Oklahoma Career Technology Center teachers may have traditional certification, alternative certification, emergency certification or a Provisional Technology Center Certification when beginning teaching (Bowen et al., 2019; Provisional Certification, 2022). However, more and more, fewer career tech teachers are

graduating from undergraduate teacher education programs and have had little pedagogical training (Bottoms et al., 2013). “Most CTE teachers will need considerable professional development to broaden their teaching skills and learn to use data for instructional improvement” (Bottoms et al., 2013, p. 2). In Oklahoma, under the umbrella of Provisional Technology Center Certification, the Provisional-Alternative certification allows “a teacher that has field experience in a subject area and is working towards earning a degree or already has a degree” (Provisional Certification, 2022, p. 3) to teach. Practically speaking, this allows a Provisional-Alternative teacher to be hired and placed in the classroom so long as they are enrolled in, but may have yet to begin, college courses. While the college major of the Provisional-Alternative certified teacher is not specific, they are required to take two college credit courses addressing classroom management & pedagogical principals (Provisional Certification, 2022). However, again, they are not required to have those courses prior to beginning their teaching career, meaning both theoretically and practically, Oklahoma Career Tech teachers may have no actual college hours prior to entering the classroom. Research shows traditionally certified teachers not only feel more prepared than those pursuing other certification paths, but their reported ratings are higher, specifically in classroom management (Bowen et al., 2019). Unfortunately, like many early career teachers, especially emergency certification teachers, Provisional-Alternative certified career and technology teachers would be prone to suffer in the area of self-efficacy related to classroom management, impacting their job satisfaction and choice to remain employed in education. Skepticism of the abilities of teachers with emergency certification has a long history based on both opinion and research literature. In a 1994 paper, Neumann stated, “It appears that students of emergency-certification teachers and alternative certification interns bear a considerable cost in the education of these teachers,” (Neumann, 1994, pp.105), going further to

charge that, “states that issue emergency certificates or otherwise grant uncertified individuals the authority to teach are negligent in their responsibility to the public.” More recently, faced with a continually increasing dependency on emergency certified teachers, former Oklahoma State Superintendent Joy Hofmeister had set the goal of reducing the use of emergency certification by 95%, a goal that has seen only negative progress (Heubeck, 2022). In addition to classroom performance and student achievement, the financial burden of teacher turnover for a subgroup exhibiting twice the proclivity to attrition as all classroom teachers as a whole, must be considered. It is expensive for a district to replace a teacher, around 20% of the leaving teacher’s annual salary (García et al., 2022; Kidd et al., 2015).

Self-Efficacy, Job Satisfaction, and Choosing to Remain Employed

Self-efficacy, a person’s belief in their ability to realize preferred outcomes, has a strong influence on their motivation and behavior, and therefore success (Bandura, 1997). It is important to be mindful that self-efficacy reflects perceptions of ability rather than actual ability (Gale et al., 2021). Tschannen-Moran & McMaster, (2009) define self-efficacy as a “future-oriented belief about the level of competence a person expects he or she will display in a given situation” (Tschannen-Moran & McMaster, 2009, pp. 229). The impact of self-efficacy is expressed through mental and emotional paradigms that affect an individual’s actions in situations where they feel they have some measure of control (Tschannen-Moran & McMaster, 2009).

A study examining four educational professional development formats with the most basic providing an information only teaching method workshop, the second level combining the first with modeling of the method, the third level combining the second with practice of the teaching method, and the fourth combining the third with follow-up coaching, Tschannen-Moran

& McMaster (2009) found the fourth professional development format (information, modeling, practice, and follow-up coaching) had the greatest positive impact on self-efficacy beliefs. Additionally, it was observed that use of the fourth format was associated with greater implementation of the teaching method (Tschannen-Moran & McMaster, 2009). In 1997 Bandura (1997) realized mastery experiences, the opportunity to practice, reform, and reperform a skill up to the point of mastery, is the most influential source of training to enhance self-efficacy, foreshadowing Tschannen-Moran & McMaster's findings. Personal confidence in one's efficacy is built by success at a task, while excessive need for assistance, perceived lack of importance of a task, and failure are detrimental to self-efficacy related to that task (Tschannen-Moran & McMaster, 2009). A 2021 study noted modeling, discussions, and vicarious narratives from actual teaching experiences were the most common methods utilized to promote self-efficacy in pre-service teachers (Pearman et al., 2021), but follow-up coaching was not mentioned. Pre-existing individual conditions exist that will influence professional development success in positively impacting self-efficacy. Self-efficacy is affected by both personal and contextual factors (Agbaria, 2021). Gale et al. points out, "there is no simple formula by which teachers' experiences are translated into self-efficacy beliefs and self-efficacy beliefs are not cultivated in a vacuum" (Gale et al., 2021, pp, 14). Other contributors to self-efficacy identified by Pearman et al. (2021) are confidence/self-empowerment, commitment, ability to meet challenges, innovative thinking, and facilitation as personal characteristics important to self-efficacy in teachers. Barni et al. (2019) observed among teachers, values focused on social outcomes (i.e., welfare of ingroup members, tolerance, social justice, benevolence, conformity, security, and tradition) had a positive correlation with self-efficacy, regardless of the type and level of motivation for teaching. A 2002 study done of emergency permit teachers from a mid-

sized Texas University, indicated extroversion to be associated with a higher sense of self-efficacy (Henson & Chambers, 2002).

The Teaching and Learning International Survey (TALIS) shows clearly a positive relationship between teacher self-efficacy and teacher job satisfaction, and a negative relationship between both and the intention of teachers to leave their profession (Kasalak & Dagyar, 2020; OECD, 2018). A meta-analysis of TALIS discusses the many influences of self-efficacy. Daily successes and failures, observed experiences of others, and input from others all impact self-efficacy beliefs. Competence, attitude and perceived importance of teaching also influence self-efficacy. All these factors influence teachers' cognitive and emotional ability to undertake the tasks of teaching (Kasalak & Dagyar, 2020). Summarizing his own work from 1976, Edwin Locke describes factors in job satisfaction that include interest in the activities, achievements, mental challenges and importance of the work, fair compensation, opportunity for growth, and competent supervisors and colleagues (Locke, 2016). There is a significant positive relationship between job satisfaction and self-efficacy (Aliyev & Tunc, 2015; Canrinus et al., 2011; Demir, 2020; McConnell, 2017; Ortan et al., 2021; Skaalvik & Skaalvik, 2014; Wang et al., 2015; Zakariya, 2020). "Self-efficacy is a predictor of job satisfaction" (Demir, 2020, p. 13") While job satisfaction depends on many factors, administration, coworkers, the duties of the job, perceptions of self-efficacy has been shown to be the most important element (Ortan et al., 2021), providing a self-confidence that provides the teacher the ability to improve methods, teacher-student and teacher-parent interactions, collaborations, managerial processes, and the classroom environment. Ortan (2021) goes on to state, "An efficient work environment decreases attrition, burnout, emotional exhaustion, and teacher turnover, while it increases job satisfaction, well-being, and teacher retention" (Ortan et al., 2021, p. 22). Kasalak and Dağyar state,

“Teachers are expected to love their professions, to have a positive attitude towards their jobs, to be satisfied with what their professions bring to them, and to have high self-efficacy beliefs that they can do their jobs” (Kasalak & Dagyar, 2020, p. 3), confirming the belief that teaching is a calling, an ideal associated with both self-efficacy and job satisfaction, however occupational stress can infringe on that ideal (Won & Chang, 2019). Compounding that infringement, and creating a self-feeding cycle, decreased self-efficacy leads to decreased efforts to deal with occupational stressors and decreased job satisfaction (Demir, 2020). Wang (2015) found teacher self-efficacy to be a predictor of both psychological and physical health which predicted lower levels of depression as well as higher job satisfaction and lower intentions of quitting the profession (Wang et al., 2015). In a study of over 2500 Norwegian teachers, job satisfaction was positively associated with self-efficacy, and negatively with emotional exhaustion (Skaalvik & Skaalvik, 2014). A 2011 study looking at the deterioration of teachers’ professional identity, linked job satisfaction to self-efficacy and occupational commitment, the desire to remain teaching (Canrinus et al., 2011). In the same year a group of Norwegian teachers exhibited that feeling of belonging positively and emotional exhaustion negatively were predictors of job satisfaction, which was shown to have a negative relationship with motivations to leave the profession (Skaalvik & Skaalvik, 2011). Similar relationships are found outside of teaching but inside of education where principals were shown to associate feelings of low self-efficacy with increased motivations to leave their positions (Skaalvik, 2020). A 2015 study of school psychological counselors revealed that psychological capital and job satisfaction are positive, and burnout is a negative significant predictor of self-efficacy (Aliyev & Tunc, 2015). Another profession experiencing notable attrition, nursing, revealed a positive correlation between job satisfaction and self-efficacy, both showing a negative correlation to turnover intention with job

satisfaction having the greatest influence on turnover intention (De Simone et al., 2018). The observation was made that job satisfaction and self-efficacy “not only can promote the nurses’ well-being at work but also increase patient satisfaction with nursing care, producing a virtuous circle in which everyone benefits” (De Simone et al., 2018, p. 8). In a 2019 study a significant positive relationship between self-efficacy and job satisfaction among Chilean workers from various fields including health, education, retail, commerce, mining, hospitality, transport, and construction, with education making up about a third of those studied, was demonstrated (Bargsted et al., 2019). A study of Taiwanese car salespersons demonstrated a positive relationship between self-efficacy and job satisfaction and a negative relationship between job satisfaction and turnover intent (Lai, 2012). The study’s author contributed the relationship between self-efficacy and job satisfaction to salespersons with high self-efficacy having superior abilities and performance. Even Persian sports referees show a significant positive relationship between self-efficacy and job satisfaction, with those demonstrating high self-efficacy experiencing higher job satisfaction (Tojjari et al., 2013).

Self-Efficacy and Classroom Management

The assertive discipline model offers that teachers have three options when responding to students’ misbehavior: conceding to the student, exhibiting anger, or calmly insisting the students fulfill teacher expectations. (Martella et al., 2011) The final option, calmly insisting the students fulfill teacher expectations requires the knowledge and skillset of classroom management. Relating self-efficacy to classroom management, Junker et al. (2021) found a significant link between self-efficacy and professional vision concerning classroom management. Additionally, a significant positive relationship between teacher efficacy and classroom management exists in practice (Abu-Tineh et al., 2011; Agbaria, 2021; Bay, 2020; Dicke et al.,

2015; Kaya & Selvitopu, 2019; Lay, 2021). A Jordanian study of primary and secondary teachers observed that teacher self-efficacy has a positive correlation with classroom management (Abu-Tineh et al., 2011). An Israeli study of kindergarten teachers showed a statistically significant positive relationship between self-efficacy and actual classroom management skills (Agbaria, 2021). Data collected from 274 preschool teachers in a 2020 study, examining the relationship between self-efficacy and classroom management skills revealed a positive correlation (Bay, 2020). Results of a 2021 study of 151 primary school teachers suggested that when self-efficacy is high it will be reflected in classroom management practices (Lay, 2021).

Classroom management included the functions of controlling disruptive behavior in the classroom, making expectations clear about student behavior, establishing routines to keep activities running smoothly, getting children to follow classroom rules, doing to calm a student who is disruptive or noisy, establishing a classroom management system with each group of students, keeping a few problem students from ruining an entire lesson, responding to defiant students (Lay, 2021, p. 30).

A more succinct definition of classroom management is “the creation of a positive learning environment” (Davis, 2017, p. 129). This environment requires awareness of the continually evolving classroom environment and student behaviors (Bozkus, 2021). With self-efficacy having a positive correlation with effective classroom management and the relationship between self-efficacy and job satisfaction, it is not unexpected that job satisfaction has a positive relationship with effective classroom management (Kaya & Selvitopu, 2019; Vidic et al., 2021). Kaya & Selvitopu (2019) state that, “satisfied teachers use CMSs (classroom management skill) better and also teachers who use CMSs effectively get satisfied with their jobs” (Kaya & Selvitopu, 2019, p. 419). Considering effective classroom management supports student

achievement, increases class participation, and prevents misbehavior (Bozkus, 2021), it is rational to believe, “Effective classroom management strategies that address individual needs while protecting the interests of the learning community are the most valuable skill set a teacher can have” (Shamina, 2018, p. 42).

Impacts of the Teacher/Student Relationship

O’shea (2021) has shown the teacher-student relationship to be the strongest predictor of teacher job satisfaction. There exists a link between the emotional environment and a strong foundation needed to create a successful classroom (Hargreaves, 2000). Elementary classrooms have long been interwoven with emotional support for the students, but the teacher-student relationship has differed for secondary classrooms historically. However, in more recent times the need for an emotional link between teachers and students at all levels has become a prerequisite to successful learning (Hargreaves, 2000). Additionally, in consideration of the chronic teacher attrition problem, it is important to consider that the teacher-student relationship has been shown to be a core reason teachers remain in the classroom (Farhah et al., 2021; O’Shea, 2021). Fundamental factors like teacher well-being have been positively correlated with teacher-student relationship (Farhah et al., 2021), “if teachers feel that they have a close relationship with students, they will feel more positive about themselves as a teacher” (Farhah et al., 2021, p. 271). Teacher-student relationships are foundational in building trust with students (O’Shea, 2021), trust also being an indicator of a healthy teacher-student relationship (Aldrup et al., 2018; Özen & Yildirim, 2020; Thapa et al., 2013; Walker & Baepler, 2018). Beyond the teacher, creating a strong teacher-student bond has a positive influence on students. A positive school climate promotes respect among its members (Agbaria, 2021; Thapa et al., 2013). Enhancing and supporting trust within the school environment is imperative (Davis, 2017; Thapa

et al., 2013), it is a basic need of students and component of respect (Özen & Yildirim, 2020). Additionally, “bonds with school members are vital for students from challenging backgrounds because supportive adults can help students learn strategies for overcoming adversity” (O’Shea, 2021, p. 28). When a student perceives a positive relationship with their teacher, they afford that teacher respect (Aldrup et al., 2018), which contributes to teacher job satisfaction (O’Shea, 2021). Conversely, a lack of perceived respect leads to discontent and a decrease in teacher job satisfaction (Özen & Yildirim, 2020). A component of effective classroom management is respect for students, their values, and their opinions (Davis, 2017; Keshavarz et al., 2022; Nie & Lau, 2009). Respect is justified with emotional understanding which Hargreaves (2000) points to as foundational in a successful classroom, yet there exists a deficit among less experienced teachers in the skillset for forming strong teacher-student relationships (Farhah et al., 2021). King (2018) recognizes building understanding as an important component of the teacher-student relationship, a component often not modeled in the teacher’s collegiate training. Yet, emotional understanding of the student is linked with both successful classroom management and the teacher-student relationship (Davis, 2017; Kaya & Selvitopu, 2019; Nie & Lau, 2009; Özen & Yildirim, 2020). A student or teacher observing or learning of the other’s shared interest outside the classroom adds an enhanced new dimension to the teacher-student relationship (Agbaria, 2021; Bulut & Topdemir, 2018; Kaya & Selvitopu, 2019; Nie & Lau, 2009), allowing for the perception of that person in a new and positive context (Hargreaves, 2000). Teacher-student relationships have a direct positive correlation to teacher self-efficacy (Farhah et al., 2021), and self-efficacy has a strong positive relationship to classroom management (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021).

In a recent study, teacher educators were surveyed with the intention of clearly defining self-efficacy. Analysis of participant comments identified five personal characteristics necessary for self-efficacy in teachers as Confidence/Self-Empowerment, Commitment, Ability to Meet Challenges, Innovative Thinking, and Facilitation. Of these five characteristics, two emerged as crucial for a teacher to possess in order to feel competent in their classroom. In the eyes of teacher educators, the characteristics of Commitment and Confidence/Self-Empowerment are key in the development of self-efficacy. (Pearman et al., 2021, p. 90)

Confident, self-empowered teachers exhibit the ability to act and alter the environment to better suit learning, exhibit commitment to consistently improve, meet challenges with the ability to overcome difficulties, grasp opportunities and realize goals, think innovatively finding inventive methods of effectively addressing challenges, and have the willingness to take actions that help others to succeed (Pearman et al., 2021). Agbaria (2021) suggests when teachers believe in their capabilities (self-efficacy) this belief has a positive effect on their behavior by allowing them to explore and expand their capacities and be more intentional and mindful in their actions. Similar observations were reported by Lay that same year (Lay, 2021), tying classroom management abilities to effective teaching strategies and self-efficacy. While years of experience correlate with self-efficacy (Shahat et al., 2022; Torabzadeh & Hashamdar, 2022), beginning teachers having experienced a short training on classroom management interventions had a statistically significant positive relationship with classroom management skills (Dicke et al., 2015). Dicke et al. (2015) speculated that a contributing factor to that improvement was the resulting enhancement of self-efficacy. This shows that although experience is a contributing factor to quality teaching, there are measures to be taken that enhance the abilities of

inexperienced educators. “Enhancing teachers’ personal and professional skills could promote good teacher-student relationships, prevent relational conflict, and address students’ emotional and behavioral difficulties” (Poulou, 2018, p. 151). Unfortunately, only a small number of evidence-based, teacher-student relationship enhancement trainings exist (Duong et al., 2019; King, 2018; Poulou, 2018). Classroom management’s direct relationship with teacher wellbeing and psychological health (Dicke et al., 2015; Junker et al., 2021), explain why first-year teachers’ deficiencies in classroom management are a significant contributor to burnout (Junker et al., 2021), further emphasizing the need for teacher-student relationship training. This gains significance when considering most of a teacher’s workday and nearly a fourth of their waking hours are spent with students (Pianta et al., 2012), impacting both their professional and personal identities (Spilt et al., 2011), and impacting their job satisfaction (O’Shea, 2021). “The process of teaching and learning is fundamentally relational,” (Thapa et al., 2013, p. 9), “relationships refer not only to relations with others but relations with ourselves, how we feel about and take care of ourselves.” O’Connor (2008) found that if a teacher perceives their relationship with students as favorable, they feel greater job satisfaction, indicating a positive association between that relationship and job satisfaction. This correlation was confirmed in a 2021 study that confirmed a teacher’s personal well-being associated with job satisfaction shares a significant positive association with the teacher-student relationship (Farhah et al., 2021). An earlier study of 222 teachers found the teacher-student relationship has a positive association with teacher well-being (Aldrup et al., 2018). A study of 53 teachers in 15 schools, both elementary and secondary, found the teacher-student relationship was the primary source of fulfillment and motivation for teachers, contributors to job satisfaction (Hargreaves, 2000). The teacher-student relationship influences the students’ social, behavioral, and emotional development (McGrath &

Van Bergen, 2015; Enoch & Asogwa, 2021), creating both a pedagogical and classroom managerial justification for strong teacher-student relationships which are foundational for both pedagogical and behavioral strategies (Davis, 2017). Kaya & Selvitopu (2019) found that effective classroom management is fostered by and should be focused on the teacher-student relationship. This finding agrees with a previous observation that one of the elements of effective classroom management is teacher-student relationships (Marzano et al., 2003), in which the teacher and student are a team devoted to the well-being of all participants. The importance of effective classroom organization and behavior management is widely acknowledged by educators and researchers. Shamina (2018) asserted that creating reasonable classroom management that maximizes the opportunity for learning and provides concrete strategies to handle disruptive behavior should be a part of preservice teacher training, additionally stating, “Classroom management focuses on three major competencies: competencies in content management, competencies in conduct management and competencies in covenant management,” (Shamina, 2018, pg 41). Content management focuses on knowing the curriculum and relaying it to students effectively. Conduct management centers around managing the classroom in such a fashion that students feel safe, and learning can occur. Covenant management addresses the class’s social environment, including teacher and student roles. Furthering the definition of covenant management, Shamina (2018) explains it influences attitudes, beliefs, expectations, and behavior concerning personal and social issues, including articulation of ideals and communication of expectations by teaching, reinforcing, and modelling desirable individual qualities and behaviors. Covenant management also contains an aspect of remediation for students demonstrating difficulty with personal or social skills (Shamina, 2018). Effective classroom managers collaborate with students by inspiring and motivating them, using

modeling behaviors and student-teacher interaction, and being aware of their students' interests (Kaya & Selvitopu, 2019). Classroom management can be enhanced with the development of caring, supportive teacher-student relationships promoting appropriate social interaction and self-regulation (Shamina, 2018). For the teacher, successful classroom management skills are positively associated with perceptions of teaching effectiveness and negatively associated with teacher burnout (Kaya & Selvitopu, 2019).

Career Tech Teachers

Considering all instructors, Oklahoma Career Tech and public school alike, non-standard certified instructors start their careers with a disadvantage in pedagogical abilities (Heubeck, 2022; Mobra & Hamlin, 2020). While a deficit in classroom management preparedness is typical of all beginning teachers, regardless of training route (Dicke et al., 2015; Junker et al., 2021; Özen & Yildirim, 2020), a 2019 study showed a significant deficit in classroom management preparedness for non-traditionally prepared beginning teachers as compared to traditionally prepared teachers (Bowen et al., 2019). It can be argued that second-career emergency certification teachers, a group that normally acquire non-standard teacher certifications, have accumulated knowledge and experiences in their previous career, but that knowledge and experience appears to have little or no effect on the challenges associated with teaching (Troesch & Bauer, 2020). Separating public school and Oklahoma Career Tech instructors is that previous career knowledge is going to be immediately utilized by most career tech instructors, but that knowledge is associated with their curriculum and has little impact on other pedagogic abilities (Bottoms et al., 2013). Oklahoma Career Technology Center instructors may have traditional standard certification, alternative certification, emergency certification or a Provisional Technology Center Certification (Bowen et al., 2019; Provisional Certification, 2022). With the

exception of the minority that have standard certifications, it is uncommon for those instructors to have had pedagogical training prior to entering the vocational classroom (Bottoms et al., 2013). “Most CTE teachers will need considerable professional development to broaden their teaching skills and learn to use data for instructional improvement” (Bottoms et al., 2013, p. 2). Research shows traditionally certified teachers not only feel more prepared than those pursuing other certification paths, but their reported ratings are higher, specifically in classroom management (Bowen et al., 2019).

Gaps in the Literature

There has been little response in federal and state policy to the challenges created by emergency certification. This is perhaps due to the recent upswing in emergency certification or could be a reflection of legislative concerns being primarily to quickly fill teaching positions without significant concern about associated consequences. On the institutional level most responses come in the form of training. The Oklahoma Career Tech system has historically used second-career teachers for their trade and industry programs. This is due to the need for the instructor to have a specific knowledge of a particular trade or industry and the un-commonality of that knowledge accompanying a pedagogical background. “With more and more teachers entering through an alternative route to certification, beginning teachers need timely, focused professional development and a significant amount of support...” (CareerTech Teacher Institute, 2022, p. 1). Oklahoma Career Tech offers a Teacher Institute training program. The program consists of workshops on classroom management, instructional planning, strategies and assessment (*CareerTech Teacher Institute*, 2022). Professional learning communities are constructed among program participants. Administrators and paid mentors are included in the training process. During the year of training on-site visits are conducted by the program’s staff to

council with participants. Support systems of this kind, with the use of training, mentors, follow-ups, and feedback have been shown effective for all beginning teachers in increasing retention rates (Maruca & Pineda Zapata, 2022; Newton et al., 2020; Renbarger & Davis, 2019; Troesch & Bauer, 2020; Wiens et al., 2019; Zugelder et al., 2021). For SC/NCTs, focusing on teaching skills with the feedback of peers, administrators, and mentors is critical for obtaining a meaningful knowledge of pedagogy and the ability to apply it in the classroom (Zugelder et al., 2021). Gaining a professional identity through practice and competence is essential for successfully transitioning into the classroom (Dassa & Derose, 2017). While these programs can be expensive, they are less than the cost of replacing a teacher (García et al., 2022; Wiens et al., 2019). Unfortunately, lack of support and informal entrance processes are common and correlated positively with teacher attrition (Zhang & Zeller, 2016).

Theoretical Framework

Self-efficacy powerfully affects people's behavior, motivation, and ultimately their success or failure. (Bandura; 1997). Teacher self-efficacy is influenced by their goals, efforts, and resilience in the classroom and is therefore linked to their performance in the classroom. Woolfolk and Hoy (1990) examined three aspects of control: pupil control ideology, motivational orientation, and bureaucratic orientation. Pupil control is characterized by a rigid and highly controlled setting and is concerned with order. Motivational orientation is characterized by providing information to the students, triggering intrinsic motivations that produce behavioral outcomes. Bureaucratic orientation relies on the hierarchy of authority where superiors maintain authority and pre-established rules and regulations are to be followed (Woolfolk & Hoy, 1990). The posture of this study, in agreement with motivational orientation, reflects cognitive-social learning theory, believing individuals can learn vicariously, develop a

sense of self-efficacy, and exert control over a particular situation or environment (Bandura; 1997). With second-career and/or non-standard certified teachers (SC/NCT)s lacking the observational learning associated with pedagogical training and student teaching, it is reasonable to assume that they will feel less confident in their ability to affect positive change in the classroom environment.

Summary

The education workforce is getting older on average, predominantly female and predominantly white (“Table 209.10, Teacher Characteristics, Class Sizes, and Assignments,” 2022). The greatest challenge facing education currently, due to teacher attrition and waning interest by young people in education as a career, is a labor shortage (Allegretto, 2022; Carver-Thomas & Darling-Hammond, 2017; Corrente et al., 2022; Darling-Hammond et al., 2016; Elyashiv, 2019; Espel et al., 2019; García et al., 2022; Harris et al., 2019; Lindsey et al., 2021; Olson Stewart et al., 2021; Pivovarova & Powers, 2022; Podolsky et al., 2016; Ramos & Hughes, 2020; Shuls & Flores, 2020; Solomonson et al., 2019; The Role of Principals in Addressing Teacher Shortages, 2017; Zhang & Zeller, 2016). There are a number of contributing factors for the decrease in the appeal of teaching. Poor compensation (Allegretto, 2022), lack of influence in schoolwide decisions (García et al., 2022; Podolsky et al., 2016), lack of career advancement opportunities (Podolsky et al., 2016; Shuls & Flores, 2020), and insufficient resources (Corrente et al., 2022; Holmes et al., 2019; Lindsey et al., 2021; Ramos & Hughes, 2020) are among the most impactful influences. Federal interventions over the last quarter century have proved fruitless, and seem to have worsened the situation (Edgerton, 2019; Levitt, 2017; Walker, 2016). As a direct result of the labor shortage, a decrease in teacher standards has been seen, resulting in teachers with limited or no pedagogical training increasingly being

utilized in the classroom; certification for these instructors is typically referred to as Emergency Certification (Heubeck, 2022; Mobra & Hamlin, 2020). Emergency certified teachers leave the profession at twice the standard rate of teacher attrition (Bailey et al., 2020; García et al., 2022; Heubeck, 2022; Neumann, 1994; Troesch & Bauer, 2020). There is a strong positive correlation between a teacher's self-efficacy, their job satisfaction and their intent to remain in education (Kasalak & Dagyar, 2020; OECD, 2018). Additionally, there is a strong positive correlation between self-efficacy and classroom management (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021). With strong positive correlations between teacher self-efficacy and positive teacher/student relationship (Farhah et al., 2021), classroom management abilities (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021), job satisfaction, and teacher intent to remain in education (Farhah et al., 2021; Kasalak & Dagyar, 2020; OECD, 2018; O'Shea, 2021) there are strong justifications to promote teacher self-efficacy. Classroom management is a stressor for all levels of teachers, and a major contributor to teacher burnout (Aldrup et al., 2018; Collie, 2021; Davis, 2017; Kaya & Selvitopu, 2019). Beginning teachers, regardless of their previous training, have difficulty with classroom management (Dicke et al., 2015; Junker et al., 2021; Özen & Yildirim, 2020). Behavior management preparedness for non-traditionally prepared teachers compared to traditionally prepared teachers (Bowen et al., 2019; Schonfeld & Feinman, 2012) is lacking. In summation, the literature finds that the teacher/student relationship is a strong predictor of teacher job satisfaction (Hargreaves, 2000; O'shea, 2021), a core reason teachers remain in the classroom (Farhah et al., 2021; O'Shea, 2021), and has a direct positive correlation to teacher self-efficacy (Farhah et al., 2021), which has a strong positive correlation to classroom management (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021). Unfortunately, only a

small number of evidence-based, teacher-student relationship trainings exist (Duong et al., 2019; King, 2018; Poulou, 2018). But what is not known is what perceived classroom management skills are lacking in non-traditionally trained CTE teachers, and where they perceive their classroom management weaknesses to be.

Chapter 3: Methods

Overview and Rationale of Design

With a strong positive correlation between a teacher's self-efficacy and classroom management (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021), job satisfaction, and teacher intent to remain in education (Kasalak & Dagyar, 2020; OECD, 2018), there is significant reason to promote teacher self-efficacy in all aspects of the teaching process. The teacher/student relationship, which has a direct positive correlation to teacher self-efficacy (Farhah et al., 2021), not surprisingly has a strong positive correlation to classroom management abilities (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021), is a strong predictor of teacher job satisfaction (Hargreaves, 2000; O'shea, 2021), and teachers' willingness to remain in the classroom (Farhah et al., 2021; O'Shea, 2021).

Singling out classroom management, research has shown that all beginning teachers, regardless of their previous training, have difficulty with classroom management (Dicke et al., 2015; Junker et al., 2021; Özen & Yildirim, 2020). Additionally, a 2019 study showed a statistically significant deficit in behavior management preparedness for non-traditionally prepared beginning teachers compared to traditionally prepared beginning teachers (Bowen et al., 2019; Schonfeld & Feinman, 2012). With research identifying classroom management as a stressor for not just beginning teachers, but all levels of teachers, and a major contributor to teacher burnout (Aldrup et al., 2018; Collie, 2021; Davis, 2017; Kaya & Selvitopu, 2019), training on methods to enhance classroom management, potentially through creating and enhancing a productive teacher-student relationship, are going to benefit SC/NCTs, particularly

when considering they are prone to be undertrained for the profession (Kavrayici, 2021; Kaya & Selvitopu, 2019; Lay, 2021; Özen & Yildirim, 2020). Additionally, teacher-student relationship activities allow for regular social interaction between teacher and students, which becomes more important when considering a number of studies of SC/NCTs have reported intrinsic motivations related to fostering trusting relationships with students (Backes & Burns, 2008; Berger & D'Ascoli, 2012; Hart, 2008; Mobra & Hamlin, 2020; Salyer, 2003).

“Research approaches are plans and procedures that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation” (Creswell, 2014, p. 3). In a study conducted of 2014 to 2016 educational journals, looking at 255 articles, the most prominent research approach was qualitative, accounting for around 44% of studies, 35% (approximately one-third) of studies were quantitative, mixed methods accounted for 16% of studies, with 5% of the articles were classified as “other” (Curtin et al., 2020). When a theory is tested by examining the relationship among variables and statistical procedures, and instruments are used to analyze numbered data, a Quantitative approach is appropriate. As in other research approaches, the researcher will have assumptions about testing theories deductively, desire to protect against bias, control for alternative or counterfactual explanations, and the need to be able to generalize and replicate findings (Creswell, 2014). In the previously mentioned 2014-2016 educational journal article study, among quantitative designs, Correlational Design, investigating relationships between variables without manipulating them to describe their attributes, accounted for almost half (48.3%) of designs observed. Descriptive Quantitative Research Design, similar to Correlational Design in not manipulating variables but dissimilar in its goal to predict how variables are related to the natural world, accounted for 36.8% of designs observed. Causal Comparative Design (determining if one variable has a direct impact on another variable),

Experimental Research Designs (establishing a cause-and-effect relationship between an independent and dependent variable using random assignment of subjects) and Quasi-Experimental Design (similar to experimental research design, however lacking random assignment of subjects) combined to account for 10.5% of quantitative research designs. Other designs comprised 3.3% of quantitative research designs (Curtin et al., 2020). A study published in 2018 examining research articles published in the *American Educational Research Journal*, the *Educational Administration Quarterly*, and the *NASSP Bulletin* between 2008 and 2013 showed 58% of articles used quantitative methodology, though not necessarily exclusively, within the study design (Hochbein & Smeaton, 2018). A 2017 study of research approaches in education publications showed a somewhat even distribution of research designs, qualitative (37.2%), quantitative (29.6%), and mixed methods (33.2%) (Divan et al., 2017). Divan et al (2017) collected data from 267 studies published between 2012 and 2014 in three educational journals, the *International Journal for the Scholarship of Teaching and Learning (IJSOTL)*, the *International Journal of Teaching and Learning in Higher Education (IJTLHE)*, and the *Journal of the Scholarship of Teaching and Learning (JOSOTL)*. A study of educational dissertations from 2014 revealed a bias toward quantitative research with 53% following that method, a third, 33% were qualitative, and those remaining, 13% were mixed methods (Randolph et al., 2014).

A needs analysis is an information gathering endeavor that determines the gap between an experienced outcome and a desired outcome (Pushpanathan, 2013). As opposed to a descriptive study which attempts to summarize an outcome based on descriptive statistics, an analytical cross-sectional study tries to answer how or why a certain outcome might occur, examining the association between exposures and outcomes at a single point in time (Rezigalla, 2020; Setia, 2019). An observational study seeks to understand what is observed without

manipulation of the research subjects (Rezigalla, 2020). This dissertation study proposes a quantitative approach with a needs analysis, cross-sectional, observational study.

Research Question

In order to ascertain the impact of traditional teacher preparation versus non-traditional teacher preparation on perceptions of self-efficacy associated with classroom management, which has been shown to positively impact job satisfaction (Ertürk, 2022; Kaya & Selvitopu, 2019; Marzano et al., 2003) and job retention (Agyekum, 2019; Aldrup et al., 2018; Booker, 2021; Chen et al., 2021; Duong et al., 2019; Iwuagwu & Aiwuyo, 2017; Tipton-Fisler et al., 2020), this study asks the following question:

RQ1: Is there a statistical difference in perceived self-efficacy between traditionally certified and non-traditionally certified teachers in the Oklahoma Career Tech system?

The null hypothesis is, “There is no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers’ perceptions of self-efficacy in classroom management.” The alternative hypothesis for this needs analysis is, “There is a measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers’ perceptions of self-efficacy in classroom management.”

Population of the Study

The target population of this study was traditionally certified teachers and non-traditionally certified teachers in the Oklahoma Career Tech system. There are twenty-nine Career Tech districts in Oklahoma. Research shows that years of experience in teaching correlates directly with self-efficacy (Shahat et al., 2022; Torabzadeh & Hashamdar, 2022); to

reduce the impact of years of experience as a confounding factor, years of teaching experience was included in the survey. Because many terms are used both colloquially and as a technical definition, the following terms are defined as variables in this study.

Definition of Terms

- **Second-Career and/or Non-standard Certified Teacher (SC/NCT)** is an instructor that has entered the classroom through non-traditional means, often as a second career and with a non-standard teaching certification such as Emergency Certification, Alternative Certification or Technology Center Certification.
- **Standard Certification** refers to the traditional route educators have taken to obtain teaching credentials. Steps to this route include graduation from an accredited institution of higher education having completed an approved teacher education program and successful completion of all required competency examinations (*Traditional Path for Oklahoma Teacher Certification*, n.d.).
- **Alternative Certification** refers to a non-standard route of teacher certification which requires a Baccalaureate degree from an accredited institution, competence in a certification commonly shown through degree requirements or work experience, and college credit hours in pedagogy and related subjects, along with successful completion of all required competency examinations (*Oklahoma Alternative Placement Program for Teacher Certification*, n.d.).
- **Emergency Certification** refers to a non-standard route of teacher certification. Qualifications for emergency certification of teachers by state fluctuate, commonly a bachelor's degree and background check are the whole of what is required (Heubeck, 2022; Mobra & Hamlin, 2020; Neumann, 1994).

- **Technology Center Certification** refers to a vocational technology teacher certification where the individual has field experience in a subject area to be taught, and either has or is working towards earning a degree from an accredited institution (*Provisional Certification*, 2022).
- **Teacher/student Relationship** refers to the way the teacher and one or more students are connected, and how they behave toward one another (Farhah et al., 2021; O'Shea, 2021).

The Sample and Sampling Procedure

The study's sample consisted of Oklahoma Career Tech teachers with both standard certifications and non-standard certifications (emergency certification, alternative certification, Career Tech certification, and other).

The recruitment procedure began with contacting Oklahoma Career Tech teachers via email, explaining the purpose of the study and inviting them to take the survey. Teachers at nine of the state's twenty-nine Career Techs were emailed. Those schools vary in size and location from large metro area districts to smaller rural districts. Included in the email invitation were Caddo-Kiowa Technology Center, Chisholm Trail Technology Center, Eastern Oklahoma County Technology Center, Francis Tuttle Technology Center, Gordon Cooper Technology Center, Great Plains Technology Center, Green Country Technology Center, High Plains Technology Center, and Mid-America Technology Center. The survey link was on 12/03/2024. Results were collected on 12/18/2024, and the survey was closed.

Data Collection

Survey invitations were distributed via email, in groups of no greater than nine recipients, with a link to the survey were distributed to all selected Career Tech instructors. The body of the

email explained the purpose of the study, instruments used and the informed consent.

Participation in the survey was completely voluntary. In the email, participants in the study were informed their responses would remain anonymous but that responses would be available as a composite and linked to demographics. This study underwent an Institutional Review Board to determine ethical adequacy at the University of Oklahoma. It was approved by this board. IRB approval was obtained on 10/04/2024, before contacting any participant (Appendix A).

Potential Threats to Validity

Threats to validity, situations that compromise cause-and-effect inferences of a study due to experimental procedures or experiences of participants, must be managed to ensure validity of findings (Creswell, 2014). Potential threats could lie in nonequivalent groups and selection bias, location threat, and maturation.

Nonequivalent groups and selection bias present a threat to internal validity (Grimshaw, 2000; Miller et al., 2019; Shadish et al., 2002). The risk of poorly matched comparison groups makes selection of a similar control group very important (Gribbons & Herman, 1996; Grimshaw, 2000; Miller et al., 2019; Shadish et al., 2002; White & Sabarwal, 2019). Since this is a needs analysis, cross-sectional, observational study, all data was collected at a point in time, and the study group was limited to Oklahoma Career Tech instructors only (Creswell, 2014; White & Sabarwal, 2019). Self-selection bias, when invited study participants choose to join or to not join a study (Każmierczak et al., 2023; Khazaal et al., 2014; Oswald et al., 2013), is a concern in a population of educators that face many stressors and challenges, and strengths and weaknesses. In a study of this nature, where expertise are questioned, it may be difficult to mitigate such a bias. Research

suggests that more proficient educators may be more likely to contribute to online surveys (Khazaal et al., 2014).

Location threat, the impact of characteristics of a school environment, which could facilitate or inhibit the development of teacher/student relationship skills (Hargreaves, 2000; O'shea, 2021) creating a threat to internal validity was considered in the study design. There is no safeguard to ensure participants do not experience a changing environment, for example a change in administrators or mentors, however, use of only Oklahoma Career Tech teachers, although from various Career Tech sites, enhances the opportunity that the study group will not suffer significant location threat. Additionally, the survey was conducted exclusively online, providing a consistent environment.

The threat of maturation, academic or life experiences impacting the abilities of instructors to form teacher/student relationships or conduct classroom management activities (Creswell, 2014) to internal validity was mitigated by the “moment in time” nature of the survey, as well as the correlational analysis of years of teaching in collected data.

Instrument

The Teachers' Sense of Efficacy Scale (TSES) survey (Tschannen-Moran & Hoy, 2001) developed to measure teacher efficacy. The survey, developed by Megan Tschannen-Moran, College of William and Mary and Anita Woolfolk Hoy, of Ohio State University, is a list of questions with a 9-option Likert scale of answers. Answer options are (1) “Nothing”, (2), (3) “Very Little”, (4), (5) “Some Influence”, (6), (7) “Quite a bit”, (8), (9) “A Great Deal”. The complete scale consists of twenty-four questions addressing Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management. The Efficacy in

Classroom Management portion consisting of eight questions was used. The TSES survey was identified as an effective tool to ascertain teacher's perceptions of self-efficacy in classroom management. Alone this section was found to have an alpha of .90, very near 1 and well above 0.5, giving it good reliability (Goforth, 2015). Factor loadings for this section's questions range from .50 to .78 indicating a meaningful load, reasonably strong justification of the variable (Ford, n.d.; Tschannen-Moran & Hoy, 2001).

Table 1:

Factor loadings for the TSES

Ohio State teacher efficacy scale (OSTES)	24 items	12 items		
<i>Factor 1: Efficacy for instructional strategies</i>				
1. To what extent can you use a variety of assessment strategies?	0.72	0.73		
2. To what extent can you provide an alternative explanation or example when students are confused?	0.70	0.75		
3. To what extent can you craft good questions for your students?	0.68	0.63		
4. How well can you implement alternative strategies in your classroom?	0.66	0.73		
5. How well can you respond to difficult questions from your students?	0.66			
6. How much can you do to adjust your lessons to the proper level for individual students?	0.59			
7. To what extent can you gauge student comprehension of what you have taught?	0.57			
8. How well can you provide appropriate challenges for very capable students?	0.55			
<i>Factor 2: Efficacy for classroom management</i>				
9. How much can you do to control disruptive behavior in the classroom?	0.78	0.83		
10. How much can you do to get children to follow classroom rules?	0.69	0.66		
11. How much can you do to calm a student who is disruptive or noisy?	0.66	0.63		
12. How well can you establish a classroom management system with each group of students?	0.66	0.61		
13. How well can you keep a few problem students from ruining an entire lesson?	0.62			
14. How well can you respond to defiant students?	0.61			
15. To what extent can you make your expectation clear about student behavior?	0.53			
16. How well can you establish routines to keep activities running smoothly?	0.50			
<i>Factor 3: Efficacy for student engagement</i>				
17. How much can you do to get students to believe they can do well in schoolwork?	0.75	0.75		
18. How much can you do to help your students value learning?	0.70	0.69		
19. How much can you do to motivate students who show low interest in schoolwork?	0.66	0.64		
20. How much can you assist families in helping their children do well in school?	0.63	0.62		
21. How much can you do to improve the understanding of a student who is failing?	0.57			
22. How much can you do to help your students think critically?	0.56			
23. How much can you do to foster student creativity?	0.50			
24. How much can you do to get through to the most difficult students?	0.47			
	Long form	Short form		
	Eigenvalue	Cum %	Eigenvalue	Cum %
Factor1	10.38	43.25	5.68	47.30
Factor 2	2.03	51.72	1.51	59.89
Factor 3	1.62	58.47	1.11	69.10

(Tschannen-Moran & Hoy, 2001, p. 800)

Table 2: Means for TSES subscales and total score for long and short forms

	Long form			Short form		
	Mean	SD	α	Mean	SD	α
OSTES	7.1	0.94	0.94	7.1	0.98	0.90
Instruction	7.3	1.1	0.91	7.3	1.2	0.86
Management	6.7	1.1	0.90	6.7	1.2	0.86
Engagement	7.3	1.1	0.87	7.2	1.2	0.81

(Tschannen-Moran & Hoy, 2001, p. 800)

From the original and validated survey, I adapted a short version to measure the efficacy of CTE teachers in the classroom. The questions used are as follows:

- Which best describes your teacher certification?
 - Standard Oklahoma Teacher Certification (traditional path)
 - Alternative Placement or Emergency Certification
 - CareerTech Instructor Certification
 - Other
- How many years have you been teaching? (open response)
- (If known) What percentage of students in your school are on Free and Reduced Lunches?
- How much time is available in your weekly schedule to administer a relationship-building program to improve student behavior?
- What is your gender? (male, female)
- How much can you do to control disruptive behavior in the classroom?
- To what extent can you make your expectations clear about student behavior?
- How well can you establish routines to keep activities running smoothly?
- How much can you do to get children to follow classroom rules?

- How much can you do to calm a student who is disruptive or noisy?
- How well can you establish a classroom management system with each group of students?
- How well can you keep a few problem students from ruining an entire lesson?
- How well can you respond to defiant students?

Permission to use the survey was obtained from Anita Woolfolk Hoy, Ph.D., Professor Emeritus, Ohio State University, cocreator of the survey. In addition to the TSES survey questions, demographic data was asked.

Variable of Interest

The independent variable in this needs analysis, cross-sectional, observational study was a categorical variable associated with teacher training experiences and has two levels, ‘standard certified instructors’ and ‘non-standard certified instructors’ (*Welcome to STAT 200! | STAT 200*, 2023).

The dependent variable, ‘teacher’s perceptions of self-efficacy in classroom management’ was evaluated by taking the mean of a nine answer Likert scale for each question, creating an approximate continuous scale from “nothing” to “a great deal”, and so was treated as a continuous variable (Sullivan & Artino, 2013; Zumbo & Zimmerman, 1993). Given a web of positive correlation among teacher/student relationship, self-efficacy, classroom management, job satisfaction, and choosing to remain employed for educators, and the problematic attrition rate associated with education in general, it is reasonable to assume means to effectively address attrition may lie in those correlated areas. This study proposed to examine the difference in Oklahoma Career Tech instructors that have attained standard teaching certifications and those

that have non-standard teacher certification to identify differences in perceptions of self-efficacy in classroom management. A proven measure, the Teachers' Sense of Efficacy Scale (TSES) survey, was the instrument used to determine differences between self-perceptions of instructors with standard certification and those with non-standard certification in classroom management self-efficacy. The use of a needs analysis, cross-sectional, observational study, which allowed for an information gathering endeavor that determined the gap between an experienced outcome and a desired outcome (Pushpanathan, 2013) by examining the association between exposures and outcomes at a single point in time (Rezigalla, 2020; Setia, 2019) sought to understand what was observed without manipulation of the research subjects (Rezigalla, 2020).

If a negative relationship was established between non-standard certification instructors and perceptions of self-efficacy in classroom management among Oklahoma Career Tech instructors by this study when compared to standard certification instructors, findings could shed light on the specific training needs of those instructors with non-standard certifications. If the null hypothesis is confirmed, it could indicate the need to examine what experiences Oklahoma Career Tech instructors with non-standard certifications have had, leading them to greater self-efficacy in classroom management than emergency certified public school teachers that typically start their careers at a disadvantage in these abilities (Bowen et al., 2019; Heubeck, 2022; Mobra & Hamlin, 2020), and often "are ill-prepared for their assignment, receive inadequate guidance and support, and experience considerable difficulty performing their duties," (Neumann, 1994, pp. 89-90).

Chapter 4: Results

The purpose of this study was to examine the relationship between Oklahoma Career Technology Center instructors' certification type, standard vs. non-standard, and their self-efficacy in classroom management. To that end the following question was identified: "Is there a statistical difference in perceived self-efficacy between traditionally certified and non-traditionally certified teachers in the Oklahoma Career Tech system." The null hypothesis is, "There is no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers' perceptions of self-efficacy in classroom management." The alternative hypothesis for this needs analysis is, "There is a measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers' perceptions of self-efficacy in classroom management."

Data Examination

Since there was a single independent variable and dependent variables, statistical analysis was conducted using IBM SPSS software (Frey, 2017). The distribution proved normal so an Independent Samples T-Test examining the difference in means was used for analysis (Kent State University, 2018) testing for robustness. Although parametric statistics are not universally recommended for ordinal data, there's a body of research indicating the use of parametric methods will not result in errant conclusions (Camparo, 2013; Sullivan & Artino, 2013).

Looking at the results of this study which included a population of thirty Oklahoma Career Tech instructors, when comparing Oklahoma Career Tech instructors with standard certifications (ten respondents) to those with non-standard certifications (twenty respondents), it might be expected to see significant differences in classroom management self-efficacy. That

proved not to be the case. IBM SPSS Statistics (Version 30) was used in all statistical analysis except determining minimum sample size to achieve significance which was determined using ClinCalc.com's Sample Size Calculator (Kane, 2025). In all eight questions, Lavene's test confirmed equal variances. Answers on a nine-point Likert scale showed statistically non-significant results on all eight TSES survey questions. The greatest difference in group mean scores was associated with the question, "How much can you do to calm a student who is disruptive or noisy? How much can you do?", where standard certification instructors answered a mean of 7.20 with a standard deviation of 1.476 on a nine-point Likert scale, scoring just above "Quite a bit". Non-standard certification instructors answered a mean of 6.65 with a standard deviation of 1.309, scoring slightly below the same descriptor, giving a mean difference of .550 with a 95% confidence interval of -.533 to 1.633, the interval going from a negative to a positive, confirming non-significance. The t-statistic was 1.041, with 28 degrees of freedom, and the degree of significance (2-tailed) was .307, the lowest of all eight questions, and which is greater than .05, confirming the null hypothesis that there was no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers' perceptions of self-efficacy in classroom management related to this question. Based on the results of this specific question, a sample size of 57 subjects would be the minimum needed to have sufficient statistical power to detect a treatment effect. The smallest difference in group mean scores was associated with the question, "How well can you establish a classroom management system with each group of students? How much can you do?", where both standard certification instructors and non-standard certification instructors answered a mean of 7.60 with standard certification instructors showing a standard deviation of 1.265 and non-standard certification instructors showing a standard deviation of 1.603. This mean fell .60 points above

“Quite a bit”, with a 95% confidence interval of -1.192 to 1.192, confirming non-significance. The t-statistic was 0.000, with 28 degrees of freedom, and the degree of significance (2-tailed) was 1.000, which is greater than .05, confirming the null hypothesis that there is no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers’ perceptions of self-efficacy in classroom management related to this question. Based on the results of this specific question, as both groups scored the same, no sample size would offer sufficient statistical power to detect a treatment effect.

The smallest difference in group mean scores, not zero, was associated with the question, “How well can you respond to defiant students? How much can you do?”, where standard certification instructors answered a mean of 6.70 with a standard deviation of 1.418, falling just below “Quite a bit”, non-standard certification instructors answered a mean of 6.80 with a standard deviation of 1.765, slightly higher, but still below the same descriptor, giving a mean difference of .100 with a 95% confidence interval of -1.418 to 1.218, confirming non-significance. The t-statistic was .155, with 28 degrees of freedom, and the degree of significance (2-tailed) was .878, which is greater than .05, confirming the null hypothesis that there is no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers’ perceptions of self-efficacy in classroom management related to this question. Based on the results of this specific question a sample size of 1578 subjects would be the minimum needed to have sufficient statistical power to detect a treatment effect (Kane, 2025).

Table 3: Group Statistics: Certification Type

Group Statistics					
TSES Questions	Which best describes your teacher certification?	N	Mean	Std. Deviation	Std. Error Mean
How much can you do to control disruptive behavior in the classroom?	<i>Standard</i>	20	7.60	1.569	0.351
How much can you do?	<i>Non-standard</i>	10	8.00	1.333	0.422
To what extent can you make your expectations clear about student behavior? How much can you do?	<i>Standard</i>	20	8.45	0.759	0.170
	<i>Non-standard</i>	10	8.60	0.699	0.221
How well can you establish routines to keep activities running smoothly?	<i>Standard</i>	20	8.05	0.945	0.211
How much can you do?	<i>Non-standard</i>	10	8.40	0.843	0.267
How much can you do to get children to follow classroom rules?	<i>Standard</i>	20	7.75	1.251	0.280
How much can you do?	<i>Non-standard</i>	10	7.60	1.350	0.427
How much can you do to calm a student who is disruptive or noisy?	<i>Standard</i>	20	6.65	1.309	0.293
How much can you do?	<i>Non-standard</i>	10	7.20	1.476	0.467
How well can you establish a classroom management system with each group of students?	<i>Standard</i>	20	7.60	1.603	0.358
How much can you do?	<i>Non-standard</i>	10	7.60	1.265	0.400
How well can you keep a few problem students from ruining an entire lesson?	<i>Standard</i>	20	6.95	1.538	0.344
How much can you do?	<i>Non-standard</i>	10	7.20	1.687	0.533
How well can you respond to defiant students?	<i>Standard</i>	20	6.80	1.765	0.395
How much can you do?	<i>Non-standard</i>	10	6.70	1.418	0.448

Table 4: Independent Samples Test: Certification Type

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance 1-Sided p	Significance 2-Sided p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
How much can you do to control disruptive behavior in the classroom? How much can you do?	Equal variances assumed	0.311	0.581	-0.690	28	0.248	0.496	-0.400	0.580	-1.588	0.788
	Equal variances not assumed			-0.729	21.012	0.237	0.474	-0.400	0.549	-1.541	0.741
To what extent can you make your expectations clear about student behavior? How much can you do?	Equal variances assumed	0.533	0.471	-0.523	28	0.303	0.605	-0.150	0.287	-0.737	0.437
	Equal variances not assumed			-0.538	19.523	0.298	0.597	-0.150	0.279	-0.732	0.432
How well can you establish routines to keep activities running smoothly? How much can you do?	Equal variances assumed	0.045	0.833	-0.990	28	0.165	0.331	-0.350	0.354	-1.074	0.374
	Equal variances not assumed			-1.029	20.088	0.158	0.316	-0.350	0.340	-1.059	0.359
How much can you do to get children to follow classroom rules? How much can you do?	Equal variances assumed	0.036	0.851	0.302	28	0.383	0.765	0.150	0.497	-0.869	1.169
	Equal variances not assumed			0.294	16.916	0.386	0.772	0.150	0.510	-0.927	1.227
How much can you do to calm a student who is disruptive or noisy? How much can you do?	Equal variances assumed	0.684	0.415	-1.041	28	0.153	0.307	-0.550	0.529	-1.633	0.533
	Equal variances not assumed			-0.998	16.279	0.166	0.333	-0.550	0.551	-1.716	0.616
How well can you establish a classroom management system with each group of students? How much can you do?	Equal variances assumed	0.479	0.495	0.000	28	0.500	1.000	0.000	0.582	-1.192	1.192
	Equal variances not assumed			0.000	22.408	0.500	1.000	0.000	0.537	-1.113	1.113
How well can you keep a few problem students from ruining an entire lesson? How much can you do?	Equal variances assumed	0.623	0.437	-0.407	28	0.344	0.687	-0.250	0.615	-1.509	1.009
	Equal variances not assumed			-0.394	16.676	0.349	0.699	-0.250	0.635	-1.591	1.091
How well can you respond to defiant students? How much can you do?	Equal variances assumed	0.086	0.771	0.155	28	0.439	0.878	0.100	0.644	-1.218	1.418
	Equal variances not assumed			0.167	22.071	0.434	0.869	0.100	0.597	-1.139	1.339

Further Statistical Analysis

To more deeply examine the study data, Oklahoma Career Tech instructors with less than six years of experience (6 respondents) were compared to those having six years of experience or more (24 respondents) in their response to the Teachers' Sense of Efficacy Scale (TSES) survey (Tschannen-Moran & Hoy, 2001). In all eight questions, Lave's test confirmed equal variances. Answers on a nine-point Likert scale showed statistically non-significant results on seven of eight TSES survey questions. The question that yielded significant results was, "How

well can you establish routines to keep activities running smoothly? How much can you do?”, where six years of experience and more instructors answered a mean of 8.33 with a standard deviation of .816, .67 points below the maximum confidence rating of “A great deal”. Six-years or less experience instructors answered a mean of 6.65 with a standard deviation of 1.049, .35 points below the descriptor “Quite a bit”, giving a mean difference of .833 with a 95% confidence interval of .027 to 1.640. The t-statistic was 2.117, with 28 degrees of freedom, and a degree of significance (2-tailed) of .043, which is less than .05, confirming significant differences. Three other questions yielded a greater difference in means. The question, “How well can you respond to defiant students? How much can you do?” showed the greatest mean difference and revealed instructors with six or more years of experience showing an average mean score of 7.04, correlating with the descriptor “Quite a bit”, and a standard deviation of 1.574, while instructors with less than six years of experience showing an average mean score of 5.67, .67 above the descriptor, “Some Influence”.

The question that yielded the narrowest non-significant results was, “To what extent can you make your expectations clear about student behavior? How much can you do?”, where six years of experience and more instructors answered a mean of 8.54, .46 points below the maximum confidence rating of “A great deal”, six-years or less experience instructors answered a mean of 8.33, .67 points below the descriptor “A great deal”, giving a mean difference of .208 with a 95% confidence interval of -.483 to 1.899. The t-statistic was .618, with 28 degrees of freedom, and a degree of significance (2-tailed) of .542, the highest of all questions, and which is greater than .05, confirming non-significant differences. Based on the results of this specific question, a sample size of 93 subjects would be the minimum needed to have sufficient statistical power to detect a treatment effect.

To further examine the study data, the Oklahoma Career Tech instructors gender results were compared on the Teachers' Sense of Efficacy Scale (TSES) survey (Tschannen-Moran & Hoy, 2001). Female instructors (22 respondents) were compared to male instructors (8 respondents). In all eight questions, Lavene's test confirmed equal variances. Answers on a nine-point Likert scale showed statistically non-significant results on all eight TSES survey questions. The greatest difference in group mean scores was associated with the question, "How well can you establish a classroom management system with each group of students? How much can you do?", where female instructors answered a mean of 7.41 with a standard deviation of 1.593, .41 points above "Quite a bit", male instructors answered a mean of 8.13 with a standard deviation of .991, .87 points below the maximum score with a descriptor of, "Quite a bit", giving a mean difference of .716 with a 95% confidence interval of -1.956 to .524. The t-statistic was -1.183, with 28 degrees of freedom, and the degree of significance (2-tailed) was .247, the smallest of the eight questions, which is greater than .05, confirming non-significance. Based on the results of this specific question a sample size of 38 subjects would be the minimum needed to have sufficient statistical power to detect a treatment effect. The question that yielded the narrowest mean results was, "How much can you do to calm a student who is disruptive or noisy? How much can you do?", where female instructors answered a mean of 6.82 with a standard deviation of 1.532, .18 points below the confidence rating of "Quite a bit", male instructors answered a mean of 6.88 with a standard deviation of .835, .12 points below the descriptor "Quite a bit", giving a mean difference of .057 with a 95% confidence interval of -.1233 to 1.119. The t-statistic was -.099, with 28 degrees of freedom, and a degree of significance (2-tailed) of .922, the greatest of all eight questions, which is greater than .05, confirming non-significant

differences. Based on the results of this specific question a sample size of 5,117 subjects would be the minimum needed to have sufficient statistical power to detect a treatment effect.

Robustness Checks

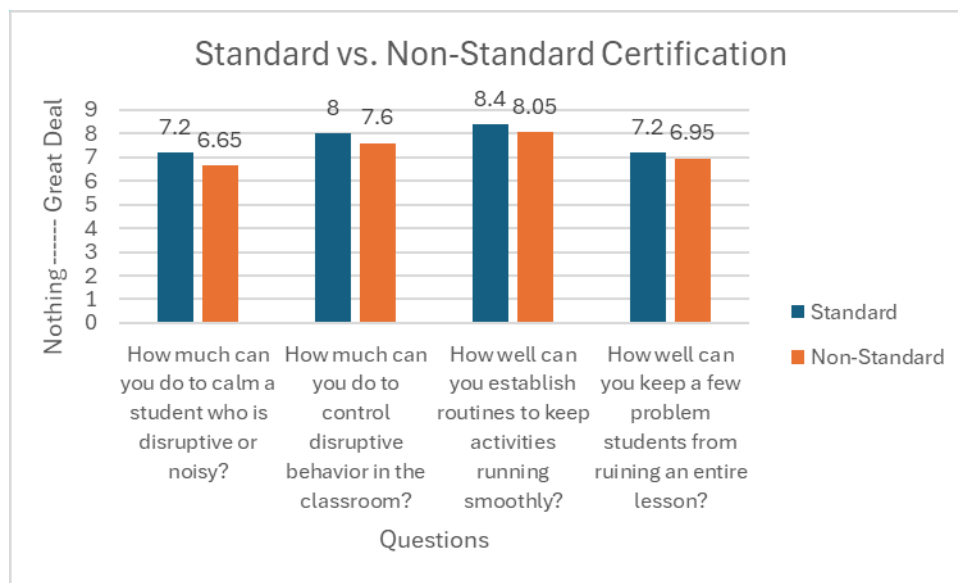
A potential threat to validity was sample size (Kane, 2025). Needed sample sizes based on observed answers' means and standard deviations for the eight survey questions, calculated using ClinCalc.com's Sample Size Calculator (Kane, 2025), gave the minimum sample size values of 46, 57, 87, 170, 357, 636, 1578, and infinite for the eight TSES questions. These values assume the means and standard deviations remain static with the increased sample size. Thirty responses represent approximately 12% of the over 250 Oklahoma Career Tech instructors from nine of the state's twenty-nine Career Technology Centers that were emailed. Were all the nearly 1500 Oklahoma Career Tech instructors (*Tech Center Profiles - Full-Time Program Data*, 2023) contacted, a similar response rate would yield roughly one-hundred eighty responses, offering the potential of significant results for only half, four of eight questions. Obtaining higher numbers would likely require some level of sponsorship from the Oklahoma Department of Career Tech.

Results Summary

This study finds a minimal and nonsignificant difference in standard certified Oklahoma Career Tech teachers and non-standard certified Oklahoma Career Tech teachers associated with the results of the classroom management portion of the Teachers' Sense of Efficacy Scale (TSES) survey (Tschannen-Moran & Hoy, 2001). These findings do not confirm the study's alternative hypothesis, "There is no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers' perceptions of self-efficacy

in classroom management.” However, these findings do follow the literature associated with public school teachers.

Table 5: Standard vs. Non-Standard Certification Scores



Additionally, further analysis of the data was conducted comparing TSES classroom management scores based on years of experience, less than six to six years or more, where significance was found in one question of the eight-question survey. And when comparing gender differentiated results on the TSES classroom management scores, a small but not statistical difference was detected.

It should be considered that teacher confidence generated a self-selection bias in participants (Każmierczak et al., 2023; Khazaal et al., 2014; Oswald et al., 2013), resulting in limited differences in TSES scores between non-standard and standard certification instructors than potentially exist. Additionally, significant difference was found when comparing instructors’ years of experience, less than six years versus six years and more, on the question, “How well can you establish routines to keep activities running smoothly? How much can you

do?”, where six years of experience and more instructors showed an advantage, an important focus may have been identified. Investigating the impact of preservice and in-service training and support for instructors early in their career could provide insight and identify a potential focus for training emphasis that creates an immediate impact on quality instruction. It is noteworthy to mention that all instructors with less than six years of experience were non-standard certified instructors while instructors with six years and more were both standard certified and non-standard certified.

Chapter 5: Conclusions, Interpretations and Recommendations

Conclusions

This study examined the relationship between Oklahoma Career Technology Center instructors' certification type, standard vs. non-standard, and their self-efficacy in classroom management, contributing to the base of literature that establishes the association between teacher preparation and teacher self-efficacy, and adds evidence to self-efficacy as an important indicator of teacher retention. In doing this, the study considers the advantages of addressing classroom management training needs for Oklahoma Career Tech second-career and/or non-standard certified instructors, particularly when considering they are prone to be undertrained for the profession (Kavrayici, 2021; Kaya & Selvitopu, 2019; Lay, 2021; Özen & Yildirim, 2020), and potential impacts. The question addressed was, "Is there a statistical difference in perceived self-efficacy between traditionally certified and non-traditionally certified teachers in the Oklahoma Career Tech system?" The null hypothesis was, "There is no measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers' perceptions of self-efficacy in classroom management." The alternative hypothesis for this needs analysis was, "There is a measurable statistical difference between traditionally certified classroom teachers and non-traditionally certified teachers' perceptions of self-efficacy in classroom management." The study finds that there are small but not statistically significant differences in seven of the eight questions from the TSES, Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) among Oklahoma Career Tech instructors with standard certifications compared to those with non-standard certifications. These findings show trends that are in agreement with the abundance of literature supporting the alternative hypothesis, that there would be a measurable difference between traditionally certified classroom teachers and non-

traditionally certified teachers' perceptions of self-efficacy in classroom management, indicating a deficit in classroom management preparedness for non-traditionally prepared, beginning teachers compared to traditionally prepared teachers (Bowen et al., 2019; Heubeck, 2022; Mobra & Hamlin, 2020), however lacked sufficient sample size to produce statistical significance in these differences. As far back as the mid-1990's literature has noted the ill-preparedness of non-standard certification teachers, stating a tendency toward inadequate guidance and support (Neumann, 1994). While second-career emergency certification teachers cumulative career knowledge and experiences may potentially contribute to their subject matter knowledge, evidence suggests it has little or no effect on pedagogy (Bottoms et al., 2013; Troesch & Bauer, 2020).

Implications for Policy and Practice

As Benjamin Franklin famously said in 1735, "An ounce of prevention is worth a pound of cure" (*Founders Online: On Protection of Towns from Fire, 4 February 1735*, n.d.). Research indicates procuring training and support resources for beginning non-standard certified teachers prior to stepping into the classroom and during their first year of teaching will yield greater self-efficacy (Agbaria, 2021; Bay, 2020; Dicke et al., 2015; Kaya & Selvitopu, 2019; Lay, 2021), greater job satisfaction, and greater intent of those teachers to stay in the classroom (Kasalak & Dagyar, 2020; OECD, 2018), potentially leading to greater student learning (Carver-Thomas & Darling-Hammond, 2017; García et al., 2022; Holloway, 2006; Shuls & Flores, 2020) and reduced future expense related to teacher turnover (García et al., 2022; Kidd et al., 2015; Wiens et al., 2019). This study singled out self-efficacy in classroom management of Oklahoma Career Tech instructors as an gauge due to research that has shown characteristically, beginning teachers, regardless of their previous training, have difficulty with classroom management

(Dicke et al., 2015; Junker et al., 2021; Özen & Yildirim, 2020), a trend exacerbated for non-traditionally prepared beginning teachers compared to traditionally prepared beginning teachers (Bowen et al., 2019; Schonfeld & Feinman, 2012). Research identifies classroom management as a stressor not just for beginning teachers, but all levels of teachers, and a major contributor to teacher burnout (Aldrup et al., 2018; Collie, 2021; Davis, 2017; Kaya & Selvitopu, 2019). Training on methods to enhance classroom management has been shown to benefit second-career and/or non-standard certified teachers (SC/NCT)s, particularly when considering they are prone to be undertrained for the profession (Kavrayici, 2021; Kaya & Selvitopu, 2019; Lay, 2021; Özen & Yildirim, 2020).

While not offering statistically conclusive data, this study observed non-significant conforming evidence that Oklahoma Career Tech SC/NCTs suffer a deficit in self-efficacy in classroom management when compared to standard certification Oklahoma Career Tech instructors. This suggests a need for developing training and support for this population of instructors, the reasons being similar to justifications for similar considerations for K-12 non-standard certification instructors, to enhance self-efficacy, job satisfaction, and intent to remain in the classroom.

Oklahoma Career Tech provides new instructors, regardless of certification or previous classroom experience, access to the CareerTech Teacher Institute (CareerTech Teacher Institute, 2022), a training program for instructors new to Oklahoma Career Tech. Research shows beginning teachers trained in classroom management interventions display a statistically significant direct relationship with improved classroom management skills (Dicke et al., 2015; Poulou, 2018), which is positively associated with a variety of other quality teacher indicators including intention to remain in the classroom. Data trends observed in this study would suggest

that additional training in classroom management skillsets specifically for beginning second-career and/or non-standard certified teachers (SC/NCT)s serving in Oklahoma career Techs is likely to enhance their self-efficacy in classroom management, potentially increasing retention of those instructors.

Recommendations

Expanding on work that is already done in K-12 public and private schools, this study conducts early testing in Oklahoma on CTE teachers in Oklahoma Career and Technology Schools. This study has shown a small but non-statistically significant advantage for traditionally trained instructors compared to non-traditionally trained instructors in the Oklahoma Career Tech system on the classroom management portion of the TSES Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). As these findings conform with the expectations that research associated with public school non-standard certified instructors would produce when compared to public school standard certification instructors, however underpowered due to participant numbers, a logical step is to conduct a similar study with expanded participant numbers. Keeping measures that confirm respondents' anonymity and adding measures that mitigate self-selection bias (Kaźmierczak et al., 2023; Khazaal et al., 2014; Oswald et al., 2013), to ensure all educators, and not just those that see themselves as more proficient which is a group that has been shown more likely to contribute to online surveys (Khazaal et al., 2014), are represented in the study, could enhance results. In a study where certain expertise are questioned, it may prove important to mitigate such a bias.

Research to compare scores of Oklahoma Career Tech non-standard certification instructors to public school non-standard certification instructors on the TSES or using other

means to compare these two groups in classroom-management self-efficacy, would help further define similarities and differences in the groups, allowing for proper comparisons between both groups and potentially lead to shared best practices to address similar observed needs, as well as more specifically defining both individual groups. Observations gained from a study of this nature could assist in reducing attrition rates in both of these vulnerable groups.

Additional research that could prove beneficial to retaining SC/NCTs in Oklahoma CTE education lies in teacher/student relationships. Considering a teacher will spend nearly a quarter of their waking hours with students during the school year (Pianta et al., 2012), that teacher job satisfaction can be predicted by the teacher/student relationship (O'Shea, 2021), that few evidence based interventions exist to promote positive teacher/student relationships, particularly on the secondary level (Duong et al., 2019; Shamina, 2018), and that perceptions of self-efficacy in classroom management is directly correlated with teacher job satisfaction (Ertürk, 2022; Kaya & Selvitopu, 2019; Marzano et al., 2003), there exists a worthy research opportunity. A study examining the impact of a teacher/student relationship activity and its impact on perceptions of self-efficacy associated with classroom management could lead to a greater understanding of the impact of the teacher/student relationship, and potentially an intervention that could be put into immediate practice.

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Appendix A

Institutional Review Board Approval of Study Modification



Institutional Review Board for the Protection of Human Subjects

Approval of Study Modification – Expedited Review – AP0

Date: October 04, 2024

IRB#: 16847

Principal Investigator: Corey G Herndon

Reference No: 768529

Study Title: A QUASIEXPERIMENTAL STUDY OF A TEACHER/STUDENT RELATIONSHIP PRACTICES' IMPACT ON EMERGENCY CERTIFIED AND/OR SECOND-CAREER TEACHERS' SELF-EFFICACY IN CLASSROOM MANAGEMENT

Approval Date: 10/04/2024

Modification Description: The study has been modified to a needs analysis, cross-sectional, observational study.

The review and approval of this submission is based on the determination that the study, as amended, will continue to be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

If the consent form(s) were revised as a part of this modification, discontinue use of all previous versions of the consent form.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. The HRPP Administrator assigned for this submission: Kat L Braswell.

Cordially,

Aimee Franklin, Ph.D.
Chair, Institutional Review Board