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Midwestern “Grow Your Own” Programs:  
A Viable Means to Teacher  
Recruitment and Retention?

by

Sandra Jean Humbyrd

July 29, 2020

A Dissertation submitted to the Education Faculty of Lindenwood University in  
partial fulfillment of the requirements for the degree of  
Doctor of Education  
School of Education

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Dr. Kathy Groven, Dissertation Chair

July 29, 2020  
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Dr. Robyn Gordon, Committee Member

July 29, 2020  
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Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

Full Legal Name: Sandra Jean Humbyrd

Signature:  Date: 7-29-2020

## Acknowledgments

I would like to thank all the grow your own advocates who helped in my research, including those hard-working educators who encourage the next generation of teachers each day. Without your dedication to your students, there would be fewer alumni teachers in our schools. Thank you for your passion for the profession.

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## Abstract

In this study, an analysis of the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers (pseudonym) and Homegrown Educators sponsors (pseudonym) in a Midwestern state on the success of grow your own programs regarding recruitment and retention rates of alumni teachers was conducted. This research resulted from reports throughout the nation concerning the shortage of teachers. An open-ended survey was utilized to gather perceptual data surrounding recruitment and retention, with a specific interest in high-needs areas and geographical location. Survey results showed there were no significant perceived differences between rural and urban districts in regard to success in recruitment and retention of alumni teachers in all areas, including high-needs positions. The survey results revealed the need for a more formal data collection process to share throughout the state, all levels of the school district community to focus on recruiting students into teaching, and additional grow your own programs throughout the state.

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## **Chapter One: Introduction**

The single most significant in-school factor that influences student academic achievement is teachers (Herrmann, 2018). Therefore, by taking cues from other industries to seek top talent, school personnel can do a better job of working actively to pursue candidates for this most important role (Herrmann, 2018). Growing your own teachers is a viable means of creating a supply of quality, prospective candidates within a local school community (Midwest Marketing Brochure, 2020).

Grow your own programs in the Midwestern state researched are most often known as Career and Technical Education (CTE) Pathways for the Teaching Profession and future teacher clubs such as Homegrown Educators. These grow your own programs, offered at the high school level, have shown some success in recruiting students to the teaching profession (Midwest Marketing Brochure, 2020; Grow Your Own Teachers Initiatives Resources, 2018). The major topics addressed in this chapter include the background of the study, the framework for the study, statement of the problem, the purpose of the study, the significance of the study, definitions of key terms, and limitations and assumptions.

### **Background of the Study**

President Obama signed The Every Student Succeeds Act (ESSA) in 2015; in the ESSA, legislators reauthorized the 50-year-old national education law, the Elementary and Secondary Education Act (ESEA) (U.S. Department of Education, 2020). The ESSA included an expectation of accountability in all schools, including the lowest performing and a commitment to equal opportunity for all students (U.S. Department of Education, 2020). The ESSA provided additional monies for low-income districts to recruit and

retain high-quality teachers (Podolsky, Kini, Bishop, & Darling-Hammond, 2017). Under this act, states were also allowed to raise the quality of their educator workforce by targeting their investments (Podolsky et al., 2017). Researchers agreed that good teachers are the most critical factor in student learning and achievement to provide equal opportunities, thus investing in raising the quality of future teachers is critical (Sack-Min, 2016).

Public schools enroll 90% of students in the United States and employ over three million educators, but teacher shortages make it difficult to fill teaching positions, and the situation is growing increasingly worse (Sack-Min, 2016, p. 1). Public school systems are limited by state law in the ability to offer higher pay for less desirable locations or in high-need specialized areas, unlike other industries (Cowan, Goldhaber, Hayes, & Theobald, 2016). The profession, in general, is becoming less desirable according to a survey issued by Phi Delta Kappan (PDK) International in 2018, which reported that the majority of parents surveyed indicated that they do not want their children to become educators (Partelow, 2019). Likewise, student survey results from the Midwestern state's Outreach Plan showed the same desolate outlook, with students indicating that many of their parents would discourage them from a career in education and that only 26% of the surveyed students would consider a career in education. Included in the data from the Midwestern state's Outreach Plan were students' comments indicating that their parents discouraged them from becoming teachers, even some whose parents were currently in education.

The lack of candidates in high-demand areas of teacher certification, such as science, technology, engineering, math (STEM) and special education, has resulted in

some states offering emergency credentials, or allowances for no credentials, to get teachers in classrooms (Partelow & Baumgardner, 2016; Reeves, 2018). With a decrease in qualified teachers for specific content or regional areas, stakeholders should be concerned with the strength of teacher pipelines (Partelow, 2019). Teacher pipeline is the term used to describe teacher-training programs, including teacher preparation programs at various levels (Partelow & Baumgardner, 2016). These makeshift teachers shortchange students and increase the burden for current, qualified teachers (Reeves, 2018).

Challenges for recruiting and retaining talented teachers are occurring in many states (Partelow & Baumgardner, 2016). Enrollment for teacher-prep programs, the first step in becoming a teacher, is on a sharp decline in many states, in some cases a decline of more than 50% (Partelow, 2019, p. 4; Partelow & Baumgardner, 2016). Across the nation, more than one-third fewer students enrolled in teacher-prep programs in 2018 than in 2010 (Partelow, 2019, p. 4). This decline means fewer people were taking that first critical step toward becoming a teacher (Partelow & Baumgardner, 2016). From 2010 to 2018, Midwestern state teacher preparation enrollments were down:

- Arkansas's teacher preparation program enrollment was down nearly 46%
- Illinois's teacher preparation program enrollment was down nearly 60%
- Indiana's teacher preparation program enrollment was down nearly 55%
- Kansas's teacher preparation program enrollment was down nearly 22%
- Kentucky's teacher preparation program enrollment was down nearly 42%
- Missouri's teacher preparation program enrollment was down nearly 33%
- Oklahoma's teacher preparation program enrollment was down nearly 89%

- Tennessee's teacher preparation program enrollment was down nearly 48% (Partelow, 2019, p. 10)

Not only were enrollment in teacher-prep programs down, but completion numbers of these programs followed a similar pattern (Partelow & Baumgardner, 2016). Graduation from these programs declined approximately 28% from the 2010 school year to 2018 across the United States (Partelow, 2019, p. 4). In the Midwest, teacher preparation program completion followed this pattern of decline and was down from 2010 to 2018:

- Arkansas's teacher preparation program completion was down around 3%
- Illinois's teacher preparation program completion was down around 52%
- Indiana's teacher preparation program completion was down around 29%
- Kansas's teacher preparation program completion was down around 2%
- Kentucky's teacher preparation program completion was down around 36%
- Missouri's teacher preparation program completion was down around 17%
- Oklahoma's teacher preparation completion was down around 53%
- Tennessee's teacher preparation program completion was down around 35% (Partelow, 2019, p. 12)

These projections tell only part of the story, teacher labor market issues are not national, most teachers seek employment in schools near where they grew up or where they were trained; therefore, some markets are saturated, yet demand for teachers in one state does not necessarily mean teachers will move across state lines to accept a job (Partelow & Baumgardner, 2016; Partelow, 2019). Some research disputed that there was a decline in teacher prep programs; the opposing research showed that the production

of newly minted potential teachers has steadily increased over the past few decades, but only about half of those graduates were hired each year (Cowan et al., 2016, p. 460). There was substantial evidence that staffing issues are more difficult in specific subjects (e.g., special education and STEM) and specific geographic locations or types of schools (e.g., rural schools or schools with high numbers of disadvantaged students), which suggested that the true shortage areas that needed to be addressed were specific types of teachers and schools (Carver-Thomas & Darling-Hammond, 2017; Cowan et al., 2016; Goff & Bruecker, 2017; Partelow, 2019).

Students who may consider a teaching major in STEM subjects often end up outside the teaching field due to the fact higher-paying options for employment in non-education fields exist (Carver-Thomas & Darling-Hammond, 2017; Partelow, 2019). Other career options for college-educated professionals outside of education provide better working conditions and higher pay that increases throughout their career as their skill level grows (Partelow, 2019). Congress is considering reauthorizing the Higher Education Act (HEA); therefore, policymakers should add reporting requirements to enable them to better understand declining enrollment in teacher preparation programs as well as teacher labor markets (Partelow, 2019).

It is increasingly difficult to fill teaching positions across the United States as an estimated 8% of educators leave their jobs annually (Sutcher, Darling-Hammond, & Carver-Thomas, 2016a, p. 4). In one year alone, it was estimated that approximately 10,000 of the most successful teachers in the country's 50 largest school districts left teaching (Indiana Charter School Network, 2016, p. 22). As reported by The Learning Policy Institute, some districts are filling the teacher gap with underprepared teachers

(Sutcher, Carver-Thomas, & Darling-Hammond, 2018). Partelow & Baumgardner (2016) reported the following:

...teacher quality is the most significant school-based determinant of student learning, so if shortages lead to an increase in emergency certification or a lowering of standards for entry into the profession—as has already happened in some states—they could be problematic for school systems and teachers alike. The immediate effects of this drop are seen in fewer education majors in schools of education as well as fewer participants in alternative certification programs... (p. 4)

A crisis is threatening the public education system due to the diminishing supply of new career educators, which is exacerbated by the ever-increasing demand placed on current teachers (Reeves, 2018).

### **Theoretical Framework**

Job satisfaction for teachers is a highly important factor affecting education quality (Homyamyen, Kulachai, & Phuangthuean, 2017). To build a foundation for this study, Behling, Labovitz, and Gainer's (1968) job-based theory was selected as a theoretical framework as it was most closely associated with the problem and purpose of the study. Young, Rinehart, and Place (1989) later applied this theory in the educational setting. Job choice theory is focused on the decisions teaching applicants make and the influences of three separate theories within the overarching, job-based theory (Young et al., 1989). These three theories are objective theory, subjective theory, and critical contact theory (Behling et al., 1968).



The objective theory of job choice theory is based around the notion that individuals want to maximize their economic status by taking a job that is the most economically competitive; this includes salary, benefits, and location (Engel & Cannata, 2015). More so than other professions, teachers are more likely to work close to their hometowns (Goff & Bruecker, 2017). Most teachers choose to work close to their hometowns, often within 15 miles of where they grew up or their undergraduate university, indicating that teacher labor markets are usually hyper-local (Goff & Bruecker, 2017; Partelow, 2019, p. 2).

The subjective theory of job choice theory is focused on applicants' desires to fulfill their particular psychological needs or their perceived ability to provide satisfaction for emotional needs, which are often deeply rooted in childhood experiences (Engel & Cannata, 2015). A novice teacher can be steered toward or away from particular vacancies depending upon their interpretation of the safety and community demographics (Goff & Bruecker, 2017). Educators consider subjective measures to predict their compatibility with the working conditions in a school district and to assess how those conditions fit with their personal values (Goff & Bruecker, 2017).

Individuals are also influenced by the critical contact theory within job choice theory through specific job expectations and requirements, including climate, atmosphere, and people, all of which are communicated during the initial contact with an organization, including a student's own district while still enrolled in high school (Engel & Cannata, 2015). Homyamyen et al. (2017) found that relationships with co-workers and supervisors have positive impacts on job satisfaction. As explained in the critical contact theory, the behaviors of members of an organization can impact the decision of

applicants; therefore, the recruitment process should be considered long before trying to fill needed positions, this can be done by encouraging students to consider the teaching field (Engel & Cannata, 2015; Schwab, Rynes, & Aldag, 1987).

### **Statement of the Problem**

A necessary foundation to improve educational outcomes is a competent teacher workforce, yet administrators in public schools have continued to face issues of teacher recruitment and retention (Carver-Thomas & Darling-Hammond, 2017; Podolsky & Sutchter, 2016). Building a staff of highly qualified teachers is increasingly difficult due to teacher shortages and high turnover rates in the profession (Carver-Thomas & Darling-Hammond, 2017). Ingersoll's et al. (2018b) original 2003 study revealed that up to 50% of new teachers left within five years of joining the profession (p. 22). Newer studies, as documented in national longitudinal data, revealed that approximately 30% of new teachers leave teaching within the first five years of entry into the profession (Garcia & Weiss, 2019b, p. 13).

Wilson (2018) found that Career and Technical Education Teaching Pathway classes offered at the high school level for students interested in a career in education are a possible solution to the teacher pipeline shortage. Teacher pipelines indicate the students' trajectories through teacher certification (Valenzuela, 2017). Family Consumer Science and Human Services Department director, T. Struempf (personal communication, November 27, 2018), indicated a need for research regarding the Career and Technical Education Pathways for the Teaching Profession program and teacher recruitment and retention in the state that would help decrease the teacher pipeline shortage. Dan Brown, former co-director of the nation-wide Educators Rising

organization, stated, “Research on grow your own teacher programs is threadbare since until recently these programs have barely existed and have typically required individual teachers to patch together their own self-styled programs, with limited opportunities to do serious data collection” (personal communication, November 5, 2018).

### **Purpose of the Study**

The purpose of this study will be to determine how the implementation of grow your own programs such as Career and Technical Education Pathways for the Teaching Profession classes, and Homegrown Educators chapters affect perceived recruitment and retention rates of alumni teachers for a Midwestern state’s districts providing such programs. By gathering data regarding perceived recruitment and retention rates from qualifying school districts, strengths and weaknesses of the Career and Technical Education Pathways for the Teaching Profession programs and Homegrown Educators chapters will be identified. The data gathered will also determine how the teacher sponsors of Homegrown Educators chapters perceive the effectiveness of such programs for recruiting teachers into high demand subjects and geographic locations.

**Research questions.** The following research questions guided the study:

1. What are the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators chapter sponsors regarding grow your own programs on recruitment of alumni teachers?
2. What are the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators sponsors regarding grow your own programs on retention of alumni teachers?

3. How do the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educator sponsors in rural communities compare to their urban counterparts' perceptions of their programs regarding the success in recruiting students into teaching through grow your own programs?

4. What are the perceptions of Career and Technical Education Pathways for the Teaching Profession class teachers and Homegrown Educators chapter sponsors regarding whether the Midwestern state's grow your own programs result in an increased number of students interested in the teaching profession, including high needs areas such as math, science, and special education?

### **Significance of the Study**

According to the Midwest state's General Assembly report, Recruitment and Retention of Teachers in Public Schools in 2018, there were approximately 70,500 teachers in schools across the state. The Midwest state's General Assembly reported in December 2018 the following information:

- Through the school year 2015-2016, the percentage of first-year teachers who left the classroom with less than three years of teaching experience increased by 5.0 percent compared to just four years prior in 2012-2013.
- Through 2014-2015, the percentage of first-year teachers who left the classroom after five years of teaching experience increased by 1.9 percent compared to three years prior in 2012-2013.

The results of this study may be useful to district leaders as well as Homegrown Educators coordinators in understanding the effectiveness of high school classes and

teacher clubs currently offered in Midwestern public schools that encourage recruitment and retention of effective teachers. This study may also aid in the development of plans to implement these classes and clubs in other districts across the state.

### **Definition of Key Terms**

For the purpose of this study, the following terms are defined:

**Alumni teacher.** An alumni teacher is a teacher who graduated from a specific school district and returned to teach in that same school district (Sabo, 2017).

#### **Career and Technical Education (CTE) Pathways for the Teaching**

**Profession.** CTE Pathways for the Teaching Profession is a pseudonym given to the Midwestern state's grow your own teaching classes offered at the high school level for students interested in pursuing a career in education.

**Career technical education (CTE).** According to the National Center for Education Statistics (NCES) (2018): In accordance with federal law (the Carl D. Perkins Act of 2006), NCES defined career and technical education (CTE) as courses (at the high school level) and programs (at the postsecondary sub-baccalaureate level) that focus on the skills and knowledge required for specific jobs or fields of work. (para. 1)

**CTE teaching pathway.** The Kansas State Department of Education (2018) defined CTE Teaching Pathway as "a career cluster that covers the basics of teaching which can be applied to a range of education careers from elementary and middle level, to specific disciplines to community education and workforce training across the lifespan" (para. 2).

**Future teachers of America.** Future Teachers of America are state-based programs established in 1937, designed to serve as a recruitment organization for the teaching profession (Hamm, n.d.).

**Educators rising.** Educators Rising is a national network launched in 2015 to support existing grow-your-own efforts aimed at attracting and supporting high school students interested in becoming teachers (Phi Delta Kappa, 2016).

**Grow your own programs (GYO).** Valenzuela (2017) stated Grow Your Own teacher programs:

...help address teacher shortages, retention issues, and teacher diversity by engaging in a variety of strategies that aim to recruit teachers from local communities in hopes that the pool of candidates will increase in diversity and will be more likely to stay teaching in the community. (p. 1)

**Homegrown educators.** Homegrown Educators is a pseudonym given to the Midwestern state's grow your own program in this research study for the purposes of assuring anonymity.

**Novice teachers.** Novice teachers are preservice teachers and teachers with two years or less of teaching experience. (Riley & Sakimura, 2018)

**Recruitment.** According to Lazarev, Toby, Zacamy, Lin, and Newman (2017), successful recruitment by a district is a new hire who teaches for three consecutive years and earns non-probationary status, or tenure. For the purpose of this study, recruitment is defined as having been employed for one year and determined eligible for rehiring a second year.

**Retention.** According to Lazarev et al. (2017), retention is the duration of the employment of tenured teachers in years. For the purpose of this study, retention is defined as having remained employed by the same district for at least two years.

### **Delimitations, Limitations, and Assumptions**

The scope of the study was bounded by the following delimitations:

**Time frame.** Data were collected during the spring 2020 semester.

**Location of the study.** The study took place at a state Homegrown Educators conference and via email for any sponsor members who were unable to attend the conference. Qualifying school districts in this study are defined as districts that have a Career and Technical Education Pathways for the Teaching Profession program or Homegrown Educators chapter.

**Sample.** The sample included perceptions of sponsors of current Homegrown Educators chapters in a Midwestern state. The size is small because not all school districts in the Midwestern state have a Homegrown Educators chapter. The sample size increased the validity of the results (Fraenkel, Wallen, & Hunn, 2019). Fraenkel et al. (2019) suggested, “Researchers should try to obtain as large a sample as they reasonably can” (p. 102).

The following assumption was accepted:

1. The responses of the participants were offered honestly and willingly.

**Criteria.** The selected sample only included participants who were a Midwestern state Homegrown Educators sponsor. This study was a census of the population of teachers, all of whom were sponsors for Homegrown Educators in their district.

The identified limitations of this study include the following:

**Sample demographics.** Teachers considered for the study met the criteria of being a sponsor for a Homegrown Educator chapter in the Midwestern state. The qualifications for the study are specific to the Midwestern state's Homegrown Educator chapters; therefore, the results may not be generalizable to other states.

**Instrument.** The primary investigator created the data collection open-ended survey prompts as the qualifications for the study are specific to the Midwest state's Career and Technical Education Pathways for the Teaching Profession program and the Midwestern state's Homegrown Educator chapters, which will limit the generalizability of the results. The prompts were informed by the Midwest Marketing Brochure and Annual Report (2020, 2018) and Wilson (2018).

### **Summary**

Growing your own teaching programs are supported by research as a viable means of supplying prospective teaching candidates within a community (Midwest Marketing Brochure, 2020). Recruiting high school students to the teaching profession with grow your own programs has shown success in other states (Grow Your Own Teachers Initiatives Resources, 2018). In this chapter, the background of the study, theoretical framework, and statement of the problem were identified. The purpose of the study, which was to determine the Midwestern state's success in recruiting and retaining teachers by implementing Career and Technical Education Pathways for the Teaching Profession classes or Homegrown Educator chapters at high schools in the Midwestern state researched, and the research questions and hypotheses were presented. The significance of the study, delimitations, limitations, and assumptions, and the definition of key terms were also explained.



Chapter Two includes research literature on teacher shortages throughout the United States. A synthesis of literature regarding recruitment and retention efforts with a specific emphasis on grow your own program implementation and impact are presented in Chapter Two. The history of grow your own programs, including multiple variations throughout the nation, the success of their implementation, and what the future may hold regarding these programs are presented.

## Chapter Two: Review of Literature

The research informing the background of the study indicated the increased need in the United States school systems for high-quality educators (Reeves, 2018; Sack-Min, 2016; Sutchter, Darling-Hamond, & Carver-Thomas, 2016a). The high demand for teachers in certain certification areas has resulted in some states offering individuals emergency teaching credentials or allowing individuals to teach without credentials to have teachers in every classroom (Reeves, 2018). Replacing teachers is costly, thus retaining teachers could substantially reduce the cost districts are currently spending due to attrition (Sutchter et al., 2016a).

The purpose of this study was to determine the perceptions of Homegrown Educator sponsors on recruitment rates and retention rates for a Midwest state's districts providing Career and Technical Education Pathways for the Teaching Profession classes and Homegrown Educators chapters. Data regarding recruitment and retention rates from qualifying school districts were gathered and analyzed to determine the perceived strengths and weaknesses of the programs. The issue of high turnover rates in the teaching profession may have an alternative solution. The results of the study may contribute to identifying possible solutions to the increased turnover rates in the Midwestern state studied.

In the review of literature, examples of grow your own programs shown to be effective in recruiting and retaining teachers are described. Specific areas of interest regarding this topic include teacher shortages across the nation, recruiting and retaining teachers, and the value of grow your own programs in regard to recruitment and retention of effective teachers. Included in the literature review is the need for a solution to teacher

shortages occurring in the nation, the explanation of recruitment and retention strategies that are implemented in different states, and the description of various grow your own programs that fit the needs of districts throughout the United States. The framework for this study was viewed through the lens of job choice theory and the components of that theory over which school districts have control.

### **Theoretical Framework**

Prior research on teacher selection was from the administration perspective (Young et al., 1989). Researchers utilizing job choice theory assume that each applicant has all available knowledge for each job option and that selecting a school for employment is not random or haphazard but a thoughtful process where multiple factors and influences are considered about each organization in which the applicant could work (Engel & Cannata, 2015; Goff & Bruecker, 2017). The applicant's task is to compare options then choose the one that has the most significant utility for him or her personally (Schwab, Rynes, & Aldag, 1987). The focus of job choice theory has been on decisions applicants make and the influences of three separate theories within the overarching theory (Engel & Cannata, 2015).

The three sub-theories are objective theory, subjective theory, and critical contact theory (Behling et al., 1968). The objective theory of job choice theory is based on the idea that candidates want to have the best economic outcome by taking a job that is the most financially competitive, which includes salary, benefits, and location (Engel & Cannata, 2015). The subjective theory of job choice theory is focused on a candidate's perceived ability to provide satisfaction for emotional needs (Engel & Cannata, 2015).

Critical contact theory within job choice theory indicates that candidates are influenced by job expectations and requirements that are communicated by the initial contact with an organization, which could be within a student's own district while still enrolled in high school (Engel & Cannata, 2015). By clarifying a school's value proposition, that which specifically sets an organization apart, and building relationships, all staff members can influence students to consider becoming educators and returning to the district as an alumni teacher (Indiana Charter School Network, 2016). When current educators explicitly market teaching as a career to students, indicating the type of teachers the district needs, a pipeline of future educators is created (Indiana Charter School Network, 2016). Research findings reveal that relationships with supervisors and co-workers have a positive impact on job satisfaction (Homyamyen et al., 2017).

If multiple job openings are close in objective and subjective theories, applicants will choose a job based on critical contact elements (Engel & Cannata, 2015). The behaviors of those within organizations impact the decision of applicants, according to critical contact theory; therefore, the recruitment process should be planned carefully before trying to fill needed positions (Engel & Cannata, 2015). By marketing to applicants based on the three theories, specifically critical contact theory, school district leaders can gain access to the top applicants rather than filling vacancies with less sought-after applicants (Engel & Cannata, 2015).

### **Teacher Shortage**

The Seattle Times headlines in 2015 read, "Teacher shortage has schools in 'crisis mode'...", the San Jose Mercury News headlines in 2016 read, "California teacher shortage could get worse...", the Peoria Journal Star headlines in 2016 read, "School

districts of all sizes experiencing teacher shortages...” (as cited in Barth, Dillon, Hull, & Higgins, 2016, p. 1). Broadcast in headlines across the country was the struggle to attract and keep good teachers, especially in math, science, and special education (Barth et al., 2016; Ingersoll, Merrill, Stuckey, & Collins, 2018b; Partelow & Baumgardner, 2016; Sack-Min, 2016). In 2015, between June and November, there were over 330 articles covering teacher shortages in America (Sutcher, Darling-Hammond, & Carver-Thomas, 2016a, p. 1). Only two years earlier, there were only 24 such articles during the same time frame (Sutcher et al., 2016a, p. 1).

Turnover and attrition rates are higher for U.S. teachers than among educators in other countries (Darling-Hammond, Burns, Campbell, Goodwin, Hammerness, Low, McIntyre, Sato, & Zeichner, 2017). Not all states are equal in teacher shortages; turnover rates are the highest in the Southern region of the United States (16.7%) and the lowest in the Northeastern region of the United States (10.3%) (Carver-Thomas & Darling-Hammond, 2017, p. v). The northeast has lower turnover rates because they tend to offer higher salaries, smaller class sizes, and seemingly make more substantial investments in education (Carver-Thomas & Darling-Hammond, 2017). Shortages in the teaching profession are much higher than in other occupations (Garcia & Weiss, 2019b). A shortage is defined as “the inability to fill vacancies at current wages with individuals qualified to teach in the fields needed” (Sutcher et al., 2016b, p. 1).

Teacher shortages follow a cyclical pattern and have sharp declines during periods of economic downturns, most recently following the recession of 2008 and the slashing of school budgets; class sizes grew, many teachers received pink slips, and the teaching force declined by 45,000 (Barth et al., 2016, p. 4) following 2008 (Dee &

Goldhaber, 2017; Gill, 2017). Experts believed a struggling economy and a need to choose a higher paying career factor into whether students chose to teach as a career (Barth et al., 2016). The education field has faced teacher shortages at multiple points over the last half-century; both systemic and contextual factors have magnified this problem (Coffey, Putman, Handler, & Leach, 2019). Garcia and Weiss (2019a) reported that the teacher shortage makes it harder to build a strong reputation for teaching, thus perpetuating the shortage issue. A 2018 Phi Delta Kappan (PDK) Poll supported these findings by indicating that only 46% of parents would like their child to pursue a career in public education, down from 70% in 2009 (p. 7K).

With state leaders expecting all students to graduate ready for college and careers and the implementation of more rigorous standards, this is not the time for school districts to be facing teacher shortages (Barth et al., 2016). States across the country, including the Midwest, are introducing state task forces to address teacher shortages (Illinois State Board of Education, 2020; Indiana Department of Education, 2020; Missouri Department of Elementary and Secondary Education, 2020; Oklahoma State Department of Education, 2020). School leaders have been feeling a sense of urgency with the national shortage of approximately 110,000 teachers (Garcia & Weiss, 2019b, p. 2), which is partially due to an increase in the teacher attrition rate and partly due to a decrease in enrollment for teacher preparation programs. Enrollment rates in teacher preparation programs dropped 37.8% from 2008-09 to 2015-16 (Garcia & Weiss, 2019b, p. 5). In 2013-2014, eight states, including California, Illinois, Indiana, Louisiana, Michigan, Oklahoma, Oregon, and Pennsylvania, enrollment was less than half of what it was in 2008-2009 (Partelow & Baumgardner, 2016, p. 4).

Even though the number of individuals in teacher preparatory programs has declined, a positive statistic revealed by some researchers was students recently enrolling in teacher preparatory programs more often complete the program compared to former teacher preparatory students (Barth et al., 2016). This result did not hold true for the Midwestern state researched, the 2018 Title II Report indicated that the total number of students enrolled in a teacher preparatory programs in 2016-2017 was 8,265, up from 7,830 from the 2015-2016 school year, an increase of 5.6%. Unfortunately, the same 2018 Title II Report indicated the total number of students completing a teacher preparatory program in 2016-2017 was 3,868, down from the previous year by 1%.

In addition to a decline in enrollment in teacher preparatory programs, attrition rates for veteran teachers were increasing (Barth et al., 2016). The forthcoming retirement of the generation of baby boomer teachers will reduce the number of teachers as well as the average age of those in the teaching field, losing valuable mentors for teachers entering education (Coffey et al., 2019). To address the teacher shortage issue, at least five states have enacted legislation to provide incentives for retired teachers to return to teaching, some of these states are only offering incentives to those willing to work in areas with shortages (Aragon, 2018, p. 7). Of those five states offering incentives to retired teachers, two are in the Midwest (Aragon, 2018, p. 7).

According to the National Center for Education Statistics (Snyder, 2018), there are a projected 3.6 million public school teachers in the United States, only 1% lower than a decade prior (p. 18). The overall numbers indicate that the supply of teachers is remaining steady; but shortages continue to increase in specific categories as the student population continues to grow due to higher graduation rates, thus increasing the need to

offer more courses such as math and science (Barth et al., 2016; Ingersoll et al., 2018b). Two unnecessarily large factors that are weakening the educator pipeline is graduating too many of a particular kind of teacher, such as elementary teachers, and not enough of other types of teachers, such as math or science teachers (Cowan et al., 2016; Walsh, Putnam, & Lewis, 2018). Multiple studies indicated that subject-certified teachers improve student success, which is a necessary foundation to improve a child's educational outcome (Dee & Goldhaber, 2017; Podolsky & Sutchter, 2016). There will be 1.5 million teachers needed in the next 10 years (Sack-Min, 2016, p. 2). At the same time, the National School Board Association Center for Public Education reported a drop in the number of certified teachers in 20 states (Sack-Min, 2016, p. 6) projecting a need for approximately 300,000 new teachers expected by the year 2025 (Sutchter et al., 2016a, p. 3).

School districts of all sizes have teaching vacancies that go unfilled each year; there are even some statewide vacancy issues (Barth et al., 2016). For example, in California, three out of every four districts had a shortage of teachers, which undermined efforts to improve learning and to close the achievement gap by implementing new standards (Sack-Min, 2017, p. 1; Sutchter, Carver-Thomas, & Darling-Hammond, 2018). Leaders in those districts are resorting to hiring untrained teachers and substitutes with emergency credentials or no credentials at all (Carver-Thomas, & Darling-Hammond, 2017; Reeves, 2018; Sutchter, Carver-Thomas, & Darling-Hammond, 2018). In 2017, at least 12 states enacted legislation to decrease teacher shortages by providing exceptions to licensure requirements and alternatives to teacher preparation programs (Aragon, 2018, p. 5). Teacher shortages are found in specific states, subject areas, school levels,



economic levels, and race or ethnic backgrounds (Barth et al., 2016). In the All Star Staff 2018 report, “What Kind of Teachers are in Highest Demand,” 47 states reported a shortage in math (para. 5), 46 states reported a shortage in special education (para. 8), and 43 states reported a shortage in science (para. 11).

In 2017, legislation regarding research and data collection relating to teacher shortages was enacted in at least six states (Aragon, 2018, p. 3). Some of the legislation passed included requiring the members of Colorado’s Department of Education to examine teacher recruitment, preparation, and retention (Aragon, 2018). Colorado’s Department of Education and the Department of Higher Education had to prepare a plan to overcome teacher shortages (Aragon, 2018). Another legislative enactment required Oregon’s chief education office officials to research teacher supply and demand, then create a support plan for increasing the number of culturally diverse candidates in the education workforce (Aragon, 2018). The education office officials focused on recruiting highly qualified teachers to work in high-need subjects and schools (Aragon, 2018). Other states enacted legislation that gave state and local education officials the flexibility to create their own innovative, targeted recruitment strategies that included funding and other supports (Aragon, 2018).

High poverty public schools have the highest number of students, which transfers to a higher need for teachers, and both numbers continue to grow (Dee & Goldhaber, 2017; Ingersoll et al., 2018b). Turnover rates in Title I schools (schools that are receiving federal funds for low-income students) are 50% higher than non-Title I schools (Carver-Thomas & Darling-Hammond, 2017, p. v). In Title I schools, teachers of math and

science have turnover rates that are approximately 70% greater than in non-Title I schools (Carver-Thomas & Darling-Hammond, 2017, p. v).

A shortage of minority teachers was also a significant issue for school leaders in the United States (Ingersoll et al., 2018a). Students were found to be more ethnically and racially diverse, with nearly half of students in the nation considered to be a minority (Barth et al., 2016, p. 7). However, the diversity of the teaching force had not kept pace, as eight out of 10 teachers were white (Gill, 2017, p. 6). Goings, Brandeho, & Bianco (2018) contended that diversity in the teaching profession disrupted educational inequities. With all else being equal, teachers in schools with at least 25% of students being students of color are more likely to leave their careers in education than teachers in schools with a lower percentage of students of color (Carver-Thomas & Darling-Hammond, 2017, p. 24).

Turnover rates for teachers in schools with the largest concentrations of students of color are 70% higher than schools with smaller levels of students of color (Carver-Thomas & Darling-Hammond, 2017, p. v). Teachers who have less experience and, many times, significantly less training in education are often the teachers staffing schools with large numbers of students of color (Carver-Thomas & Darling-Hammond, 2017). Teachers of color positively affect students of color by holding them to higher expectations (Grissom & Redding, 2016). Teachers of color are less likely to refer students of color for special education or suspension, and more often recommend students of color for gifted and talented programs (Grissom & Redding, 2016).

Minority teachers can be positive role models and help students prepare to live in a multiracial society (Gill, 2017). Advocates have argued the importance of all students

having role models of their race or ethnicity among their teachers; unfortunately, minority teachers are more likely to leave the profession than white peers, approximately 50% more likely (Ahmad & Boser, 2014; Carver-Thomas & Darling-Hammond, 2017, p. 22; Grow Your Own Teachers Initiatives Resources, 2018). The Midwestern state in this research published a 2019 Teacher Workforce Report, which indicated that 93.2% of all the state's teachers were white.

Elementary and secondary students encounter few if any male teachers during their school careers, creating a significant issue considering the influence teachers have as mentors and role models (Ingersoll, Merrill, & Stuckey, 2018a). The Midwestern state's Title II Report (2018) showed that male enrollment in teacher preparatory programs in the state was only 1,719 in the 2016-2017 school year, up only 0.1% from the prior year. Female enrollment during the same year was 6,307, up 8.3% from the preceding year. The Midwestern state's 2019 Teacher Workforce Report indicated that only 21.5% of the state's teachers were male. Likewise, rural schools also have consistent vacancies to fill and struggle to attract and keep highly qualified teachers, often due to social and geographical isolation (Aragon, 2016; Dee & Goldhaber, 2017). The combination of decreased availability of educators and the increased demand placed on current teachers may lead to a crisis that threatens the public education system (Reeves, 2018).

### **Recruitment and Retention**

A well-functioning education system is dependent upon school leaders attracting and retaining effective educators (Podolsky, Kini, Bishop, & Darling-Hammond, 2016b). In education, data-driven instruction is vital in improving student outcomes, and

the same principles should be applied to talent recruitment and retention in schools (Indiana Charter School Network, 2016). This data-driven approach allowed schools to invest their resources better when recruiting and retaining teachers (Indiana Charter School Network, 2016).

To build robust teacher pipelines, and more importantly, maintain the pipelines, teaching must be seen as a respected profession to attract stronger candidates (Reeves, 2018). When schools create recruitment structures that involve as many employees as possible with a consistent year-round messaging of recruitment at school events, faculty meetings, and public events, stronger candidates are attracted to those schools (Indiana Charter School Network, 2016). One successful strategy in attracting and hiring local, diverse teachers is strong brand awareness (Indiana Charter School Network, 2016). Schools often focus on local marketing to recruit students and families, by utilizing brand awareness when attracting teachers, schools can recruit stronger teacher candidates (Indiana Charter School Network, 2016). To build brand awareness of the types of teachers wanted, school district personnel could utilize social media platforms, such as Twitter, Instagram, and Facebook, to directly market to those candidates (Indiana Charter School Network, 2016). Recruiting should not be just about attracting teachers to districts but being strategic about recruiting and retaining the teachers for subjects and schools who have the right qualifications, are best suited, and most needed (Barth et al., 2016; Sack-Min, 2016).

According to Carver-Thomas and Darling-Hammond (2017), approximately 8% of teachers leave the profession each year, which results in about 30% to 50% leaving within their first five years of teaching (Garcia & Weiss, 2019b, p. 13; Ingersoll et al,

2018b, p. 20). Educators who enter the career of teaching through alternative certification are 25% more likely to leave the profession (Carver-Thomas & Darling-Hammond, 2017, p. 25). Mathematics, science, and special education teachers are more likely to leave the profession compared to their elementary school teaching counterparts (Carver-Thomas & Darling-Hammond, 2017). The turnover rate of mathematics and science teachers was predicted to be 37% greater than that of elementary school teachers (Carver-Thomas & Darling-Hammond, 2017, p. 27). Special education teachers have a turnover rate 46% higher than that of elementary school teachers (Carver-Thomas & Darling-Hammond, 2017, p. 27).

Teacher turnover varies over states, regions, and districts, with about 45% of all turnover taking place in just one-fourth of the schools, mostly in urban and rural schools with high-poverty and high-minority students (Ingersoll et al., 2018b, p. 48). New teachers bring new energy and ideas to schools, but with fewer veteran teachers, the new teachers lose mentors and leaders who are a vital ingredient to teaching success (Ingersoll et al., 2018b). Over the past three decades, the teaching profession has increased in teacher turnover, both teachers who move to another school and those who leave teaching altogether (Ingersoll et al., 2018b). The highest turnover rates of those who leave the profession entirely are beginning teachers who leave within the five years of teaching (Ingersoll et al., 2018b). Due to this turnover, 23 states enacted teacher recruitment legislation to attract teachers to high-needs schools and subjects in 2017, including many Midwestern states: Arkansas enacted five teacher recruitment legislative bills; Illinois enacted three teacher recruitment legislative bills; Oklahoma enacted four teacher

recruitment legislative bills; and Tennessee enacted two teacher recruitment legislative bills (Aragon, 2018, p. 2).

The Midwestern's state 2018 General Assembly Report on recruitment and retention of teachers in public schools, supported these data for the Midwestern state described in this research. The data obtained from the teacher recruitment and retention report signified the percentage of first-year teachers in the Midwestern state who remain in the classroom after three years is roughly 63%, and after five years is approximately 35%. School district personnel struggling to recruit qualified teachers may end up with larger class sizes, hiring underprepared teachers with emergency credentials, and providing a less competitive hiring process (Partelow & Baumgardner, 2016).

School leaders who are attempting to increase teacher recruitment efforts across the nation are providing monetary incentives to transfer to high poverty districts; offering signing bonuses, scholarships or grants, or loan forgiveness for high needs areas such as math, science, and special education; promising college loan forgiveness; creating teacher residency programs; and providing housing assistance or access to teacher villages (Aragon, 2018; Aragon, 2016; Barth et al., 2016; Dee & Golhaber, 2017; Gill, 2017; Loewus, 2018; Podolsky et al., 2016b). In 2017, California proposed the Teacher Recruitment and Retention Act that would give teachers tax credits to help recoup the cost of earning a teaching degree (Gill, 2017). In addition, California teachers working in high-poverty schools would only pay half of their income taxes during their sixth through tenth years of teaching (Gill, 2017).

There were at least 14 states in 2017 that enacted legislation that provides financial incentives for educators to work in areas of shortage (Aragon, 2018, p. 6).

Several of the states that passed laws to provide incentives for teachers working in shortage areas were in the Midwest, including Arkansas, Oklahoma, Illinois, and Tennessee (Aragon, 2018). South Dakota launched an aggressive effort to recruit more individuals into the profession by adopting a statewide half-cent sales tax to be used to raise educators' salaries by an average of \$8,000 (Gill, 2017, p. 5).

Across the nation, school leaders are offering various monetary incentives, but researchers concluded that teachers are more likely to choose a preferred location and good working conditions over financial incentives (Barth et al., 2016). Employers offering incentives may recruit more teachers, but if not supported, those teachers will not remain (Barth et al., 2016). One example of efforts to increase retention included North Carolina's Teaching Fellows Program; the leaders of this program recruit talented high school graduates and provide them with an enhanced program of teacher preparation in exchange for a four-year commitment of teaching in that state (Podolsky, Kini, Bishop, & Darling-Hammond, 2017). The recipients of the scholarship had a higher rate of retention and were found to be more effective in the classroom than non-recipients (Podolsky et al., 2017).

Recruiting more candidates to attend college to become teachers had limited results because as high as 50% of student teachers do not start teaching the year after graduation (Cowan et al., 2016, p. 460). The student teaching experience is sometimes great, and sometimes it is not, which can deter some from entering the teaching profession before they have been hired (Walsh, 2018). Often student teaching was viewed as a professional responsibility, placing student teachers without considering the best fit for each classroom and mentor teacher (Walsh, 2018).

Mentoring student teachers and newly hired novice teachers should be considered an honor because veteran teachers are training the next generation of educators (Walsh, 2018). Mentor teachers should be carefully selected, high-quality teachers who show clear evidence of instructional effectiveness as well as the ability to mentor adults, specifically novice teachers (Walsh, 2018). Providing high-quality mentoring to novice teachers helps inexperienced teachers learn to teach more effectively in high-need schools (Carver-Thomas & Darling-Hammond, 2017). Mentoring that includes observation and feedback, collaborative planning time with colleagues, and a focus on high-leverage activities such as analyzing student work and discussing high-yield instructional strategies is the most useful to beginning teachers (Carver-Thomas & Darling-Hammond, 2017). Administrators should match the best prospective student teachers with the best cooperating teachers to provide a high-quality experience and increase the chance that those student teachers will return to be good educators for the same district (Walsh, 2018).

Finding top talent is especially difficult for rural district leaders, considering that most teacher-preparation programs are in urban areas, which provide a limited supply of highly effective teachers to rural districts (Lazarev et al., 2017; Sawchuk, 2018). An example of overcoming this obstacle was a grant received by the University of Northern Colorado for \$2.2 million to help incentivize rural high school students to enter the teaching field (Gill, 2017, p. 6). The University of Northern Colorado was expanding the Teacher Cadet program in rural schools and offering scholarships annually to 40 teacher candidates who worked in rural districts for at least two years following graduation (Gill, 2017).



These rural communities are also without big industries, which makes it hard for school leaders in rural districts to pass bonds or increase taxes, hindering funding for teacher salaries and further limiting opportunities to recruit quality teachers (Sawchuk, 2018). Ulferts (2015) stated, “Teacher recruitment efforts and retention woes add to the economic distress of rural schools” (p. 14). In 2017, researchers Riley & Sakimura (2018) asked a superintendent from a mostly rural state what the most important qualities were that his district was looking for when hiring a teaching candidate. The superintendent replied, “Do they have a heartbeat?” and “We also look at how many DUIs they have.” (Riley & Sakimura, 2018, para. 1). Riley & Sakimura (2018) indicated that the superintendent seemed passionate about providing high-quality teachers for his district’s students. The reality was that rural districts faced constant hiring challenges that often prohibited this option (Riley & Sakimura, 2018).

Although leaders in districts of all sizes deal with teacher attrition issues, Ulferts (2016) cited that rural schools with 300 or fewer students have the highest teacher attrition rate (para. 2). One source that may assist these communities is the federal Every Student Succeeds Act (ESSA), which provided low-income districts with additional monies to recruit and retain high-quality teachers (Podolsky et al., 2017). In addition, state leaders are allowed to target their investments to raise the quality of the educator workforce, all of which may help recruit teachers to rural districts (Lazarev et al., 2017; Podolsky et al., 2017). Because higher student outcomes are associated with longer retention rates of teachers, a student’s trajectory may have been negatively affected due to the limited supply of effective teachers who stayed long enough to make a positive

difference (Carver-Thomas & Darling-Hammond, 2017; Podolsky et al., 2017; Sawchuk, 2018).

If state policymakers offered a more mobile teaching licensing system, more candidates might be attracted to the profession; the current system does not necessarily transfer a teaching license from one state to another (Gill, 2017; Lazarev et al., 2017). Because states issue teaching licenses, it can be difficult for an educator to transfer across state lines (Gill, 2017). Teachers with military spouses move frequently and face license issues often (Gill, 2017). Students who enter college anticipating a mobile lifestyle are not choosing teaching as a career because the system could hinder their travel goals (Gill, 2017).

School recruiters' strategies are unfocused or nonexistent for most districts; utilizing critical contact theory, time and resources should be devoted to intentional recruitment beginning before students have graduated from college (Engel & Cannata, 2015; Gordon, Rath, & White, 2018; Lazarev et al., 2017). The challenge is not only the immediate concern of attracting talented recruits into the profession but also the crucial need to retain good teachers (Reeves, 2018; Tucker 2018). The executive director of Learning Forward Alliance, Hirsh, stated, "If we retain teachers we will not have to recruit as many." (as cited in Sack-Min, 2016, p. 2).

Not being able to retain existing teachers affects districts as much as the constant need to recruit new teachers (Podolsky, Kini, Bishop, & Darling-Hammond, 2016a). Teachers who leave the profession prematurely affect student learning and cost taxpayers a national price tag of up to \$7.3 billion a year (Garcia & Weiss, 2019a, p. 3). The average cost a district incurs to replace a teacher averaged about \$20,000,

depending on location (Carver-Thomas & Darling-Hammond, 2017, p. v; Garcia & Weiss, 2019a, p. 3). The Midwestern state's 2019 Teacher Workforce Report findings showed a large number of high-needs areas are filled with less-than-qualified candidates or not at all, including 65 special education positions, 38 science-related positions, and 22 math positions state-wide.

Teacher turnover is expected as educators find schools that are the best fit, making critical contact elements during high school even more important (Carver-Thomas & Darling-Hammond, 2017; Engel & Cannata, 2015). To attract better-qualified teachers, reduce overall recruitment and retention costs, and raise student achievement, district leaders need to identify and actively work to increase job satisfaction (Ulferts, 2016). Job satisfaction factors such as small class size, safe environments, and support from administration and community are high on teachers' lists (Ulferts, 2016). Retaining experienced, veteran teachers created a stable climate and most often contributed to higher student achievement (Barth et al., 2016).

Researchers indicated that relationships with students, which take time to develop, were equally crucial to high academic expectations (Wronowski, 2018). Unfortunately, the writers of the New Teacher Project of 2012 reported teachers who are building those relationships and having a positive impact on student learning are only remaining in teaching beyond five years at a rate of 53% (Wronowski, 2018, p. 550). The retention rate could be boosted by better teacher preparation, which, in turn, could decrease educator shortages (Sack-Min, 2016). Two options to increase teacher preparation were to develop teaching academies or to place student teachers in high-needs districts to help

expose future teachers to environments they may not otherwise encounter (Goff & Bruecker, 2017; Sawchuk, 2018).

Leadership was a crucial ingredient and was often a top reason why teachers remained or left the teaching profession because influential leaders develop effective teachers or remove ineffective teachers (Barth et al., 2016; Podolsky et al., 2016b). There were several low-cost strategies that schools could implement for higher retention rates, such as providing a robust support system that includes new teacher induction programs and assigning new teachers highly effective mentors (Barth et al., 2016). Building a community where teachers feel supported, valued, and inspired by ongoing professional learning is crucial to retention (Tucker, 2018).

### **Grow Your Own Recruitment Efforts**

The American College Test (ACT) surveys revealed that students' interest in teaching has fallen in the last few years (Croft, Guffy, & Vitale, 2018; Partelow & Baumgardner, 2016). An ACT report released in 2015 indicated only 4% of the 1.9 million United States high school students who took the test were interested in pursuing a career in education (Gist, Bianco, & Lynn, 2019). Therefore, another vital effort to recruit talented, prospective teachers included high school district leaders developing their own future teachers with grow your own programs that were designed to raise interest in the teaching profession (Indiana Charter School Network, 2016; Podolsky et al., 2017). If potential teachers have not had their interest sparked in the teaching field until college, it is most likely too late (Goings et al., 2019). Many grow your own programs start in high school and encourage high school students to return to their home

districts to teach once they complete college (Carver-Thomas & Darling-Hammond, 2017; Podolsky et al., 2017).

Gist et al. (2019) reported there were several comprehensive reports published over the past two decades that indicated there were more than 250 pre-collegiate grow your own programs in place in the United States (p. 6). The research on the success of grow your own programs is limited, and even the term is defined differently by various programs focused on building teacher pipelines; therefore there is no single program description that serves as a standardized model (Gist et al., 2019; Grow Your Own Teachers Initiatives Resources, 2018). Unfortunately, grow your own programs were sometimes discontinued due to inconsistent funding and leadership; however, there were grants for schools, districts, and postsecondary institutions to encourage the offering of introduction to teaching or education concurrent enrollment courses (Gist et al., 2019).

In 2017, legislation supporting CTE teaching pathways and grow your own programs were enacted in at least three states (Aragon, 2018, p. 3). For example, North Carolina created a state-specific Future Teachers of America program that encouraged high school students with good interpersonal and leadership skills, as well as strong academics, to consider a career in teaching (Aragon, 2018). The North Carolina legislation required that high school CTE teaching pathways classes to be offered as dual credit courses from state college partners (Aragon, 2018). Another example of specific state funding is Washington's Bilingual Educators Initiative that focused on recruiting, preparing, and mentoring bilingual high school students in hopes that they become future bilingual teachers (Aragon, 2018). Washington piloted the project in school districts where there is a rapid growth in the immigrant student population (Aragon, 2018). The

Washington legislation required eligible program participants to continue receiving support in college, including mentoring and loan forgiveness (Aragon, 2018).

Grow your own teacher preparation programs vary in structure and scope, yet all evolved from community efforts to address educational needs in schools across the nation (Coffey et al., 2019; Valenzuela, 2017). Grow your own programs recruit through pre-collegiate pathways or community-focused pathways (Carver-Thomas & Darling-Hammond, 2017; Gist et al., 2019; Valenzuela, 2017). Community-focused grow your own programs provide opportunities for adults to become certified teachers (Valenzuela, 2017).

One community-focused grow your own program originated in Illinois (Midwest Marketing Brochure, 2020; Valenzuela, 2017). In 2004 the Illinois state legislation designed a grow your own initiative to address the high teacher turnover rates in many of its underserved schools (Midwest Marketing Brochure, 2020; Valenzuela, 2017). This state initiative, intended to increase the presence of minority teachers in classrooms, is based on a desire to attract more educators with a cultural context and understanding of the students they teach (Midwest Marketing Brochure, 2020; Valenzuela, 2017). Unfortunately, in 2015, Illinois faced a budget crisis, leaving only one grow your own program standing (Valenzuela, 2017).

Community-focused grow your own teacher candidates are most often non-certified district employees who want to become fully certified teachers in their own hard-to-staff community school (Midwest Marketing Brochure, 2020). Community-focused grow your own recruitment incentive packages included financial aid, forgivable loans, and childcare assistance while candidates were completing their education and

certification requirements (Lazarev et al., 2017; Midwest Marketing Brochure, 2020).

Grow your own programs such as these helped supply classrooms with competent novice teachers who have strong ties to their community and want to give back to those communities (Midwest Marketing Brochure, 2020).

Some grow your own programs are focused on recruiting adults into the profession, but the most successful programs are those focused on recruiting high school students to the teaching profession (Grow Your Own Teachers Initiatives Resources, 2018). There are numerous teacher pipeline programs with the overall goal to stimulate high school students' interest in the teaching profession, ranging from after school clubs and summer courses to dual credit classes (Gist et al., 2019). Many of the grow your own programs started with a partnership with local universities that included dual credit courses in high school and pathways for paraprofessionals to obtain a degree, both of which created an awareness of teaching as a career choice (Coffey et al., 2019; Gist et al., 2019; Indiana Charter School Network, 2016).

Career and Technical Education programs offered during high school have workforce-practicum components embedded in the curriculum, making the programs the perfect pairing between high school academics and postsecondary preparedness (ACT, 2016). Colleges benefit from these partnerships because they create pipelines for the college teacher preparation programs (Gist et al., 2019). High schools benefit from partnerships with colleges and universities by gaining resources and opportunities for their students (Gist et al., 2019).

With the passing of the ESSA, there were measures integrating academics into CTE programs that ensured students were college and career ready upon high school

graduation (ACTE, 2016). Career and Technical Education programs, including Pathways for the Teaching Profession, offered students a way to participate by putting theory into practice (Eimers, 2017). CTE programs offered students the opportunity to explore career opportunities as well as learn relevant curriculum from caring adults who facilitate the learning (Eimers, 2017).

Most of the grow your own program information available was focused on specific grow your own programs across the nation such as Teacher Cadet, Education & Training, and Teachers for Tomorrow (Brown, 2018; Grow Your Own Teachers Initiatives Resources, 2018). South Carolina has a history of grow your own initiatives, some starting as early as middle school, which stemmed from a need to place teachers in many of its rural areas (Coffey et al., 2019). South Carolina's Teacher Cadet program, which has been in place for decades, resulted in almost 40% of its participants pursuing a career in education, many of them citing the program as a major reason they made their choice (Valenzuela, 2017, p. 6). Another successful grow your own program, Pathways2Teaching, intentionally focused on diversifying the teacher workforce by encouraging high school students of color to become teachers in their own communities (Goings et al., 2018).

Because many novice teachers entering education had a strong desire to give back to their communities, Pathways2Teaching helped students examine and critique the issues of schools so they could potentially become the kind of teacher their communities needed most (Goings et al., 2018). In their research of the best way to attract quality novice teachers to high-needs schools, Walsh, Putman, and Lewis (2015) stated that:



Direct observation and supervised practice in classrooms with teachers who have demonstrated their effectiveness in high-needs settings is essential to prepare teacher candidates for jobs made tougher by the obstacles poverty creates. This training is crucial for reasons other than skill-building. Too many graduates come out of teacher prep programs believing that they cannot hold children living in poverty to high standards. (2015, p. 26)

Coffey et al. (2019) found that grow your own programs focused on recruiting teachers for specific areas had high levels of success.

Recruitment for grow your own programs included career fairs, clubs, and teacher referrals with the specific intent of encouraging more students to enter the teaching field (Gist et al., 2019). When leaders recruit from within, districts may benefit; school personnel can offer clubs like Educators Rising and Future Teachers of America, classes, and volunteer opportunities for students who are aspiring to become teachers (Barth et al., 2016; Brown, 2018; Gill, 2017; Patterson, 2018). Educators Rising is a secondary and postsecondary school-based program that helps students explore teaching and connect with their peers across the country who are interested in the same educational issues and challenges (Educators Rising, 2020). Educators Rising is a free grow your own national membership organization (Educators Rising, 2020). There are more than 2,400 schools in 31 states that currently have Educators Rising chapters that support more than 43,000 students who are interested in becoming teachers (Educators Rising, 2020, para. 3). Leaders of Educators Rising nurture future teachers by helping students explore

the potential career of teaching through internships and coursework that is relevant (Ingersoll et al., 2018b).

Future Teachers of America is another student club that helps prepare future educators for the classroom, these clubs are state-specific sponsored organizations like Tennessee Education Association and Texas State Teachers Association, rather than a national organization like Educators Rising (Missouri Future Teachers of America, 2020; North Carolina Future Teachers of America, 2020; Tennessee Education Association, 2020; Texas State Teachers Association, 2020). Future Teachers of America allows students to become involved at the local, state, and national levels (Missouri Future Teachers of America, 2020; North Carolina Future Teachers of America, 2020; Tennessee Education Association, 2020; Texas State Teachers Association, 2020). Future Teachers of America clubs are established within middle or high schools and designed to provide opportunities for participation for students who are interested in education as a career (Hamm, n.d.). Future Teachers Association clubs in some states offer students the opportunity to participate in cadet teaching; in other states, cadet teaching is offered, but not in conjunction with any clubs (Arkansas Department of Education, 2020; Missouri Future Teachers of America, 2020; North Carolina Future Teachers of America, 2020).

Cadet teaching is a program designed to encourage high school students, who possess strong leadership and interpersonal skills, to enter the teaching profession (Arkansas Department of Education, 2020; Missouri Future Teachers of America, 2020; North Carolina Future Teachers of America, 2020). Cadet teaching gives students a chance to understand the teaching profession and to recruit them to return home as

alumni teachers (Arkansas Department of Education, 2020; Missouri Future Teachers of America, 2020; North Carolina Future Teachers of America, 2020). Cadet teaching provides students an opportunity to work in classrooms with the guidance of experienced, enthusiastic teachers (Arkansas Department of Education, 2020; Missouri Future Teachers of America, 2020; North Carolina Future Teachers of America, 2020).

Sabo (2017) reported that the most impactful factor in education is the teacher, as teachers can have an extraordinarily negative or positive impact on a child's life. Elementary, middle, and high school students across the United States need to be exposed to the power of teaching through teacher preparation partnerships (Coffey et al., 2019; Milner, 2018). Alumni teachers, teachers who return to teach in the district from which they graduated high school, impact the ideas and beliefs of the students, teachers, and parents they encounter because they are already invested in the community's culture and understand what the students may be facing (Sabo, 2017). Alumni teachers provide hope that graduating from high school, going to college, and getting a job are real possibilities because they were able to attain this goal (Sabo, 2017). Districts that perpetuate this practice encourage more students who may be thinking about becoming teachers to come back home to apply for teaching positions (Sabo, 2017).

Hiring decisions impact a district's learning environment for many years, grow your own programs can provide a way to represent a faculty's unique culture as well as offer a promise of a way to better one's circumstances (Sabo, 2017). Studies show that many teachers appear to have a strong preference for working in schools that are close to where they grew up (Lichtenberger, White, & DeAngelis, 2015). For example, Lichtenberger et al. (2015), indicated about 66% of Illinois' novice teachers taught within

20 miles of their former high school, about 80% lived within 30 miles, and about 90% lived within 60 miles (p. 15). The research revealed that for every three-mile increment a school was from their home, teachers were 40% less likely to apply at that school (Grow Your Own Teachers Initiatives Resources, 2018, p. 4). Studies also showed that teachers prefer a similar setting (e.g., urban, suburban) to that of the school they attended (Lichtenberger et al., 2015).

In the fall of 2017, Riley and Sakimura (2018) released a report based on their research highlighting the four essential building blocks for teaching; modeling, practice, feedback, and alignment, all of which could be introduced during high school grow your own classes long before enrolling in college and student teaching. Riley and Sakimura (2018) defined each essential building block:

Modeling means providing opportunities for novice teachers to observe effective pedagogy by expert educators. Practice means giving novice teachers frequent opportunities to practice specific teaching skills in a variety of settings. Feedback means giving novice teachers specific timely and actionable feedback on their instruction. Alignment in teacher preparation means that the arc of the preparation experiences novice teachers receive is coherent and structured rather than unrelated and disjointed. (para. 4 & 6)

Although grow your own programs may differ in emphasis, many have similar components, such as promoting the profession by working with younger students, providing college readiness skills, and experiencing college visits by prospective teachers (Grow Your Own Teachers Initiatives Resources, 2018). Other grow your own program activities include teacher appreciation days and teacher job shadowing experiences for

prospective teachers (Gist et al., 2019). Thoughtfully developed grow your own programs have the potential to recruit and prepare students as prospective teachers in middle and high school because these students can identify with the needs of their future students (Coffey et al., 2019).

When grow your own programs were well executed by strong leaders, rich opportunities were provided for aspiring teachers to gain experience in teaching with the assistance of veteran teachers (Brown, 2018). Grow your own pipeline funding sources need to come from multiple sources, including local, state, and federal levels, as well as colleges, to assure that the programs are maintained beyond initial implementation and sustain a database of successful pipelines (Gist et al., 2019). Until such funding becomes available, grow your own programs should organize across pipelines to share knowledge of their work and to offer successful innovations for recruiting future educators, which could potentially result in more funding of successful initiatives (Gist et al., 2019).

School district leaders may provide incentives, such as scholarships and stipends to offset teacher preparation courses, to students to come back to the district to teach after earning their degree (Bland, Church & Luo, 2014; Lazarev et al., 2017; Podolsky et al., 2017). These incentives are especially effective in rural and urban communities because most teachers want to teach where they grew up (Bland et al., 2014; Lazarev et al., 2017; Podolsky et al., 2017). Since teachers tend to teach in schools in or near their hometowns, local grow your own efforts have merit (Grow Your Own Teachers Initiatives Resources, 2018).

In addition to wanting to teach close to home, teachers most often choose to teach students with similar socioeconomic backgrounds and race to the students with whom

they attended school (Grow Your Own Teachers Initiatives Resources, 2018; Lichtenberger et al., 2015). The benefits of school leaders recruiting from similar racial backgrounds are that minority teachers have a positive effect on minority students' achievement, choice of high-level courses, college enrollment, and attendance (Grow Your Own Teachers Initiatives Resources, 2018). The possible adverse effect of recruiting from within low socioeconomic districts is that it could, in some cases, impact the quality of available candidates in lower-performing schools (Grow Your Own Teachers Initiatives Resources, 2018).

Grow your own recruitment efforts by school leaders are especially beneficial in rural, hard-to-staff districts because they help students become interested in a teaching career (Goff & Bruecker, 2017; Grow Your Own Teachers Initiatives Resources, 2018; Lazarev et al., 2017; Sawchuk, 2018). The development of homegrown teachers has begun to surface across the nation in response to the challenge to strengthen the teaching force with effective, well-prepared, diverse educators (Coffey et al., 2019; Lazarev et al., 2017). These grow your own programs, starting as early as middle and high school, utilize existing resources to attract and develop future teachers to meet the needs of their particular community (Coffey et al., 2019).

Rural district students could reap the rewards of such efforts; recent research indicated that novice teaching candidates from rural communities often seek rural teaching positions because they are already accustomed to that lifestyle and have ties to their community (Goff & Bruecker, 2017; Grow Your Own Teachers Initiatives Resources, 2018; Lazarev et al., 2017; Sawchuk, 2018). Teaching candidates from non-rural communities avoid these same districts because they are not accustomed to a rural

lifestyle, and those who accept a position in a rural district often leave after a short time (Goff & Bruecker, 2017; Grow Your Own Teachers Initiatives Resources, 2018; Lazarev et al., 2017; Sawchuk, 2018). Oklahoma, for example, would benefit from recruiting high school students into the profession because 70% of their districts are rural and employ two-thirds of the state's educators (Lazarev et al., 2017, p. 2). As stated, rural grow your own programs are often pre-collegiate programs; an example is South Carolina's Teacher Cadet program, which is state-funded and committed to the recruitment of homegrown, high-achieving students into rural school districts of the state (Valenzuela, 2017).

All good grow your own program leaders provide the opportunity to experience teaching (Brown, 2018; Valenzuela, 2017). The most valuable experience for any profession, especially teaching, is lived experience; with the support of governors, state legislators, and local and regional business leaders, an authentic teacher preparation approach would increase teacher recruitment and retention (Brown, 2018; GYO Collective, 2107). Allies for high school grow your own programs in both the private and public sectors could be vital to ensuring healthy workforce development initiatives (Gill, 2017; Wilson, 2018). All students deserve highly skilled, well-prepared teachers, which can be accomplished with strong grow your own programs, thoughtful policy to support these programs, and strong partnerships with the community that encourage new teachers to return home (Brown, 2018).

## **Summary**

The literature was reviewed regarding the theoretical framework used for the study, teacher shortages, recruitment and retention of teachers, and programs being

implemented to attract students to the teaching field. The theoretical framework chosen for this study was job choice theory (Behling et al., 1968), specifically the components of the theory that school personnel can control, such as critical contacts, while students are still forming their career goals. A description of the need for a solution to teacher shortages, the explanation of recruitment and retention strategies introduced in districts across the nation, and how various grow your own programs are implemented to help with the shortage problem followed the discussion of the framework.

Chapter Three includes the problem and purpose overview, the research design, population and sample, and instrumentation used in the research. Included in Chapter Three are descriptions of the data collection method and analysis of the data. A section on the ethical considerations is provided, and the chapter is concluded with a summary.



### **Chapter Three: Methodology**

Growing your own teachers is a viable means of creating a supply of quality teacher candidates to meet the needs within a local school community (Midwest Marketing Brochure, 2020). In particular, high school CTE Teaching Pathway classes are a possible solution to the teacher shortage (Wilson, 2018). This chapter includes the problem and purpose overview for this study, including the research questions. Detailed in this chapter are the research design, population, and sample. The instrument, the reliability and validity of the instrument, data collection, data analysis, and ethical considerations are provided to complete this chapter.

#### **Problem and Purpose Overview**

The problem to be addressed in the study is the substantial rate of teachers in the United States, including a specific Midwestern state, who leave the profession within the first five years (Carver-Thomas and Darling-Hammond, 2017). In 2018, the Midwestern state in this research reported that the percentage of new teachers in the state who continue teaching after three years is around 63%, and after five years is near 35%. In the Midwestern state, high school Career and Technical Education Pathways for the Teaching Profession classes are a possible solution to the teacher shortage (Wilson, 2018).

In this study, the implications of district teacher recruitment and retention for districts in the Midwestern state implementing high school Career and Technical Education Pathways for the Teaching Profession classes and Homegrown Educators chapters were researched. The purpose of this study is to determine if the successful implementation of high school Career and Technical Education Pathways for the

Teaching Profession classes and Homegrown Educators chapters increases the rate of retention and recruitment of teachers in districts providing the programs. The knowledge of the results of this study may benefit school district administrators trying to increase the number of students that become educators and ultimately return to teach in that district.

**Research questions. The following research questions guided this study:**

1. What are the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators chapter sponsors regarding grow your own programs on recruitment of alumni?
2. What are the perceptions of teaching pathway teachers and Homegrown Educators sponsors regarding grow your own programs on retention of alumni teachers?
3. How do the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educator sponsors in rural communities compare to their urban counterparts' perceptions of their programs regarding the success in recruiting students into teaching through grow your own programs?
4. What are the perceptions of Career and Technical Education Pathways for the Teaching Profession class teachers and Homegrown Educators chapter sponsors regarding whether the Midwestern state's grow your own programs result in an increased number of students interested in the teaching profession, including high needs areas such as math, science, and special education?

## **Research Design**

This research will consist of a direct administration of an open-ended survey to a group (Fraenkel et al., 2019). For a direct survey administered to a group, all (or most) members of a group are in one place at the same time gathered for a specific purpose (Avy, Jacobs, Irvine, & Walker, 2018; Fraenkel et al., 2019). The survey for this research was administered to all sponsor-members of the Midwestern state's Homegrown Educators group at the same time and the same place (Fraenkel et al., 2019). Some advantages of this type of survey were that it had a high rate of response and a low-cost factor (Avy et al., 2018; Fraenkel et al., 2019). Another advantage of a direct survey was the researcher had the opportunity to explain the study as well as answer any questions that the group members had (Fraenkel et al., 2019). A survey administered to a group was appropriate for this research because most of the districts' Homegrown Educators chapter sponsors were in attendance at the state Homegrown Educators conference (Fraenkel et al., 2019). For the research, survey results of a census were collected for the perceptual and quantitative research prompts (Avy et al., 2018; Fraenkel et al., 2019).

## **Population and Sample**

The total number of teachers in the Midwest state in 2019 was 70,578, according to the Midwestern state report. The Midwestern state reported that 33 districts in the state offered CTE Career Pathways for the Teaching Profession classes (T. Struempf, personal communication, March 1, 2019). The Midwestern state's Homegrown Educators affiliation reported that 21 districts offered a Homegrown Educators chapter (A. Jarrett, personal communication, February 18, 2020). The population for the study was Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown

Educators sponsors from the Midwestern state's school districts that participated in the Homegrown Educators organization. According to the Midwestern state's Homegrown Educators state coordinator, (A. Jarrett, personal communication, February 18, 2020), there were 21 district chapters of Homegrown Educators in the state, and 15 districts attended the 2020 state conference. The perceptual data were collected from the qualifying districts.

### **Instrumentation**

The primary investigator created the data collection prompts as the qualifications for the study are specific to the Midwestern state's Career and Technical Education Pathways for the Teaching Profession program and the state's Homegrown Educators chapters, which limited the generalizability of the results. The prompts were informed by:

- The Midwestern state's Department of Elementary and Secondary Education's report on teacher recruitment and retention (2018)
- Midwest Marketing Brochure's resource guide for grow your own programs (2020)
- Wilson's 2018 'How CTE Can Help Fill the Teacher Pipeline' article in ASCD's Express (Volume 13, Issue 8)

**Reliability.** The data collection tool was field-tested by a trial group of teachers, who were similar to the study's prospective respondents but not included in the study's population (Avy et al., 2018; Fraenkel et al., 2019). The members of the trial group were asked to provide feedback to ensure the prompts were easy to understand (Avy et al., 2018). The trial data collection tool also allowed for checking the data collection process

and making necessary adjustments before the tool was administered to the actual participants (Avy et al., 2018; Fraenkel et al., 2019).

**Validity.** The validity of the instrument was based on construct-related evidence, “which refers to the degree to which the totality of the evidence obtained is consistent with the theoretical expectations” (Fraenkel et al., 2019, p. 162). In this research, the theoretical expectations were to align with Behling et al.’s (1968) job choice theory, including the three embedded components of the theory: objective theory, subjective theory, and critical contact theory. This theory was articulated as it relates to education by Young et al. (1989).

### **Data Collection**

The first step in the process of participant recruitment for this research was to contact the Midwestern state’s Homegrown Educator coordinator, A. Jarrett, to determine if the proposed research topic was a viable option. Once IRB approval was obtained (see Appendix A), site permission was sought (see Appendix B) from the Midwestern state’s Homegrown Educator coordinator to administer the survey during the Homegrown Educator state conference held in the spring of 2020. Upon receipt of site permission from the coordinator of the Midwestern state’s Homegrown Educators, all sponsors attending the Homegrown Educator state conference were invited to participate in this survey (see Appendix C). Once the Homegrown Educators sponsors agreed to participate, they received the survey (see Appendix D). Any districts that had a Homegrown Educator chapter whose sponsors did not attend the conference were sent the survey via email utilizing the state Homegrown Educator listserv. All data gathered from

both the onsite surveys and the emailed surveys were combined into one set of data for analysis.

Historical data collected using this tool were utilized to obtain the total number of students who participated in the Career and Technical Education Pathways for the Teaching Profession program and Homegrown Educator chapters as well as the number of participating students who were ultimately hired by the district. Potential teachers and sponsors received a link to the survey that included the consent to participate, and the survey prompts. Once informed consent was obtained, the survey prompts populated.

An attempt was made to survey sponsors from districts of different sizes and geographical locations throughout the state. Standardized open-ended prompts for the survey were used for this study. Fraenkel et al. (2019) defined the standardized open-ended strategy as asking the same prompts of respondents, helping increase the response comparability.

### **Data Analysis**

The quantitative responses from the data collection tool completed by the affected districts were analyzed utilizing descriptive statistics, including percentage, mean, and median (Fraenkel et al., 2019). Results of the descriptive statistics indicated whether there was a difference in recruitment and retention of teachers who were involved with Career and Technical Education Pathways for the Teaching Profession programs or Homegrown Educator chapters in rural and urban districts (Fraenkel et al., 2019). Similarities and differences of the teachers' responses, by research question, were sorted and grouped into categories. These categories were used to determine common themes regarding the perceived effectiveness of Career and Technical Education Pathways for

the Teaching Profession programs and Homegrown Educator chapters (Roberts, 2018).

The use of this strategy allowed for the efficient comparison of the responses sought. Prompts in the surveys were asked in a positive, respectful manner and were not degrading to the participants (Fraenkel et al., 2019). The demographic data did not include any personal identification.

### **Ethical Considerations**

Approval by the Lindenwood University Institutional Review Board was granted for this study. Questions in the interviews were asked in a positive, respectful manner and were not degrading to the participants (Fraenkel et al., 2019). Personal or identifying information concerning the participants was not collected in the survey. The email addresses of participants were known only to the Homegrown Educators director, who emailed the survey to the Homegrown Educators sponsors who did not attend the conference where the survey link was initially distributed. Pseudonyms were used for the state, state grow your own program, and state teacher club to protect the identities of the population of sponsors surveyed for the study. There will be no information included in publications of this study that would lead to the identification of participants.

### **Summary**

This research involved a direct survey administered to a group. The information in this chapter consisted of the problem and purpose overview, research design, population and sample, and instrumentation used, including the measures taken to ensure reliability and validity of the instrument. A description of how these data were collected, the data analysis processes, and ethical considerations were also explained.

Chapter Four includes a description of the survey prompts and the demographics of the respondents to the survey. The four research questions are listed, followed by a full description of the results for each question. Comments from respondents found to be worthy of discussion, but beyond the scope of the research questions, are also included. A data set is presented for school districts to use when considering the possible addition of the Career and Technical Education Pathways for the Teaching Profession program.



## Chapter Four: Analysis of Data

This study was designed to explore how sponsors of a Midwestern state's Homegrown Educators chapters perceived the effectiveness of the current grow your own efforts in the state. Another purpose was to discover trends or themes in the implementation of grow your own programs in both rural and urban school districts. A quantitative method was selected for this study. Research questions were developed to obtain perceptions of rural and urban sponsors of the Midwest state's Homegrown Educators chapters, which were then categorized, sorted and reported as frequencies and percentages.

A survey of 18 prompts was created to answer the research questions for the study. Participants for the study were selected based upon their sponsorship of a Homegrown Educators' chapter. Respondents represented 71% of the population of the Midwest state's Homegrown Educators chapter sponsors. The surveys were given to 15 sponsors who were present at the state's Homegrown Educators conference and sent to the remaining six sponsors who did not attend the conference. Together a total of 21 surveys were administered throughout the state.

The survey included open prompts requiring a written response and prompts requiring the respondents to select from a set of options. Responses from the surveys provided quantitative data that were reviewed and analyzed utilizing descriptive statistics, including percentage, mean, and median. Open prompts, which respondents answered by entering a numeric answer, resulted in an analysis of the data by calculating the mean and median for each response. Prompts for which respondents selected a response from a set of options resulted in an analysis of data by calculating the percentages for each

selection. Open prompts for which respondents entered a written response resulted in the analysis and categorization of general themes that emerged.

This chapter contains the data collected from the surveys in order to answer the research questions. First, demographic information from the group of participants is presented. Next, each research question is posed, and corresponding data from the survey responses are provided to answer each prompt. Responses to open prompts that were not aligned to a research question, but were found worthy of discussion, follow the responses to the research questions. Finally, a summary of the chapter is provided.

### **Demographic Analysis of Survey Respondents**

Surveys were administered to respondents to collect demographic information from participants. The demographics gathered for each grow your own program included the number of years each type of program has been in place. Included in the demographics, were the number of years sponsors had served in their current role as well as the number of participants in the programs over a specified amount of time.

**Homegrown educators sponsor survey demographics.** Twenty-one sponsors from districts in the Midwestern state that offer either a Career and Technical Education Pathways for the Teaching Profession class and a Homegrown Educators chapter or a Homegrown Educators chapter only were invited to participate in this study. At the state conference, an in-person invitation flyer, which included a QR code and link to the survey, was distributed. At the end of the conference, there had been low participation by Homegrown Educators sponsors. Only 38% (8) of sponsors completed the survey during the conference. The conference participants received another invitation to participate in the survey via the state Homegrown Educators chapter mailing list, the day after the state

conference. Homegrown Educators chapter sponsors who had not attended the conference received an invitation to participate via email as well. The survey remained open for two weeks, which resulted in a 71% (15) response rate from the Midwest state's Homegrown Educators sponsors.

The sponsors of the Midwest state's Homegrown Educators chapters were prompted to indicate whether they served in a rural or urban district: 47% (7) of the respondents indicated they served in a rural district; 53% (8) of the respondents indicated they served in an urban district. Next, sponsors selected whether their district provided both Career and Technical Education Pathways for the Teaching Profession classes and Homegrown Educators chapters or only a Homegrown Educators chapter. All 15, or 100% of the sponsor respondents, indicated that their districts offered both Career and Technical Education Pathways for the Teaching Profession classes and Homegrown Educators chapters.

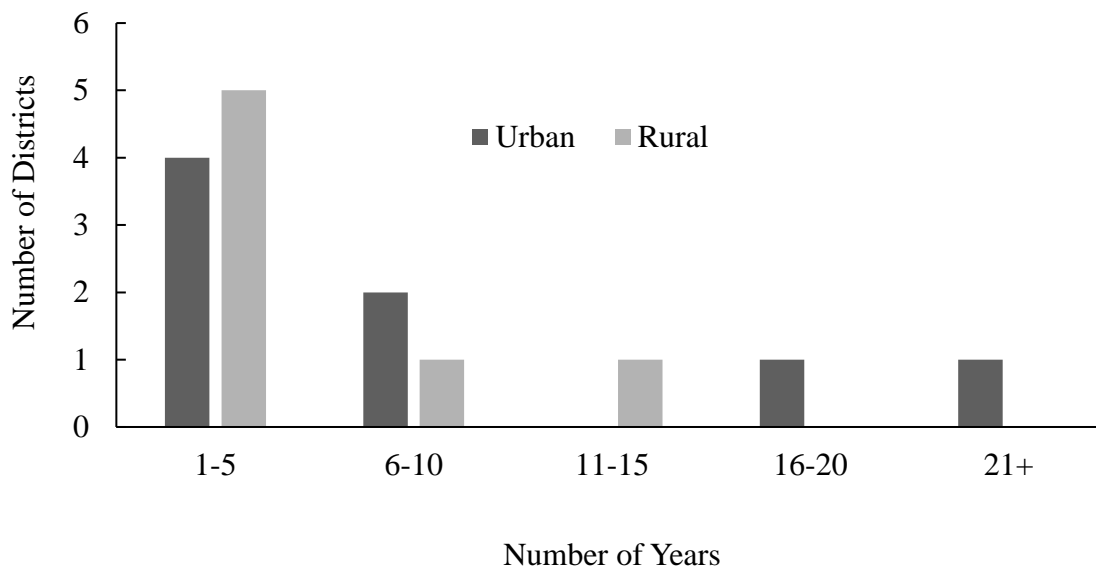
The total number of years a respondent who taught a Career and Technical Education Pathways for the Teaching Profession class and sponsored a chapter of Homegrown Educators ranged from one to 15 years per district (survey prompt 3). The median number of years of sponsors who taught a Career and Technical Education Pathways for the Teaching Profession class and sponsored a chapter of Homegrown Educators was four years. The mean number of years respondents taught a Career and Technical Education Pathways for the Teaching Profession class and sponsored a chapter of Homegrown Educators in their district was 5.6 years. In urban districts, the mean number of years the Homegrown Educators sponsors taught a Career and Technical Education Pathways for the Teaching Profession class and sponsored a chapter of

Homegrown Educators was 5.38 years. Rural district sponsors taught a Career and Technical Education Pathways for the Teaching Profession class as well as sponsored a chapter of Homegrown Educators a mean of 5.86 years.

The range of years of all responding districts having a Homegrown Educators chapter in place was two to 27 years per district (survey prompt 5). The median number of years of all responding districts having a Homegrown Educators chapter in place was four years. The mean number of years for all responding districts having a Homegrown Educators chapter in place was 7.73 years.

Urban districts having a Homegrown Educators chapter in place ranged from four to 27 years. The median number of years of urban districts having a Homegrown Educators chapter in place was five years. Urban districts' mean number of years sponsoring a Homegrown Educators chapter was 9.75 years.

Rural districts that had a sponsored Homegrown Educators chapter ranged from two to 15 years. The median number of years rural districts had a Homegrown Educators chapter in place was four years. Homegrown Educators chapters in rural districts had the program in place a mean of 5.43 years (see Figure 1).

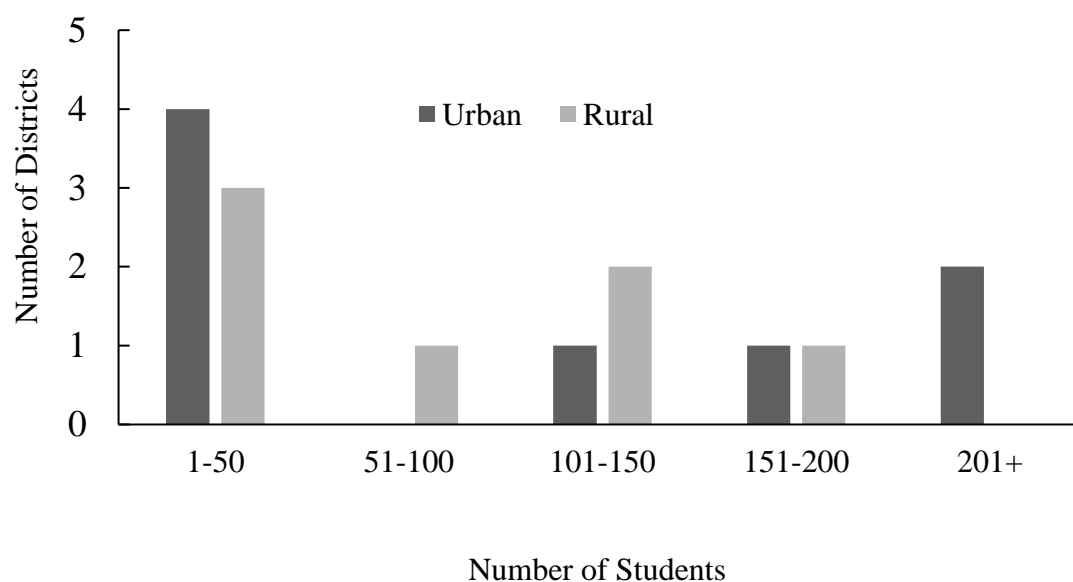


*Figure 1.* The approximated number of years Homegrown Educators chapters have been in both urban and rural districts.  $N = 15$ .

The approximate number of the Midwestern state students involved in a Homegrown Educators chapter over the past 10 years ranged from 12 to 500 students per district (survey prompt 6). The median number of students involved in a Homegrown Educators chapter over the past 10 years was 75. The mean number of students involved in a Homegrown Educators chapter over the past 10 years was 120.8 students.

The total number of students involved in an urban Homegrown Educators chapter over the past 10 years ranged from 20 to 500 students. The median number of students involved in an urban Homegrown Educators chapter was 80 over the timeframe. Urban Homegrown Educators sponsors' responses indicated the mean number of students participating in chapters over the past 10 years was 148.75 students.

Rural Homegrown Educators sponsors indicated the number of students participating in a chapter during the past 10 years ranged from 12 to 200 students. The median number of students involved in a rural Homegrown Educators chapter was 110 over the last 10 years. Collected data revealed the mean number of students involved in rural Homegrown Educators chapters over the past 10 years was 88.86 students (see Figure 2).



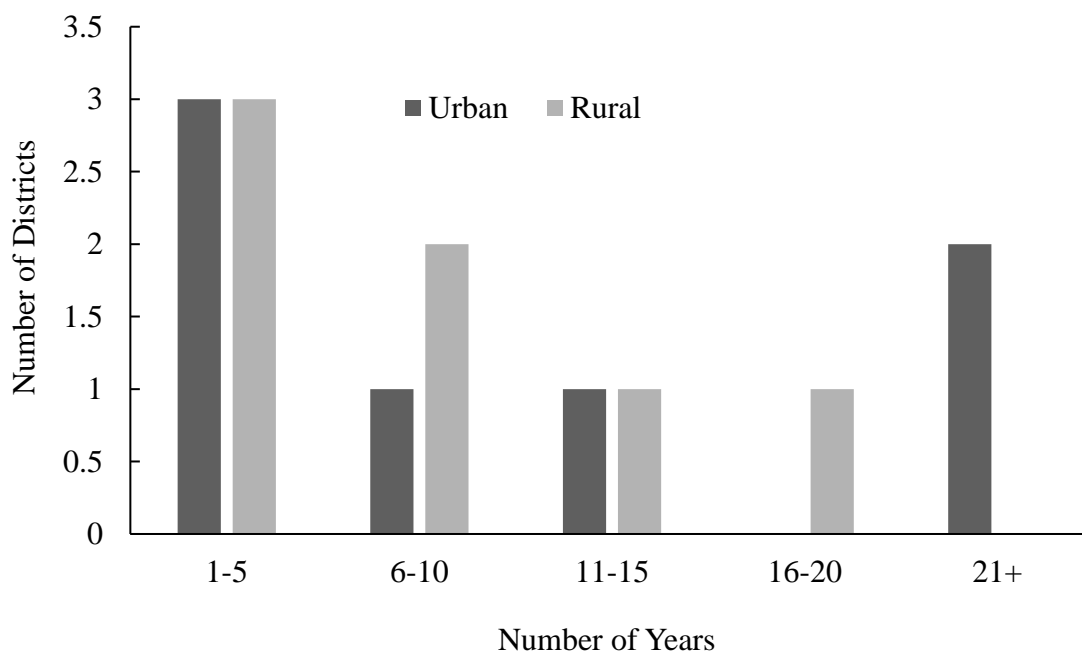
*Figure 2.* Approximate number of students involved in Homegrown Educators over the past 10 years.  $N = 15$ .

The number of years participating districts had a Career and Technical Education Pathways for the Teaching Profession class in place ranged from two to 30 years per district (survey prompt 7). The median number of years districts had a Career and Technical Education Pathways for the Teaching Profession class in place was 10 years.

The mean number of years districts had a Career and Technical Education Pathways for the Teaching Profession class in place was 11.13 years.

Urban districts had a Career and Technical Education Pathways for the Teaching Profession class in place in a range from two to 30 years. The median number of years urban districts had a Career and Technical Education Pathways for the Teaching Profession class in place was 13 years. The mean number of years urban districts had a Career and Technical Education Pathways for the Teaching Profession class in place was 13.25 years.

Rural districts had a Career and Technical Education Pathways for the Teaching Profession class in place ranging from two to 20 years. The median number of years rural districts had a Career and Technical Education Pathways for the Teaching Profession class in place was 10 years. The mean number of years rural districts had a Career and Technical Education Pathways for the Teaching Profession class in place was 8.71 years (see Figure 3).



*Figure 3.* Number of years both urban and rural districts have had a Career and Technical Education Pathways for the Teaching Profession class in place.  $N=15$ .

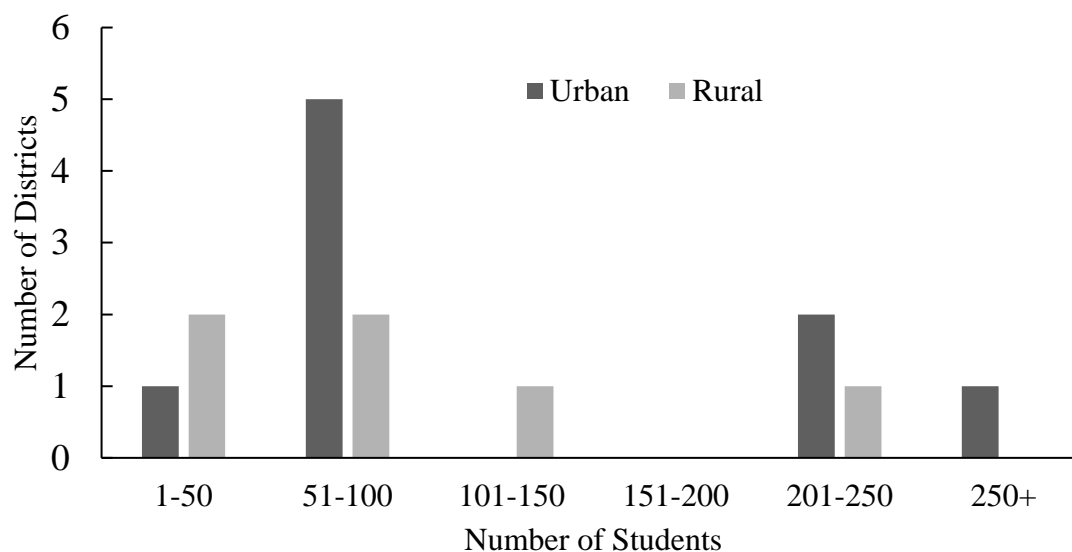
The total approximate number of students involved in a Career and Technical Education Pathways for the Teaching Profession class in the past 10 years ranged from 12 to 550 students per district (survey prompt 8). The median approximate number of total students involved in a Career and Technical Education Pathways for the Teaching Profession class in the past 10 years was 100. The mean number of students involved in a responding district's Career and Technical Education Pathways for the Teaching Profession class over the past 10 years was 142.8 students.

The total approximate number of students involved in an urban Career and Technical Education Pathways for the Teaching Profession class in the past 10 years ranged from 40 to 550 students. The median approximate number of total students



involved in an urban Career and Technical Education Pathways for the Teaching Profession class was 100. The mean number of students involved in an urban district's Career and Technical Education Pathways for the Teaching Profession class over the past 10 years was 178.75 students.

The total approximate number of students involved in a rural Career and Technical Education Pathways for the Teaching Profession class in the past 10 years ranged from 12 to 250 students. The median approximate number of total students involved in a rural Career and Technical Education Pathways for the Teaching Profession class in the past 10 years was 100. The mean number of students involved in a rural district's Career and Technical Education Pathways for the Teaching Profession class over the past 10 years was 142.8 students (see Figure 4).



*Figure 4.* Number of students enrolled in Career and Technical Education Pathways for the Teaching Profession classes over the past 10 years for both urban and rural districts.

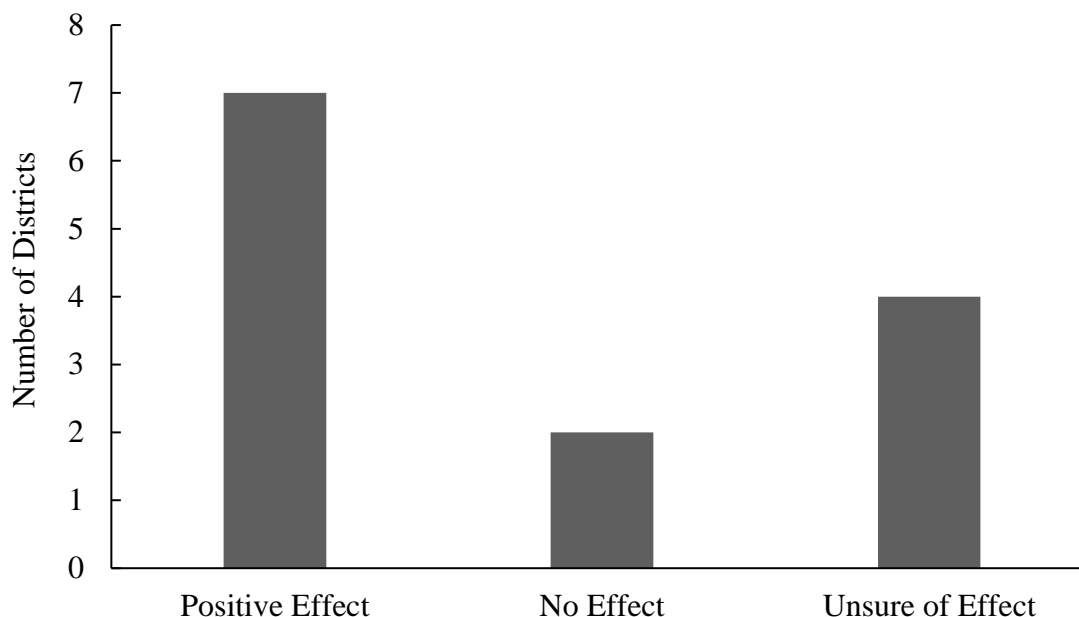
$N = 15$ .

**Research Question One**

*What are the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators chapter sponsors regarding grow your own programs on recruitment of alumni?*

In this study, sponsors first identified the number of students that had been in a Homegrown Educators chapter in the past ten years. The sponsors were then asked how many alumni teachers were hired in the past six years; this would include students that had been in the grow your own program, attended, and graduated from college, then become an employee at that district. Fifteen district sponsors answered the survey prompt relating to the number of years a grow your own program had been in place at their district (survey prompt 7). Ten, or 67%, of the responding sponsors indicated that a grow your own program had been in place in their district long enough to hire an alumni teacher, six years. Therefore, 10 districts were considered qualifying districts for the survey prompts relating to recruiting teachers.

Thirteen sponsors responded to the prompt relating their perception of the impact of grow your own programs on recruitment and hiring (survey prompt 14), seven sponsors replied that the grow your own programs had positively affected recruitment and hiring in their districts. Two respondents were unsure of the effects of their grow your own efforts in their district on recruiting and hiring; another four sponsors replied that they perceived the efforts had not shown any positive results. Some of the respondents who were unsure of the effect the grow your own program on recruiting and hiring indicated it was due to the limited number of years the program had been in place in their district (see Figure 5).



*Figure 5.* Sponsors perceptions of whether grow your own efforts in their district had a positive effect on recruiting and hiring.  $N = 13$ .

Thirteen Homegrown Educators sponsors answered the survey prompt indicating that alumni teachers had been hired in their districts in the past six years (survey prompt 12). There were 10 responding district sponsors who indicated that a grow your own program had been in place for at least six years (survey prompt 7). Of the 10 responding sponsors from districts with grow your own programs in place for at least six years, seven of the districts indicated that their districts had actually hired alumni teachers. Four of the seven districts that hired alumni teachers were urban districts, and three were rural districts. One of the six respondents who replied that their district had not hired any alumni teachers, expressly indicated that the reason was due to the limited number of years the program had been in place.

The seven districts that hired alumni teachers over the past six years, hired a range of zero to 30 alumni teachers in the past six years, which was 1% to 14% of the students who had been enrolled in the district's grow your own program, with an average hiring rate of 7%. The mean number of alumni teachers hired in the past six years in the 10 qualifying districts, indicated by the data collected from the responding sponsors, was 6.6 teachers. The median number of alumni teachers hired in qualifying districts in the past six years was three. Urban districts' administrators hired an average of approximately nine former grow your own program participants. Rural districts' administrators hired an average of approximately three former grow your own participants.

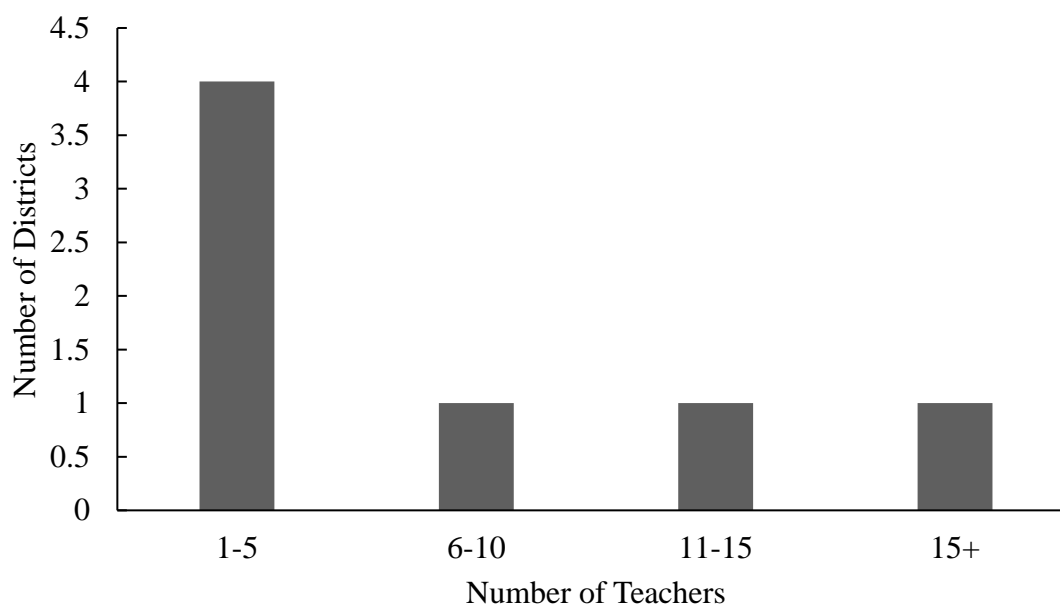


Figure 6. Number of alumni teachers hired in the past six years for all districts.  $N = 13$ .

## **Research Question Two**

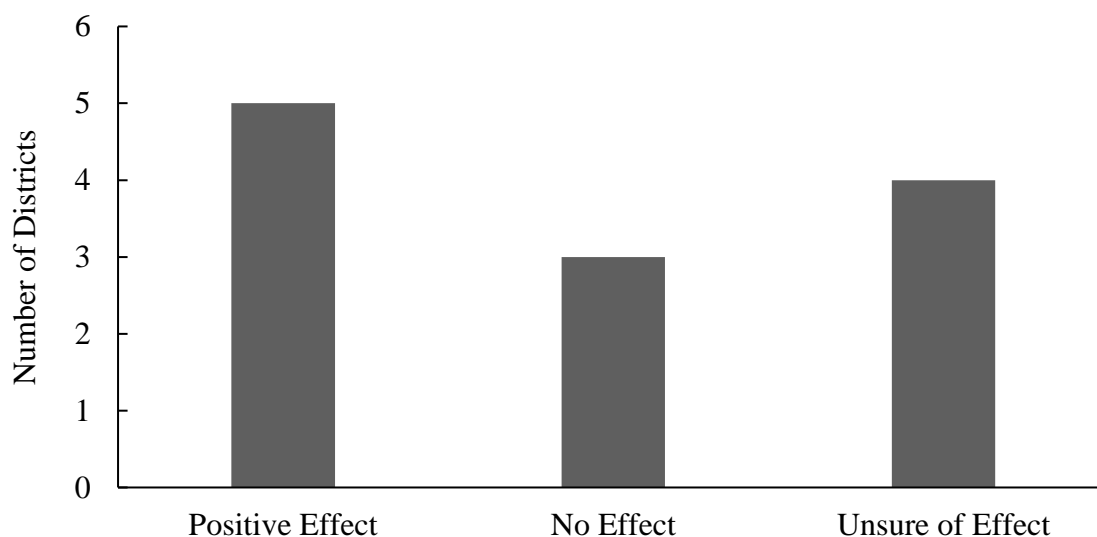
*What are the perceptions of teaching pathway teachers and Homegrown Educators sponsors regarding grow your own programs on retention of alumni teachers?*

Retention is a critical part of the teaching profession (Hanover, 2017; Reeves, 2018; Tucker 2018). Once alumni teachers have committed to returning to their home district it is important to have them remain (Hanover, 2017; Reeves, 2018; Tucker 2018). Survey prompts answered by sponsors of Homegrown Educators revealed the perceived effect of grow your own programs on alumni teacher retention.

Eight years was the number of years a program would need to be in place for an alumni teacher to graduate from college and return to their school district to teach for at least two years. In this study, sponsors identified the approximate number of alumni teachers who were hired and remained in the district for at least two years. Twelve district sponsors answered the survey prompt that asked if they perceived their grow your own program had a positive effect on retention in their district. Nine districts had a grow your own program in place for the required eight or more years, six urban districts, and three rural districts (survey prompt 7). Therefore, nine districts were considered qualifying districts for the survey prompts relating to retaining teachers. Six districts' grow your own programs were in place for less than the eight years required to hire alumni teachers that remained for at least two years, of those six districts, two were urban districts, and four were rural districts (survey prompt 7).

According to the data obtained, five, or 42%, of the respondents believed their grow your own program had a positive effect on alumni teacher retention in their district

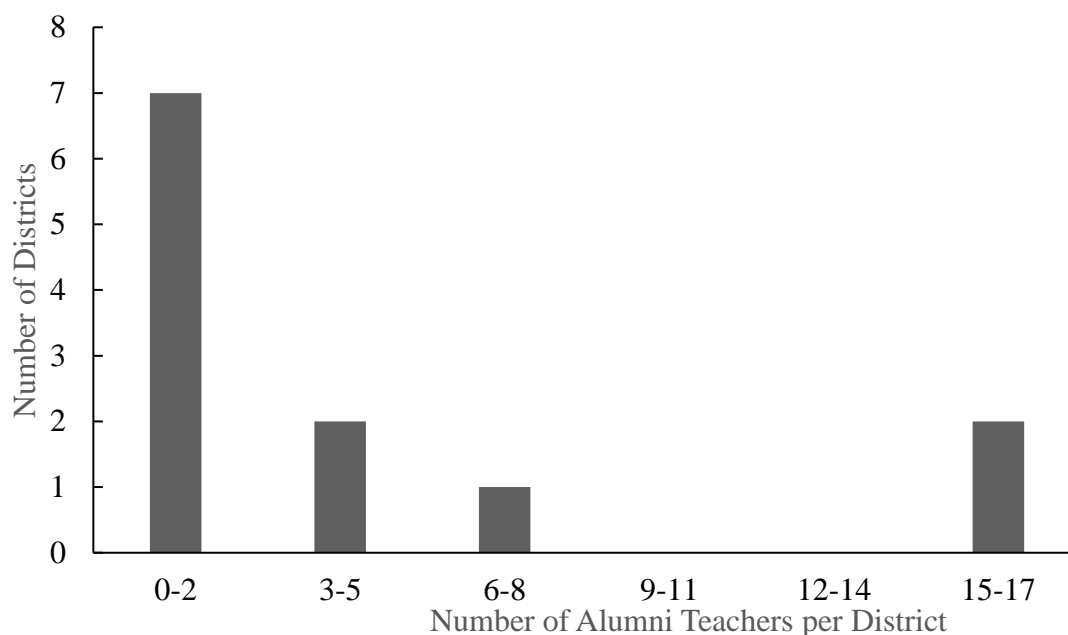
(survey prompt 15). Another three, or 25% of the respondents indicated that their grow your own program had no effect on the retention of alumni teachers. The remaining four, or 33%, were unsure of the effect of the program on retention of alumni teachers (see Figure 7).



*Figure 7.* Homegrown Educators sponsors perceptions of whether grow your own programs have had an effect on retention for their district.  $N = 12$ .

Twelve Homegrown Educators sponsors responded when asked if alumni teachers remained in their district for at least two years after their initial hire. Only nine of the 12 responding districts had a grow your own program in place for at least eight years, the number of years a program would need to be in place for grow your own student to graduate from college and return to their school district to teach for at least two years. The range for the number of alumni teachers remaining in their home district after two

years of employment was zero to 15 teachers per district (survey prompt 13). The median for the number of alumni teachers who remained in their home district after two years for qualifying districts was three teachers. The mean number of alumni teachers remaining in qualifying districts after two years for urban districts was 6.8 and for rural districts, 4.7. The mean number of alumni teachers across all qualifying districts was 6.1 teachers who remained in their district for at least two years (see Figure 8).



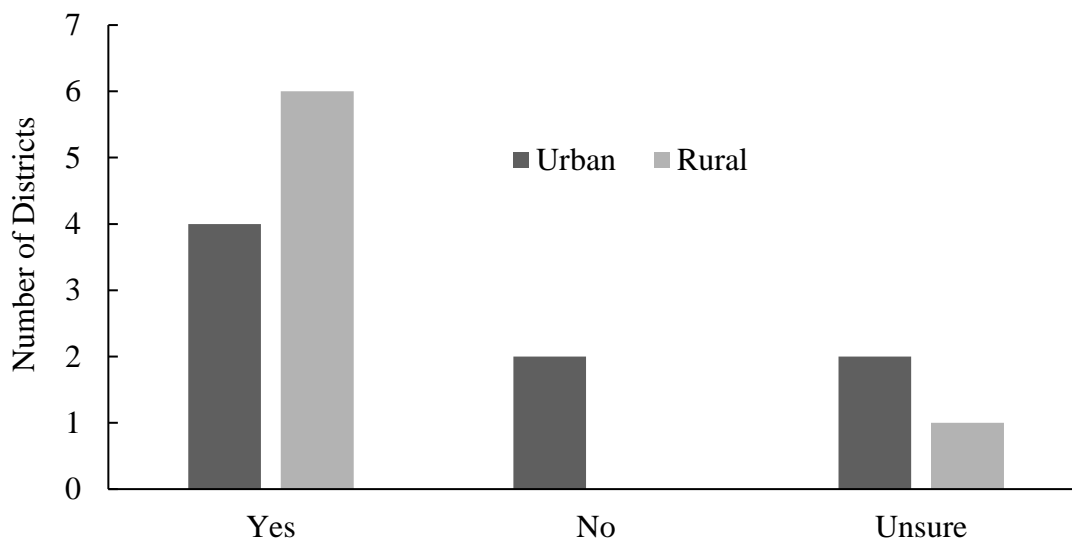
*Figure 8.* Number of alumni teachers who remained in hiring district for at least two years.  $N = 12$ .

### **Research Question Three**

*How do the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educator sponsors in rural communities compare to their urban counterparts' perceptions of their programs regarding the success in recruiting students into teaching through grow your own programs?*

Grow your own programs across the nation have been implemented in an effort to recruit more students into the field of education (Coffey et al., 2019). Fifteen Homegrown Educators sponsors responded to the survey prompt regarding an increase in student participation since the implementation of a grow your own program. Ten of the 15 Homegrown Educators sponsors indicated that the number of students had increased since the initial implementation of their grow your own program (survey prompt 9). Two sponsors responded that the program had not increased in numbers since it began and three were unsure if the numbers had increased since beginning the program. Four, or 50%, of the urban Homegrown Educators sponsors responded that student participation had increased since the program began. Twenty-five percent of the urban sponsors did not indicate growth in participation, and the other twenty-five percent of the urban sponsors responded that they were unsure if the participation had increased. Six, or 86%, of the rural Homegrown Educators sponsors indicated an increase in student participation since the program started. Only one rural sponsor was unsure if the number of participants had increased since the beginning of the program (see Figure 9).





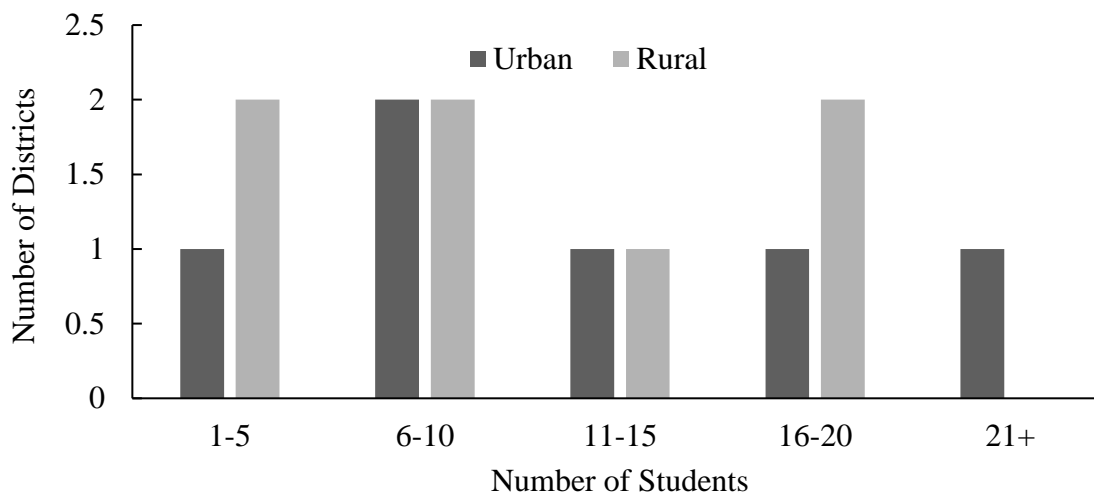
*Figure 9.* Perception of Homegrown Educators sponsors on increased participation in program since it began.  $N = 15$ .

One way to determine the success of a grow your own program focused on increasing the number of teachers in the workforce is by analyzing the number of students who intend to enter college to become an educator after participating in the program (Coffey, 2019; Valenzuela, 2017). Data were collected from district sponsors regarding the approximate number of current students in the grow your own programs intending to attend college to become a teacher, and upon graduation, return to their home district to teach. Fourteen Homegrown Educators sponsors responded to the survey prompt requiring the approximate number of students that intend to enter college to become a teacher. The range of the number of students intending to enter college to become a teacher and return to their district to teach was one to 30 per district according to the Homegrown Educators sponsors (survey prompt 10). The median number of

students participating in the Midwest state's grow your own programs who were college-bound to become an educator was 10. The mean number of students in grow your own programs who intended to enroll in college to become a teacher was 12.

Urban grow your own program sponsors indicated that a range from four to 30 of their current students planned to attend college with the intent to become a teacher. The median number of urban grow your own program students intending to go to college to become educators in their home districts was 10. The mean number of urban grow your own program students intending to go to college to become a teacher in their home districts was 13.29 students.

Rural districts had a range of one to 20 current students per district who indicated they would be attending college to become a teacher. The median number of rural grow your own program students intending to go to college to become educators in their home districts was eight. The mean number of rural grow your own program students intending to go to college to become teachers in their home districts was 10.71 students (see Figure 10).



*Figure 10.* Approximate number of students in grow your own program who intend to enroll in college to become a teacher then return as an alumni teacher.  $N = 14$ .

Another key to determining the success of a grow your own program is analyzing the number of students who actually entered college to become an educator after participating in a grow your own program (Coffey, 2019; Valenzuela, 2017). Fourteen Homegrown Educators sponsors responded to the prompt approximating the number of students who had actually entered college to become a teacher in the past six years. The total number of grow your own program students who entered college to become a teacher in the past six years from all districts combined was 482 students, ranging from zero to 150 students per district (survey prompt 11). The median number of grow your own program students who entered college to become educators was 13. The mean number of grow your own program students who entered college with the intent to become a teacher was 34.43 students.

Urban grow your own program students who entered college to become an educator in the past six years ranged from zero to 150 students per district. The median for the same group of urban grow your own students was 40 students. The mean number of urban grow your own program students who enrolled in college to become a teacher was 54.71 students.

Rural grow your own program students who entered college to become an educator in the past six years ranged from zero to 50 students. The median for the same group of rural grow your own students was eight students. The mean number of rural grow your own program students who enrolled in college to become a teacher was 14.14 students (see Figure 11).

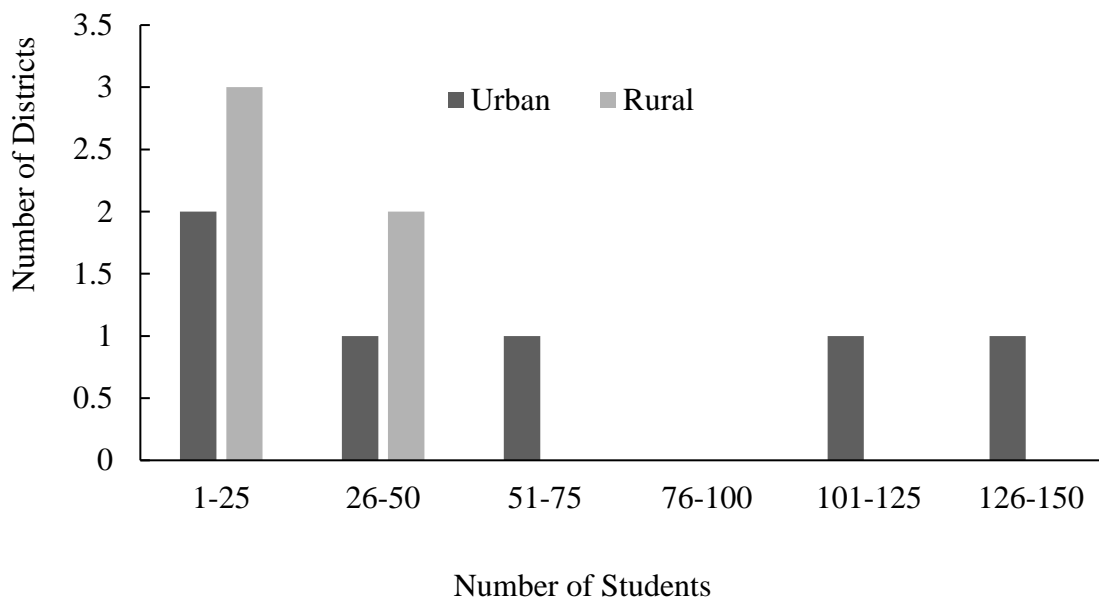


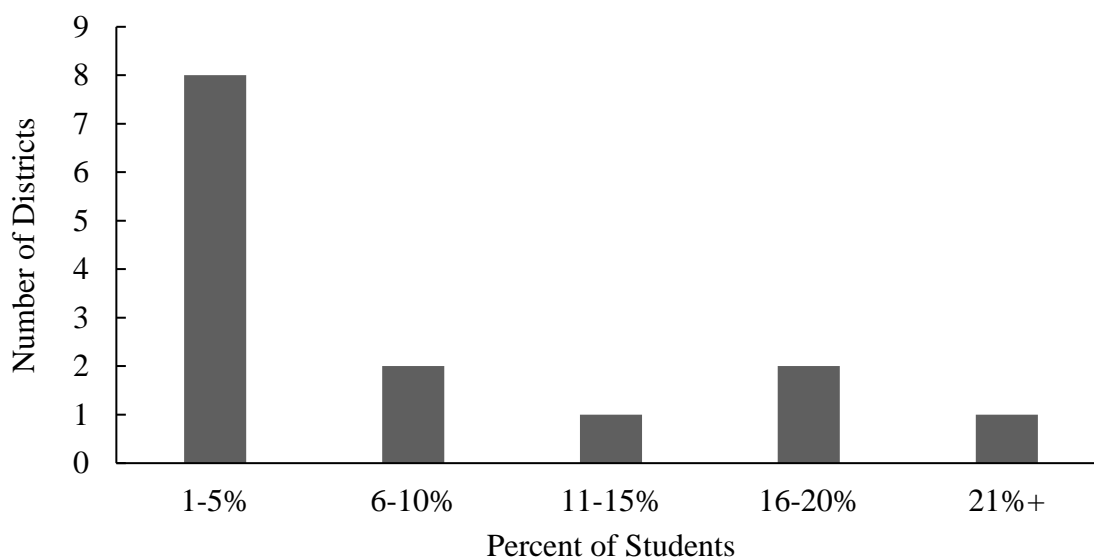
Figure 11. Approximate number of students who participated in a grow your own program and enrolled in college to become a teacher in the past six years.  $N = 14$ .

#### Research Question Four

*What are the perceptions of Career and Technical Education Pathways for the Teaching Profession class teachers and Homegrown Educators chapter sponsors regarding whether the Midwestern state grow your own programs result in an increased number of students interested in the teaching profession, including high needs areas such as math, science, and special education?*

Revealed in the data collected, over the past six years approximately 482 students in the participating Midwestern state's grow your own programs entered college with the intent to become a teacher. Sponsors of the state's Homegrown Educator chapters responded to survey prompts about perceived student interest in high needs teaching areas such as math, science, and special education. Fourteen Homegrown Educator

sponsors responded to the survey prompt regarding student interest in high needs teaching areas with a range of 0-20 students per district (survey prompt 16). The percent of students currently in the surveyed Midwestern state's grow your own programs interested in a high needs teaching area was approximately 8%. Homegrown Educator sponsors reported that they emphasized the benefits of selecting one of these areas for certification, including increased job availability and student loan forgiveness (see Figure 12).



*Figure 12.* Percent of students interested in high needs teaching positions (math, science, special education).  $N = 15$ .

The following are comments from respondents that were found to be worthy of discussion but beyond the scope of the research questions. Homegrown Educators sponsors were asked two additional prompts. First, the respondents were prompted to list changes that could be made in grow your own programs to improve teacher recruitment

and retention in their districts (survey prompt 17). Three trends emerged from their responses; those trends related to increased marketing, providing incentives, and a better overall plan for grow your own programs.

Some of the statements made by the sponsors related to increased marketing were: “get it marketed to students who want to teach at the secondary level,” “more district involvement, not just teacher/student,” “we need central office to take an interest,” “more awareness within the district about the class and club,” and “more marketing for pre-teacher classes.” The comments made by sponsors related to providing district incentives included: “scholarships/guarantee of interview,” “letter from human resource department or a former principal/teacher while students are in college to encourage students to stay with an education major, forming a strong connection with their home district,” and “develop a contract system, like a guaranteed interview if the program was completed.” Sponsors replied with comments about a better overall plan for grow your own programs. Some of the comments included: “incorporating more competition events into the class could help students really understand all the aspects of teaching” and “we need a better plan in place in our district.”

Second, Homegrown Educators sponsors of grow your own programs were asked if there was anything else they would like to express about grow your own programs related to recruitment and retention (survey prompt 18). Three themes emerged from the responses to this prompt; district incentives and support, state and local consistency, and positive outcomes. The first theme, district incentives and support, that emerged from the comments from the Homegrown Educators sponsors included comments such as: “getting the HR department to offer an incentive for going through the program/club would be

helpful in recruiting teachers” and “the best way to encourage teachers to work in a district is to make sure they are well supported.” The second theme that emerged from the open-ended prompt posed to sponsors was state and local consistency. The comments that were included in this theme were: “smaller class sizes are threatened when districts put a 10 or 15 student class minimum” and the need for “state consistency.” The third theme that emerged from grow you own program sponsors was positive outcomes from the programs. Sponsors’ comments that supported the theme were: “great opportunity to learn about the teaching career” and “it’s amazing and so important!”

### **Summary**

This chapter included a description of the survey prompts, and the demographics of the respondents to the survey were identified. Each of the four research questions was listed, followed by a full description of the results for each question. Comments from respondents that were found to be worthy of discussion but beyond the scope of the research questions were also included.

Chapter Five includes a summary of the findings. Conclusions for the findings are also described in Chapter Five. Lastly, based on the findings and conclusions, implications for practice and recommendations for further research are identified in Chapter Five.



## **Chapter Five: Summary and Conclusions**

This study was designed to gather data from Homegrown Educators sponsors in a Midwestern state to determine the perceived effect of the implementation of grow your own programs on recruitment and retention rates in their districts. The grow your own programs referenced in the study included Career and Technical Education Pathways for the Teaching Profession classes and Homegrown Educators chapters from a Midwestern state. The study was also designed to determine the differences in perceptions of urban and rural sponsors of Homegrown Educators regarding effectiveness on recruiting and retaining alumni teachers. Additionally, the study was designed to gather grow your own program sponsors' perceived effectiveness on recruiting students into teaching high needs subjects, such as mathematics, science, and special education. The data for this research study were collected through surveys administered to sponsors of Homegrown Educator chapters in the Midwestern state. Homegrown Educator chapter sponsors from 21 accredited public K-12 school districts and career tech centers throughout the state were sent the survey and invited to participate in the study.

In this chapter, the findings of the study are summarized. Conclusions are presented and organized around the research questions. Implications for practice and recommendations for future research are presented. Lastly, a summary of the entire paper concludes the chapter.

### **Findings**

Statistical analyses of the data were completed and presented in Chapter Four. Findings from the data analyses are organized by research question. Findings in the form of trends and themes are presented.

**Research question one.** *What are the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators chapter sponsors regarding grow your own programs on recruitment of alumni teachers?*

Six years was the minimum number of years a grow your own program would need to be in place for a grow your own student to graduate college and return to the district to teach. In this study, sponsors identified the number of alumni teachers who were hired in the past six years. Fifteen district sponsors answered the survey prompt relating to the number of years a grow your own program had been in place at their districts. Sixty-seven percent of the responding sponsors indicated that a grow your own program had been in place in their districts long enough to hire an alumni teacher.

Thirteen sponsors responded to the prompt relating their perception of the impact of grow your own programs on recruitment and hiring. Fifty-four percent of the sponsors replied that their grow your own program had positively affected recruitment and hiring in their districts. Fifteen percent of the respondents were unsure of the effects of the grow your own efforts in their districts on recruiting and hiring. Some of the respondents who were unsure of the effect the grow your own program had on recruiting and hiring, explicitly stated this was due to the limited number of years the program had been in place in their districts. Another 31% of the sponsors replied that they perceived the grow your own program had not shown any positive results on recruitment or retention in their districts.

Respondents were asked to indicate if alumni teachers had been hired in the past six years; thirteen Homegrown Educators sponsors responded to this prompt. Seventy

percent of the sponsors from districts with grow your own programs in place for at least six years indicated that their districts had hired alumni teachers. Four of the seven districts that hired alumni teachers were urban, and three were rural.

Thirteen Homegrown Educators sponsors answered the survey prompt identifying the approximate number of alumni teachers hired in their districts in the past six years. Homegrown Educators sponsors responded that there were approximately 12 to 550 students enrolled in grow your own programs over the past 10 years. Sponsors in districts that had hired alumni teachers indicated that their districts' administrators had hired a range of 2-30 alumni teachers in the past six years. The seven districts that hired alumni teachers hired from 1% to 14% of the students who were enrolled in the district's grow your own program, with an average hiring rate of 7%. The mean number of alumni teachers hired in the past six years in the 10 qualifying districts, indicated by the data collected from the responding sponsors, was 6.6 teachers. The median number of alumni teachers hired in qualifying districts in the past six years was three.

The prompts allowed sponsors the opportunity to include other important information regarding the hiring of alumni teachers in their district. Two main themes emerged from the comments that were included in the data collected. The first theme that emerged was the need for better marketing by district employees to increase the awareness of grow your own programs. District employees, other than Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators sponsors, should first understand the purpose of the program then use that understanding to promote the program to students throughout the district. The second

theme that emerged from the collected data was a need to for districts to provide incentives for grow your own program participants to return as alumni teachers.

**Research question two.** *What are the perceptions of teaching pathway teachers and Homegrown Educators sponsors regarding grow your own programs on retention of alumni teachers?*

Eight years was the number of years a program would need to be in place for an alumni teacher to graduate college and return to the district to teach for at least two years. In this study, 15 sponsors completed the survey. The sponsors identified the approximate number of alumni teachers who were hired and remained in the district for at least two years. Nine districts had a grow your own program in place for the required eight or more years, six urban districts, and three rural districts. Six districts' grow your own programs were in place for less than the eight years required to hire and retain alumni teachers for at least two years. Of the six districts without programs in place for at least eight years, two were urban districts, and four were rural districts.

Twelve district sponsors answered the survey prompt asking whether they perceived their district's grow your own program had a positive effect on retaining alumni teachers. According to the data obtained, 42% of the respondents believed their grow your own program had a positive effect on alumni teacher retention in their district. Another 25% of the respondents indicated that their grow your own program had no perceived effect on retention of alumni teachers. The remaining four, or 33%, were unsure of the effect of the program on retention of alumni teachers.

Twelve Homegrown Educators sponsors responded when asked if alumni teachers remained in their district for at least two years after their initial hire. The range for the

number of alumni teachers remaining in their home district after two years of employment was zero to 15 teachers. The median for the number of alumni teachers who remained in their home district after two years for qualifying districts was three teachers. The mean number of alumni teachers across all qualifying districts was 6.1 teachers who remained in their district for at least two years.

**Research question three.** *How do the perceptions of Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educator sponsors in rural communities compare to their urban counterparts' perceptions of their programs regarding the success in recruiting students into teaching through grow your own programs?*

Fifteen Homegrown Educators sponsors responded to the survey prompt regarding an increase in student participation since the implementation of a grow your own program. Ten of the 15 Homegrown Educators sponsors indicated the number of students had increased since the initial implementation of their grow your own program. Two sponsors responded that the program had not increased in numbers since the program began, and three were unsure if the numbers had increased since beginning the program. Fifty percent of the urban Homegrown Educators sponsors responded that student participation had increased since the program began. Twenty-five percent of the urban sponsors did not indicate growth in participation, and the other 25% of the urban sponsors responded that they were unsure if participation had increased. Eighty-six percent of the rural Homegrown Educators sponsors indicated an increase in student participation since their program started. Only one rural sponsor was unsure if the number of participants had increased since the beginning of the program.

Data were collected from district sponsors regarding the approximate number of current students in the grow your own programs intending to attend college to become a teacher, and upon graduation, return to their home district to teach. The range of the number of students intending to enter college to become a teacher and return to their district to teach was one to 30 students according to the Homegrown Educators sponsors. The median number of students participating in the Midwest state's grow your own programs who were college-bound to become an educator was 10. The mean number of students in grow your own programs who intended to enroll in college to become a teacher was 12.

Urban grow your own program sponsors indicated that a range from four to 30 of their current students planned to attend college with the intent to become a teacher. The median number of urban grow your own program students intending to go to college to become educators in their home districts was 10. The mean number of urban grow your own program students intending to go to college to become a teacher in their home districts was 13.29 students.

Rural districts had a range of 1-20 current students per district indicating they would be attending college to become a teacher. The median number of rural grow your own program students intending to go to college to become educators in their home districts was eight. The mean number of rural grow your own program students intending to go to college to become teachers in their home districts was 10.71 students.

Fourteen Homegrown Educators sponsors responded to the prompt approximating the number of students who had actually entered college to become a teacher in the past six years. The total number of grow your own program students who entered college to

become a teacher in the past six years ranged from 0-150 students per district. The median number of grow your own program students who entered college to become educators was 13. The mean number of grow your own program students who entered college with the intent to become a teacher was 34.43 students.

Urban grow your own program students who entered college to become an educator in the past six years ranged from 0-150 students per district. The median for the same group of urban grow your own students was 40 students. The mean number of urban grow your own program students who enrolled in college to become a teacher was 54.71 students.

Rural grow your own program students who entered college to become an educator in the past six years ranged from 0-50 students. The median for the same group of rural grow your own students was eight students. The mean number of rural grow your own program students who enrolled in college to become a teacher was 14.14 students

**Research question four.** *What are the perceptions of Career and Technical Education Pathways for the Teaching Profession class teachers and Homegrown Educators chapter sponsors regarding whether the Midwestern state's grow your own programs result in an increased number of students interested in the teaching profession, including high needs areas such as math, science, and special education?*

Revealed in the data collected, over the past six years, approximately 482 students from the participating Midwest state's grow your own programs entered college with the intent to become a teacher. Sponsors of the state's Homegrown Educator chapters responded to survey prompts about perceived student interest in high needs teaching

areas such as math, science, and special education. Fourteen Homegrown Educator sponsors responded to the survey prompt regarding student interest in high needs teaching areas with a range of 0-20 students per district. The percent of students currently in the surveyed Midwest state's grow your own programs interested in a high needs teaching area was approximately 8%. Homegrown Educator sponsors reported that they emphasized the benefits of selecting one of these areas for certification, including increased job availability and student loan forgiveness.

The following are comments from respondents that were found to be worthy of discussion but beyond the scope of the research questions. Homegrown Educators sponsors were provided two additional prompts. The first prompt asked the respondents to list any changes that could be made to grow your own programs that would improve teacher recruitment and retention for their districts. Three trends emerged from their responses, which related to increased marketing, providing incentives, and a better overall plan for grow your own programs.

Some of the statements made by the sponsors related to increased marketing were: "get it marketed to students who want to teach at the secondary level," "more district involvement, not just teacher/student," "we need central office to take an interest," "more awareness within the district about the class and club," and "more marketing for pre-teacher classes." The comments made by sponsors that related to providing district incentives included: "scholarships/guarantee of interview," "letter from human resource department or a former principal/teacher while students are in college to encourage students to stay with an education major, forming a strong connection with their home district," and "develop a contract system, like a guaranteed interview if the program was



completed.” Sponsors replied with comments about a better overall plan for grow your own programs. Some of the comments included: “incorporating more competition events into the class could help students really understand all the aspects of teaching” and “we need a better plan in place in our district.”

The second prompt that was posed to Homegrown Educators sponsors of grow your own programs asked respondents if there was anything else they would like to express regarding grow your own programs related to recruitment and retention. There were three themes that emerged from their responses to this prompt; district incentives and support, state and local consistency, and positive outcomes. The first theme, district incentives and support, that emerged from the comments from the Homegrown Educators sponsors included comments such as: “getting the HR department to offer an incentive for going through the program/club would be helpful in recruiting teachers” and “the best way to encourage teachers to work in a district is to make sure they are well supported.” The second theme that emerged from the open-ended prompt posed to sponsors was state and local consistency. The comments that were included in this theme were: “smaller class sizes are threatened when districts put a 10 or 15 student class minimum” and the need for “state consistency.” The third theme that emerged from grow your own program sponsors was positive outcomes from the programs. Sponsors’ comments that supported the theme were: “great opportunity to learn about the teaching career” and “it’s amazing and so important!”

## **Conclusions**

Conclusions for this study were formulated from the analysis of survey responses regarding a Midwest state’s Homegrown Educators sponsors’ perceptions of the

effectiveness of grow your own programs on recruitment and retention. In addition, conclusions reflect findings from the review of literature presented in Chapter Two. Conclusions presented in this section are organized around general themes and trends that include the research questions.

As discussed in Chapter One, a standardized open-ended survey administered to a group was used for this study. Fraenkel et al. (2019) defined the standardized open-ended strategy as asking the same prompts of respondents to increase the response comparability. Standardized open-ended surveys may have created limitations due to perceptions of the respondents (Fraenkel et al., 2019). According to Creswell (2018), trends in populations, rather than predictions, are collected from open-ended surveys.

A limitation of the study could be construed due to the number ( $n = 15$ ) and percentage (45%) of Career and Technical Education Pathways for the Teaching Profession' teachers participating in the study (Fraenkel et al., 2019). A limitation could have occurred from the quantitative methodology utilized to analyze the differences between urban and rural districts for the study. Inferential statistics could have been misleading if used to judge the importance of the magnitude of relationship differences (Fraenkel et al., 2019).

As discussed in Chapter Three, the questionnaire was tested for reliability and validity. The questionnaire was tested by a low number of grow your own sponsors. The low number of included sponsors in the testing phase was intentional as to not deplete the pool of actual survey respondents. Therefore, the results of this study could also be considered to have a lower construct validity (Fraenkel et al., 2019). Findings from this study led to two major conclusions for recruitment and retention in the Midwest state's

grow your own programs. These findings include overall recruitment and retention efforts by districts with Homegrown Educators chapters and Career and Technical Education Pathways for the Teaching Profession classes. The findings also revealed recruitment success for specific high needs areas such as science, math, and special education.

Research has revealed that teachers tend to teach in schools in or near their hometowns; therefore, local grow your own efforts have merit (Grow Your Own Teachers Initiatives Resources, 2018). The results of this study may be useful to district leaders as well as Homegrown Educators state and local coordinators. The results may aid in understanding the effectiveness of Career and Technical Education Pathways for the Teaching Profession classes and Homegrown Educators chapters currently offered in public high schools across the Midwest state where the study took place. This study may also aid in the development of plans to implement these classes and chapters in other districts across the state. Novice teachers often make career choices based on critical contact interactions with educators from the school they attended as students (Goff & Bruecker, 2017). Capitalizing on the localism of teacher labor markets can feed the teacher pipeline for districts if stakeholders at all levels make encouraging students to become alumni teachers a top priority (Goff & Bruecker, 2017). By aggressively recruiting students before certification also communicates the value schools put on talent (Herrmann, 2018). If schools aggressively recruited students into teaching, they would increase the desirability and prestige of the education field (Herrmann, 2018). Not only would districts increase the desirability of the profession, but they might also help uncover future educators who did not even realize they wanted to become a teacher

(Herrmann, 2018). Critical contact from teachers while students are in grow your own programs could increase the chances of the students returning to their hometown as alumni teachers (Herrmann, 2018). By engaging students earlier, districts should take advantage of opportunities enticing a more extensive range of candidates, specifically those who are underrepresented in the field of education, such as teachers of color and males (Herrmann, 2018).

Findings in regard to research questions two and three led to the first conclusion; the majority of the surveyed state's grow your own programs have been in place long enough to see an impact, but in the districts that have had the programs long enough, the impact is minimal. Homegrown Educators sponsors reported the majority of the grow your own programs have been in place for six years or more. Although the majority of the grow your own programs identified had been in place for six or more years, only 7% of the students enrolled in these programs have returned as alumni teachers, and less than 3% of those alumni teachers remained in the district for at least two years.

Rural districts could reap the rewards of grow your own efforts because teaching candidates who grow up in rural communities often seek rural teaching positions (Goff & Bruecker, 2017; Grow Your Own Teachers Initiatives Resources, 2018; Lazarev et al., 2017; Sawchuk, 2018). Rural teaching candidates are already accustomed to and enjoy a rural lifestyle, therefore grow your own programs that pique the interest of students may bring those students back as alumni teachers (Goff & Bruecker, 2017; Grow Your Own Teachers Initiatives Resources, 2018; Sawchuk, 2018). In regard to research questions one and four, both urban and rural, grow your own program sponsors indicated that their programs are having approximately the same success rate on recruiting teachers into the

profession. Although no rural districts' grow your own programs have been in place as long as their urban counterparts, the grow your own programs that have been in place long enough to recruit teachers are having approximately the same minimal effect. Therefore, the perceptions of Homegrown Educators sponsors in both urban and rural districts are that districts are not fully reaping the rewards of grow your own programs.

Coffey et al. (2019) reported grow your own programs that home in on recruiting teachers for specific areas are having higher levels of success. However, in response to research questions three and four, the data revealed a perceived low impact on recruiting students into high needs positions such as science, math, and special education by urban and rural districts. At this time, the perceived impact on recruiting students for specific areas was not producing high levels of success, perhaps due to Homegrown Educators chapters not homing in on those identified areas.

The second conclusion from this study in regard to research question one was that the perception that their current focus on the grow your own programs at the state and local levels was not strong enough to make an impact on recruiting students as future teachers. Research indicated that thoughtfully developed grow your own programs have the potential to recruit and prepare students because alumni teachers will understand the needs of their own future students (Coffey et al., 2019). Schools benefit from recruiting teachers from similar backgrounds as their students, which often has a positive effect on student achievement (Grow Your Own Teachers Initiatives Resources, 2018). Job choice theorists, specifically in critical contact theory, indicated that teaching candidates were influenced by job expectations and requirements that are communicated by the initial

contact with an organization, which could be a students' teachers and administrators (Engel & Cannata, 2015).

The data collected in regard to research questions one and two indicated a growth in the number of students participating in grow your own programs since the programs began; but the increase in student participation is not reflected in the number of alumni teachers who return to districts. There is evidence of a teacher shortage in the Midwest state studied in the state's Annual Report (2019); but as stated previously, the majority of the Homegrown Educators sponsors perceived that the grow your own programs were having little impact on the recruitment of students into the education profession in their own districts. This low level of perceived impact could reflect that some of the surveyed districts have not had programs in place long enough to hire alumni teachers.

Sponsors of the Homegrown Educators chapters indicated that more time invested in marketing the grow your own programs at both the state and local levels could help increase the number of students who return as alumni teachers. Goings et al., (2019) reported that if potential teachers have not had their interest in teaching sparked until college, it is likely too late. According to research presented by Coffey et al. (2019) grow your own programs were sometimes discontinued due to inconsistent funding. The data collected revealed that the average number of students enrolled in Career and Technical Education Pathways for the Teaching Profession per class per year across the state is 13 students. One Homegrown Educator sponsor stated that her grow your own program was in serious jeopardy of being eliminated due to low numbers (Krugg, L., personal communication, March 3, 2020). Gist et al., (2019) suggested that grow your own funding should come from multiple sources, including local, colleges, state, and federal

levels, to assure that the programs are maintained and continue to sustain a database of successful pipelines.

The Homegrown Educators sponsors also indicated that many times the curriculum and opportunities for students were geared toward elementary school; therefore, there was a need for better marketing for content-specific secondary educators as well as special education. In addition to an overall marketing approach to increase the number of students choosing education as a career, some Homegrown Educators sponsors stated there should be a particular focus on high needs areas by having high school teachers who teach those subjects and central office administrators championing the field. The data collected reflected the research that recruiting should not only be about attracting teachers to districts but should be strategic about recruiting and retaining teachers for the subjects and schools for which teachers are most needed (Barth et al., 2016; Sack-Min, 2016). Prior research has revealed that grow your own programs focused on recruiting teachers for specific areas of need had higher levels of success. (Coffey et al., 2019).

The sponsors indicated a need for the entities ultimately involved in hiring new teachers to be involved in the promotion of grow your own programs. Sponsors stated that offering guaranteed interviews might encourage students to become educators and return to their home districts to teach. Previous research mirrored this plan of action by suggesting that school district leaders provide incentives to encourage students to come back to the district to teach after earning their degree (Bland et al., 2014; Podolsky et al., 2017).

Across the nation, school leaders who are attempting to increase teacher recruitment efforts are providing monetary incentives, such as signing bonuses for high needs areas such as math, science, and special education or promising loan forgiveness to teach in specific geographical locations (Aragon, 2017; Barth et al., 2016; Dee & Golhaber, 2017; Loewus, 2018; Podolsky et al., 2016b). These incentives are effective in rural and urban communities because most teachers seek employment where they grew up (Bland et al., 2014; Podolsky et al., 2017). Podolsky (2017) found that recipients of scholarships who become alumni teachers had a higher rate of retention and were found to be more effective in the classroom than non-recipients.

### **Implications for Practice**

Based on the finding from this study, there are three main recommendations to improve the effectiveness of grow your own programs in recruiting and retaining alumni teachers. One of the recommendations involves changes to how and when data from districts that offer grow your own programs should be collected and analyzed to identify trends. Collecting and disseminating this data could better inform the Midwest state of state and district needs. There are many different grow your own models throughout the state. By collecting and sharing the data, districts could emulate the most successful models for their demographics.

A second recommendation is to involve the school community in identifying and encouraging prospective teachers to be a part of their district's grow your own program. Input from teachers in high needs areas, administrators, and central office staff involved in hiring new teachers should be sought to form well-researched district needs.



Encouraging district-wide involvement in grow your own programs could help districts achieve maximum program benefits.

The third recommendation is to create opportunities for grow your own programs to be implemented in additional districts throughout the state. These grow your own programs could include classes, Homegrown Educators chapters, or similar programs. By creating a pipeline of future educators who have already invested a school system, districts could reduce the number of positions to be filled each year, sometimes resulting in hiring underqualified teachers or teachers who are not a good fit for a particular community. As stated earlier, by using the state-wide collected data, districts can utilize the information from the most successful grow your own programs when developing their own programs.

**Increased data collection from grow your own programs.** Some of the perceptions of Homegrown Educators sponsors in this study revealed the need to have an organized method of gathering specific identifiable data from districts that implement grow your own programs across the state. Local districts, as well as the department of education at the state level, could benefit from the collection and organization of this data. The collected data could be utilized to identify which supports are working for building teacher pipelines and where there may be opportunities for improvement. Identifying districts with grow your own programs that are successfully recruiting and retaining alumni teachers at a high percentage could share best practices of those districts' programs, thereby benefitting districts across the state. Reauthorizing the Higher Education Act (HEA) by congress, which requires policymakers to add reporting

requirements, would enable policymakers to better track trends in declining enrollment in teacher preparation programs and teacher labor markets (Partelow, 2019).

**District-level strategic and needs-based assessment.** School district leaders should consider constructing a needs-based assessment to identify high needs teaching areas and create a plan to encourage students who might be prospective future candidates for those areas. The assessment results could be utilized by building level teachers, grow your own teacher program directors, Homegrown Educators sponsors, or similar program leaders in those high needs areas to help recruit students into the teaching field in the identified areas of need. The assessment results should also be utilized by administrators and central office personnel to promote and support district grow your own programs and to encourage students to return as alumni teachers.

**Create opportunities for grow your own programs.** A more focused approach to maximize the success of district grow your own programs is needed. Local districts should work with state departments of education to strengthen grow your programs to achieve a higher percentage of alumni teachers in urban and rural districts. Specific, ongoing training should be offered for Career and Technical Education Pathways for the Teaching Profession teachers and Homegrown Educators sponsors. In addition, funding should be offered to support grow your own programs, not only current grow your own programs, but future programs in districts not yet offering well-developed, structured programs. The federal ESSA, which provides low-income districts with additional monies to recruit and retain high-quality teachers, may be one source that could assist these communities (Podolsky et al., 2017). State leaders are allowed to target their

investments to raise the quality of their educator workforce, which may help recruit teachers to high-needs districts (Podolsky et al., 2017).

Creating a more focused approach could result in stronger programs and an increase in alumni teachers across the state. The research revealed that grow your own programs that are more focused on recruiting teachers for specific areas are having higher levels of success. (Coffey et al., 2019). South Carolina has a history of grow your own programs, which emerged from a need to place teachers in many of its rural districts (Coffey et al., 2019). South Carolina's Teacher Cadet program, in place for decades, reports that approximately 40% of its participants ultimately pursued a career in education, many of them citing the grow your own program as a major reason for their choice (Valenzuela, 2017, p. 6). Another successful grow your own program, Pathways2Teaching, focuses on diversifying the teacher workforce by encouraging high school students of color to return as alumni teachers in their own communities (Goings et al., 2018).

### **Recommendations for Future Research**

Further research is needed to explore how grow your own programs can positively impact teacher recruitment and retention. This research study utilized a sample of Homegrown Educators sponsors from across a Midwest state. Future studies could include a broader sampling of participants in the identified state and other Midwest states to gain a more comprehensive understanding of Homegrown Educators sponsors' perceptions of grow your own programs' impact on teacher recruitment and retention, and how to provide better support for grow your own programs.

Additional studies could focus on the benefits of grow your own programs based on the perceptions of administrators and beginning alumni teachers in both urban and rural school districts. A study of grow your own programs focused on the perceptions of beginning teachers who were enrolled in a high school grow your own program versus beginning teachers who were not enrolled in any kind of high school grow your own program may yield essential trends. Including both alumni teacher and administrator perceptions in the benefits could result in identifying strengths and weaknesses of the program, and then use the collected data to grow the program to meet the specific needs of each district. Research indicates that well prepared, energetic college graduates trained to be teachers make a more positive impact on students' overall performance (Luckett, 2017). Many district administrators seek novice teachers prepared by high-quality pedagogical programs (Luckett, 2017). Career and Technical Education students are more engaged and motivated in their chosen field (Eimers, 2017). CTE students have the opportunity in high school to learn real-world skills that position them for easier transitions into college and the workforce (ACTE, 2016).

Other topics pertaining to teacher recruitment and retention should be explored. Further research into the specific areas of need for individual districts, and compensation or incentive plans for recruitment and retention of alumni teachers into those high needs areas. In a 2018 All Star Staff report, *What kind of Teachers are in Highest Demand*, 46 states reported a shortage in special education (para. 8), 43 states reported a shortage in science, (para. 11) and 47 states reported a shortage in math (para. 5). A compiled multi-state Midwest database of all districts' yearly need for specific high-needs positions, such as math, science, and special education, could define which districts are continually

struggling to replace those positions and which districts are not. Research indicates that the overall supply of teachers is remaining steady; but shortages continue to increase in specific areas, thus increasing the need to offer more teachers in courses such as math and science (Barth et al., 2016; Ingersoll et al., 2018b). The educator pipeline is weakened by graduating too many of a particular kind of teacher, such as elementary teachers, and not enough of other kinds of teachers, such as science or math teachers (Cowan et al., 2016; Walsh, 2018). This database could include whether or not the districts that were not continually replacing high-needs positions had hired alumni teachers to those positions. The multi-state database could include all compensation or incentive plans for alumni teachers.

Other studies could include a comparison of state department of education guidelines, accountability, and funding processes that could be compiled and shared throughout the Midwest. The comparisons could be shared with Midwestern state level grow your own committees and post-secondary institution recruitment departments. The most current student survey (2020) reported by the Midwestern state in this research indicated that only 42% of the students said they had been presented with teaching as a career option while at school. The results of grow your own efforts and comparisons could be shared with district level administration, who in turn could highlight their grow your own program and make it a focus throughout the district. Studies like these could give policymakers at the state level and administrators at the district level helpful and necessary data to review and consider when making decisions. Grow your own program funding needs to come from local, state, and federal levels to assure that they are maintained beyond the initial implementation (Gist et al., 2019). A sustained, organized

database of successful grow your own programs sharing knowledge of their work could offer important innovations for recruiting future teachers, which could potentially result in more funding of successful initiatives (Gist et al., 2019).

### **Summary**

Herrmann (2018) indicated that teachers are the single most significant in-school factor that influences student academic achievement. Just as other industries seek top talent, school personnel should also actively pursue candidates for this most important role (Herrmann, 2018). A viable means of creating a supply of quality, prospective candidates within a local school community are grow your own programs (Midwest Marketing Brochure, 2020). High school grow your own programs have shown some success in recruiting students to the teaching profession (Midwest Marketing Brochure, 2020; Grow Your Own Teachers Initiatives Resources, 2018).

In Chapter Two, a review of literature revealed teacher shortages throughout the nation, as well as attrition and retention issues in the education field. The literature review included a synthesis of literature regarding recruitment and retention efforts with a specific emphasis on grow your own program implementation and impact. Additionally, the history of grow your own programs, including multiple variations throughout the United States, the success of their implementation, and what the future may hold regarding these programs were discussed.

Chapter Three contained the methodology for the study. This included the problem and purpose overview, the research design, population and sample, and instrumentation used in the research. Included in Chapter Three was the data collection method and analysis of the data. By using the data findings, a research base was created

for school districts to use when considering the possible addition of grow your own programs. The research questions and reasoning behind the quantitative research design were discussed. Systematic sampling of the population was utilized to obtain the sample for the study.

Participants included Homegrown Educators sponsors from 15 school districts in a Midwest state. Participants for the study were sent an online survey to complete. The data received from the surveys were analyzed to give frequencies and percentages of responses, and descriptions of perceptions and themes were developed. Ethical considerations and reassurances for participants were explained.

In Chapter Four, data were analyzed for each research question. This chapter included a description of the survey prompts. The demographics of the respondents to the survey were also identified. Each of the four research questions were listed followed by a full description of the results for each question.

Data collected through the survey revealed in the majority of the grow your own programs, only approximately 3.9% of the students enrolled in these programs returned as alumni teachers, and only 3.7% of those alumni teachers remained in the district for at least two years. Urban and rural grow your own programs had approximately the same success rate on recruiting teachers into the profession. The perceived impact of the grow your own programs on recruiting students into high needs positions such as science, math, and special education is even lower in both urban and rural districts.

Chapter Five contained a review of the study findings. The data collected indicated a growth in the number of students participating in grow your own programs

since the inception. Unfortunately, the increase in student participation in grow your own programs is not reflected in the number of alumni teachers returning to districts.

The majority of the Homegrown Educators sponsors perceived their grow your own programs are having little impact on the recruitment of students into the education profession in their own districts. Homegrown Educators chapter sponsors indicated that more investment at the state and local levels could increase the number of students who return as alumni teachers. An average of 13 students per class per year enrolled in grow your own programs across the state, possibly jeopardizing district grow your own programs due to low enrollment.

The Homegrown Educators sponsors also indicated a need for better marketing for specific secondary content area teachers and special education teachers. The sponsors who participated in the survey indicated a need for the whole school community to be involved in understanding and promoting grow your own programs to assure success in recruiting and retaining teachers. This chapter included findings from the study, conclusions, implications for practice, and recommendations for future research.



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## Appendix A

Jan 16, 2020 12:54 PM CST

RE:

IRB-20-113: Initial - Missouri's "Grow Your Own" CTE Career Pathways for the Teaching Profession: A Viable Means to Teacher Recruitment and Retention?

Dear Sandra Humbyrd,

The study, Missouri's "Grow Your Own" CTE Career Pathways for the Teaching Profession: A Viable Means to Teacher Recruitment and Retention?, has been Approved as Exempt.

Category: Category 1. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

The submission was approved on January 16, 2020.

Here are the findings: Regulatory Determinations

- This study has been determined to be minimal risk because the research is not obtaining data considered sensitive information or performing interventions posing harm greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Sincerely,

Lindenwood University (lindenwood) Institutional Review Board

Feb 21, 2020 1:40 PM CST RE: IRB-20-113:

Modification - Missouri's "Grow Your Own" CTE Career Pathways for the Teaching Profession: A Viable Means to Teacher Recruitment and Retention?

Dear Sandra Humbyrd,

The study, Missouri's "Grow Your Own" CTE Career Pathways for the Teaching Profession: A Viable Means to Teacher Recruitment and Retention?, has been Approved as Approved.

Category: Category 1. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

The submission was approved on February 21, 2020.

Here are the findings:

#### IRB Discussion

- This modification entails a fairly comprehensive revision of the project scope and recruitment process. These revisions include a shift of the recruitment process to a conference related to the study intervention, and a revision to the research design to account for this shift in the research population. This revised study continues to meet the Criteria for Approval and the initial Exempt determination.
- The PI will need to secure the authorization of the conference to recruit subjects there. Once this authorization is received, it will need to be uploaded to the application through an attachment in a Modification form.

#### Regulatory Determinations

- This modification entails the revision of the recruitment strategy and related protocol elements. This modification does not affect the previously approved risk determination or ongoing approvability of the research.

Sincerely,

Lindenwood University (lindenwood) Institutional Review Board

**Appendix B**  
**Permission Letter**

Date: February 4, 2020

RE: Permission to Conduct Research at the Midwestern state [REDACTED] Homegrown Educator State Conference

To: Ann Jarrett, [REDACTED] Missouri NEA Teaching and Learning Director

I am writing to request permission to conduct research at [REDACTED] Homegrown Educator State Conference. I am currently pursuing my doctorate through Lindenwood University and in the process of writing my dissertation. The study is entitled, *Midwestern "Grow Your Own" High School Programs: Are They a Viable Means to Teacher Recruitment and Retention?* I am asking permission to survey the sponsors who attend the conference to investigate their perceptions of the impact of Career and Technical Education (CTE) Pathways for the Teaching Profession courses and [REDACTED] [REDACTED] programs on teacher recruitment and retention. I would also like to send the survey to the sponsors who are unable to attend the conference utilizing the [REDACTED] Homegrown Educator listserv.

If you agree, please sign below, scan this page, and email to me, Sandy Humbyrd, at [REDACTED]

Your approval to conduct this study will be greatly appreciated. I would be happy to answer any questions or concerns you may have regarding this study.

Sincerely,

Sandy Humbyrd,  
Doctoral Student at Lindenwood University

Approved by:

---

Print name and title here

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Signature

---

Date

## Appendix C

# LINDENWOOD

## Survey Research Information Sheet

You are being asked to participate in a survey conducted by Sandy Humbyrd at Lindenwood University. We are doing this study to determine whether the implementation of Career and Technical Education (CTE) Pathways for the Teaching Profession programs and/or Homegrown Educator chapters affect recruitment rates and retention rates for [REDACTED] districts providing such programs. During this study, you will participate in a survey and respond to a series of questions regarding your experience with the Career and Technical Education (CTE) Pathways for the Teaching Profession program and/or the Homegrown Educator chapter and its effect on your district. It will take about five minutes to complete this survey.

Your participation is voluntary. You may choose not to participate or withdraw at any time by simply not completing the survey or closing the browser window.

There are no risks from participating in this project. We will not collect any information that may identify you. There are no direct benefits for you participating in this study.

### **WHO CAN I CONTACT WITH QUESTIONS?**

If you have concerns or complaints about this project, please use the following contact information:

Sandy Humbyrd      email: [REDACTED]

Dr. Kathy Grover      email: [KGrover@lindenwood.edu](mailto:KGrover@lindenwood.edu)

If you have questions about your rights as a participant or concerns about the project and wish to talk to someone outside the research team, you can contact Michael Leary (Director - Institutional Review Board) at 636-949-4730 or [mleary@lindenwood.edu](mailto:mleary@lindenwood.edu).

By clicking the link below, I confirm that I have read this form and decided that I will participate in the project described above. I understand the purpose of the study, what I will be required to do, and the risks involved. I understand that I can discontinue participation at any time by closing the survey browser. My consent also indicates that I am at least 18 years of age.

You can withdraw from this study at any time by simply closing the browser window. Please feel free to print a copy of this information sheet.



**Appendix D**

1. Which best describes your school: Rural, Urban?
2. How many years have you been the CTE Career and Technical Education (CTE) Pathways for the Teaching Profession teacher/Homegrown Educator sponsor in your current district?
3. Which Grow Your Own programs are in place in your district: CTE Career and Technical Education (CTE) Pathways for the Teaching Profession classes and Homegrown Educator, Homegrown Educator only?
4. Approximate number of years Homegrown Educator (or other teaching club) has been in place in your district.
5. Approximate number of students that have participated in Homegrown Educator (or other teaching club) in the past ten years.
6. Approximate number of years Career and Technical Education (CTE) Pathways for the Teaching Profession classes have been in place in your district.
7. Approximate number of students that have been enrolled in Career and Technical Education (CTE) Pathways for the Teaching Profession classes in the past ten years.
8. Has the number of students participating in Career and Technical Education (CTE) Pathways for the Teaching Profession classes/Homegrown Educator increased since the program(s) began?
9. Approximately how many students that intend to enter college to become teachers plan to return to their district to teach?
10. Approximate number of students that participated in a Grow Your Own Program (classes or club) at your district that entered college with the intent to become a teacher in the past six years.
11. Approximate number of students that participated in a Grow Your Own Program (classes or club) at your district then later became teachers in your district in the past six years.
12. Approximate number of teachers from question number ten that remained in your district as teachers for at least 2 years.
13. How has the Career and Technical Education (CTE) Pathways for the Teaching Profession program/Homegrown Educator club affected your school's teacher recruitment and hiring?

14. How has the Career and Technical Education (CTE) Pathways for the Teaching Profession program/Homegrown Educator club affected your school's teacher retention?
15. Approximately how many students (class or club) are interested in teaching in high needs areas such as math, science, or special education?
16. What changes should be made in the Career and Technical Education (CTE) Pathways for the Teaching Profession program/Homegrown Educator club that would improve teacher recruitment and retention for your district?
17. Is there anything else you would like to express in relation to Career and Technical Education (CTE) Pathways for the Teaching Profession/Homegrown Educator programs and recruitment and retention?

### **Vita**

Sandy Humbyrd received her Bachelor of Science in Elementary Education from College of the Ozarks and her Master of Science in Elementary Education from Missouri State University. She began teaching at Hollister R-5 School District, where she taught both fourth and fifth grade as well as spending her last 11 years at Hollister serving as the district Math instructional coach. Sandy spent a total of 29 years at the Hollister district. During her 18th year of teaching, and while still employed at Hollister, Sandy had the opportunity to spend a year as a STARR teacher (Select Teachers as Regional Resources) for the state of Missouri, which allowed her to facilitate professional development throughout southwest Missouri. Sandy was a Southwest Missouri regional teacher of the year as well as a state teacher of the year finalist in the 2016-2017 school year. Sandy also serves on the state Grow Your Own taskforce.