Grow Your Own Teachers: A Case Study of Strategies Used by Rural Texas Schools to Produce and Retain Qualified Teachers

by

Brandon Mahler, M.Ed.

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Approved

Fernando Valle, Ed.D.
Chair of Committee

Cathy Gabro, Ed.D.

Dusty Palmer, Ed.D.

Mark Sheridan, Ph.D.
Dean of the Graduate School

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ABSTRACT

Teacher retention is an enormously complex issue. This study is focused on determining the effect of Grow Your Own Teacher programs specific for the rural school. In the current state of education, teacher turnover can be depicted as the revolving door. "Nationally, schools lose between $1 billion and $2.2 billion in attrition costs each year through teachers moving or leaving the profession" (Schaffhauser, 2014). The schools located in rural, Texas face an even greater challenge due to their remote, geographic locations.

The purpose of this case study was to evaluate the partnership and effectiveness of a GYOT approach for rural schools to address teacher recruitment and retention. It is the hope of the researcher to identify successful strategies of the GYOT approach for rural schools to help alleviate the teacher shortage.

A review of the literature regarding teacher retention from the international scale to Texas rural schools provided the researcher with a context for the study. The review was furthered by analyzing current research on GYOT programs. Literature was primarily focused on program outcomes dealing with urban or hard to staff schools.

Possible participants were recruited from the TechTeach 2+1 program and a partnering rural school district. A questionnaire was delivered through Qualtrics, an online survey program. These questionnaires were primarily used for recruiting and building initial case files for participants. A follow up semistructured interview was conducted for six study participants. The results indicated GYOT programs have an

impact on teacher retention within rural schools. Further research is needed to identify additional factors that could affect GYOT programs.

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CHAPTER I

INTRODUCTION

The health of rural America is dependent upon education (Kannapel & DeYoung, 1999). In many cases, the rural school is a central social and economic hub for the local community. The health of the school district can be reflected in the community and vice versa. "Well-functioning rural schools help to increase the social integration of communities and neighborhoods by strengthening local identity and sense of community activity and nurture public participation in civic and community affairs" (Harmon & Schafft, 2009, p. 5). Rural schools provide a physical place for community events such as athletic competitions, theatrical productions, school board meetings, and numerous other interactive possibilities. Amenities that can be provided by the school help supplement the local community such as access to basketball gyms and workout gyms as well as the venue for local youth programs. The integrative and interactive nature of schools impacts the economic and social environments of rural communities (Harmon & Schafft, 2009).

The community relies upon the school district to provide a physical venue for social interaction among the community members. In addition, the school district can also be a dynamic source of economic activity in rural communities. The school is often found to be the largest employer in a rural community. Maintenance on the school buildings involves local service and supply businesses. The remote location of the rural school district is a deterrent for larger construction companies to bid on construction projects for the school district. In many ways construction projects and renovations can provide a benefit to the local economy.

The rural school is the center of many rural communities. However, many of these rural communities have a difficult time accessing the necessary resources to function. Barley and Beesley (2007) noted school consolidation, school closures, and a declining economic base have impacted rural schools and their communities. Teachers are considered to be a limited resource currently available for a large number of rural schools. The lack of teachers is placing a strain on rural schools to provide a comprehensive education. Many schools want to provide qualified applicants from within their own community. Hanford (2017) noted, "The irony, some students may not finish college because they weren't well prepared in high school" (para. 71). This could be a difficult endeavor for rural schools that see a small percentage of their graduates enroll in college, let alone earn a bachelor's degree.

In many cases, rural schools that lack a sufficient number of applicants for teaching positions are forced to increase class sizes or hire unqualified teachers to fill classrooms. A rural school in a community with a higher than average poverty rate is more likely to face these challenges. Hanford (2017) indicated when a teaching position is vacant, it is usually filled by a noncertified substitute. It is very common to find teachers in a rural school, teaching subjects in which they are not qualified. Teachers are not the only limited resources in rural schools. Although rural schools and districts face a variety of limiting issues, this study will focus on teacher recruitment and retention.

Background of the Problem

The cost of teacher turnover has been estimated at over $7 billion annually for America's public schools (National Commission on Teaching and America's Future, 2007). There are several costs associated with teacher turnover such as costs associated

with recruiting, providing relevant professional development, and acclimating new teachers to current campus norms (Flynt & Morton, 2009). Additional costs could have an impact on student achievement or negatively affect campus culture. A culture of teacher turnover could also negatively impact a school's ability to sustain long-range planning associated with a coherent, comprehensive curriculum (Brill & McCartney, 2008).

Ingersoll (2003) labeled the teaching profession as a revolving door. The National Commission on Teaching and America's Future (2007) reported that the United States does not suffer from a teacher shortage; instead, the problem is a teacher turnover crisis. The current attrition levels may be attributed to factors such as low compensation, long commutes, and dissatisfaction with the administration or the campus culture (Miller, 2010). Schools have employed various tactics to retain teachers such as offering retention bonuses or developing mentoring programs for new teachers. Despite these efforts, many teachers are lost to competing school districts or different professions on a regular basis.

The public education system has undergone a drastic evolution since the passage of the No Child Left Behind Act (2002). Teachers have been impacted by increased workloads and mandatory testing requirements, which have caused them to reevaluate their career choice in education. Ingersoll (2003) concluded that teacher attrition and shortages are caused by job dissatisfaction and the pursuit of other careers.

An ever-increasing enrollment has compounded the problem for public education. A report from the National Center for Education Statistics (2016) indicated the public school enrollment for the 2013–2014 school year was 50.0 million students in Grades

PK–12. By the academic year 2025–2026, public school enrollment is projected to increase 3% to 51.4 million students. The U.S. public education system currently employs 6.2 million staff members, of which 3.2 million are teachers. Since 2008, the pupil–teacher ratio rose to 16.1 in 2013 from a low of 15.3 in 2008 (National Center for Education Statistics, 2016). As the pupil–teacher ratio increases, so will the teacher workloads and, thus, the pressure on the profession.

As the teaching profession has aged, the number of teachers over the age of 50 has increased. In 2008, this number had reached 1.3 million but saw a decrease to 1.2 million in 2012 (Ingersoll, Merrill, & Stuckey, 2014). This has increased the number of teaching vacancies, which is expected to increase further in the near future. Sutcher, Darling-Hammond, and Carver-Thomas (2016) have found 300,000 teachers will be required to fill teaching vacancies by 2020, and this number will increase further to 316,000 annually by 2025.

Recent research has further identified the lack of interest in the teaching profession as a significant factor contributing to the teacher shortage. A recent survey of students pursuing postsecondary education by the ACT college entrance exam found only 5% of the students who participated in the ACT exam was interested in pursuing a career in education. In the 2007 survey, 9.2% of incoming college freshmen was interested in the education field (Sutcher et al., 2016). As the interest in becoming a teacher has declined, enrollment in teacher preparation has been directly impacted. Teacher education enrollments dropped from 691,000 candidates in 2009 to 451,000 candidates in 2014, representing a 35% decline (Sutcher et al., 2016).

The current teacher shortage has provided unique challenges for rural schools. Hill and Barth (2004) claimed that rural schools are traditionally hard to staff. Rural school problems are compounded by challenges in both recruiting and retaining teachers. The "highly qualified" mandates of the No Child Left Behind Act (2001) and Every Student Succeeds Act of 2015 have placed additional pressure on rural schools to find teachers certified in multiple subject areas. Rural schools are finding it increasingly difficult to recruit and retain teachers necessary to provide a basic curriculum.

The geographic location of rural schools can provide a challenge in itself. Reeves (2003) found that geographically isolated rural schools have difficulty recruiting teachers while schools near suburban areas have greater difficulty retaining teachers. The densely populated suburban areas typically provide higher salaries, and more professional development opportunities. Player (2015) discovered that suburban school teachers earn an average of $10,000 more each year than their rural school counterparts. Jimerson (2005) confirmed that beginning teachers earn 11.3% more in nonrural districts. Reeves (2003) further concluded that beginning teachers relocate to suburban districts with higher salaries in the first 2 years of teaching.

As the supply of teachers reduces, rural school districts are beginning to look for different avenues to find eligible teacher candidates. Boyd et al. (2005) has provided guidance for schools seeking eligible teacher candidates. A central theme concentrates on schools looking within their own communities. The approach of Grow Your Own Teacher (GYOT) has seen significant success in different parts of the United States. "Most public school teachers take their first public school teaching job very close to their hometowns or where they attended college. Hometown has a somewhat greater pull than

college" (Boyd et al., 2005, p. 117). GYOT programs have been utilized to place highly qualified teachers in schools to serve their own communities. As GYOT gains attention, the partnership between the school district and the university requires evaluation. The needs of the school should be effectively communicated with the university to produce effective candidates.

Statement of the Problem

Several studies have estimated between 40% and 50% of teachers leave the profession entirely within the first 5 years (Ingersoll, 2003). Rural schools, outside the realm of urban and suburban schools, face unique challenges in not only recruiting teachers but also retaining them. The challenges of teacher recruitment and retention specific to rural schools has been largely overlooked (Jimerson, 2005). An increase in the alternative certification programs available has shown promise for rural schools. However, many of these programs require a candidate to complete a bachelor's or master's degree prior to enrolling (Peterson & Nadler, 2009). Many community members found in rural schools lack the necessary education to enroll in these programs.

While there has been limited research about GYOT programs in urban school districts, research on GYOT in rural school districts is even more scant. Rural schools may be unaware that this program is available to their communities. Furthermore, rural schools, policymakers, community members, and university officials would benefit from a better understanding of how to develop and implement GYOT program strategies specific to the rural setting.

Purpose of the Study

Numerous studies have investigated teacher recruitment and retention in U.S. public education (Borman & Dowling, 2008; Dove, 2004; Guarino, Santibanez, & Daley, 2006; Hanushek, Kain, & Rivkin, 2002; Ingersoll et al., 2014; Ingersoll & Smith, 2003). The purpose of this case study was to evaluate the partnership and effectiveness of a GYOT approach for rural schools to address teacher recruitment and retention. It is the hope of the researcher to identify successful strategies of the GYOT approach for rural schools to help alleviate the teacher shortage.

It is the hope of the researcher that this study will add to the body of knowledge in the field of education. The limited research concerning GYOT programs and rural school education is an important topic in the field of education. Rural school districts scramble each year to fill vacancies; in many cases these positions go unfilled. The working conditions for these districts are considered less desirable, which make it more difficult to fill teaching positions (Ingersoll, 2004).

A large number of students attend rural schools, but many rural schools are deprived of necessary resources because they are diverted towards urban and suburban schools by policymakers (Osterholm, Horn, & Johnson, 2006). Osterholm et al. (2006) acknowledged that the process of recruiting and retaining teachers in rural communities is a complex practice. A collaborative effort between policymakers, universities, and rural districts is required to address the specific challenges of rural communities.

As the teacher shortage continues to affect districts of all classifications, the GYOT approach has gained attention. School districts across the country have already established partnerships with their local universities. Many of these schools are classified

urban or suburban and, as such, are in closer proximity to establish the necessary partnerships for a successful program. This study will provide an in-depth account of the GYOT partnership between a rural school district and its collaborating university.

Theoretical Framework

The theoretical framework for this research has been derived from a literature review of factors affecting teacher recruitment and retention, specifically for rural schools districts. The proposed research will be conducted with qualitative methods through an *asset-based* lens. Research on teacher recruitment and retention, conducted from various theoretical perspectives, has been thoroughly analyzed. These perspectives range from the supply and demand theory (Earley & Ross, 2006) to the theory of inequitable distribution (Darling-Hammond & Sykes, 2003). The factors of rural school districts affecting recruitment and retention have been primarily analyzed through a deficit viewpoint.

The asset-based community theory (Kretzmann & McKnight, 1993) will provide an alternate approach to finding solutions to the teacher recruitment and retention problems common to rural school districts. The theory proposed by Kretzmann and McKnight (1993) relies on three basic principles, which can be related to the rural school community. The first of these principles is simply asset-based or resources available in the community. This can be identified via a self-inventory of the community as a whole. The asset-based lens provides a viewpoint for teacher retention and recruitment. Kretzmann and McKnight (1993) indicated that the analysis should not be done from the perspective of what the community lacks or what is needed, but instead from the perspective of what a rural community has to offer.

The second principle of asset-based theory is *internally-focused* or the capacities of the local residents and local institutions that can help to provide additional problem-solving capacities. An analysis of the internal capacities of residents and local institutions can determine if there are potential teachers or teacher candidates found in the local community organization. The principle of internally-focused allows the community to define their local identity (Kretzmann & McKnight, 1993).

The final principle of the theory is *relationship-driven*. As the assets are located within the internal community, relationships must be cultivated among all stakeholders. "One of the central challenges for asset-based community developers is to constantly build and rebuild the relationships between and among local residents, local associations, and local institutions" (Kretzmann & McKnight, 1993, p. 27). Osterholm et al. (2006) reinforced the aspect of improving teacher retention by developing relationships. "When a community treats the faculty of their schools with respect, teachers are more likely to stay put" (Osterholm et al., 2006, p. 10).

The asset-based theory recognizes the importance of utilizing local resources of the community and cultivating the necessary relationships to incorporate teachers into the local cultures. Collins (2000) confirmed that the degree to which a teacher decides to stay within a rural community relies upon his or her involvement in the community's educational and cultural programs. As qualitative data are collected, they will be reviewed through the asset-based lens to extrapolate common themes.

Research Questions

The purpose of this case study was to evaluate the partnership and effectiveness of a GYOT approach for rural schools to address teacher recruitment and retention. The study will be guided by the following research questions:

1. Is the Grow Your Own Teacher strategy effective in providing qualified teacher candidates?
2. What are rural school perceptions and experiences regarding teacher candidates completing a Grow Your Own program?
3. What are the essential components of a Grow Your Own Teacher program?

These research questions have been structured to direct me in acquiring information from rural school districts involved in the Grow Your Own Teacher's program and their partnerships with local universities.

Limitations, Assumptions, and Design Controls

This study is based on several assumptions. First, it is assumed participants will answer interview questions in an honest and candid manner. Second, the use of purposeful sampling is appropriate for this study. The intent of purposeful sampling is to find key participants from a specific research setting.

> Random or representative sampling is not preferred because the researcher's major concern is not to generalize the findings of the study to a broad population or universe but to maximize discovery of the heterogeneous patterns and problems that occur in the particular context of the study. (Erlandson, Harris, Skipper, & Allen, 1993, p. 82)

Third, the study participants have a sincere interest in participating in the study and do not harbor any motives. Lastly, the interpretation of the findings will be based upon the analysis of the collected data and presented free of bias.

All research involved in social sciences encounters limitations. The sampling of most qualitative research is a limiting factor. Bloomberg and Volpe (2012) stated, "A further major limitation is that the research sample is restricted" (p. 127). There is a limited number of qualified participants for the study due to the geographical location of the study. The number of participants also restricts the generalizability of the conclusions. The qualitative research is not guided by statistical means across a large sub group in order to find validity and transferability.

Significance of the Study

The findings of this study are intended to be useful to rural school district administrators who struggle with recruiting and retaining qualified teachers. An analysis of the GYOT programs and strategies revealed in this study could be utilized by rural school districts in need of qualified teachers. The state of Texas has recognized the need to increase the number and quality of rural school teachers as well as the impact of a GYOT program. The Texas Education Agency announced a Grow Your Own grant for the 2018–2019 school year. It was even indicated that the program is designed to target rural school districts. "The purpose of the 2018-19 Grow Your Own grant is to assist eligible applicants increase the quality and diversity of the teaching force, especially in small and/or rural districts" (Texas Education Agency, 2018, para. 2).

University officials, rural school administrators, and policymakers could use the results of the study to develop or refine a GYOT program tailored to rural schools. The

results, which may be transferable to all rural school districts, could potentially transform the way rural schools approach the teacher shortage. This study will contribute to the working knowledge of teacher recruitment and retention by providing additional avenues for school leaders to find and retain teachers who are already acclimated to their school districts.

Summary

The rural school districts of Texas account for 44.8% of all Texas public school districts. The future of Texas public education is dependent upon these schools to educate the next generation of citizens. Using the qualitative case study approach, to analyze GYOT programs, this study will answer the following research questions.

1. Is the Grow Your Own Teacher strategy effective in providing qualified teacher candidates?
2. What are rural school perceptions and experiences regarding teacher candidates completing a Grow Your Own program?
3. What are the essential components of a Grow Your Own Teacher program?

Chapter II includes a comprehensive review of literature of teacher shortages from the international, national, and regional lenses. The review also presents research-based recommendations to address the teacher shortage. Lastly, a comparison of urban and rural schools, regarding teacher recruitment, retention, and GYOT programs, will be discussed.

CHAPTER II

LITERATURE REVIEW

Teacher shortages have affected countries across the globe. The researcher explored this problem through a review of the literature from international, national, and regional lenses. In Chapter II, findings of secondary research are presented. Additionally, research-based recommendations for addressing the teacher shortage will be offered. Finally, the literature reviewed focuses on Texas urban schools and rural schools, regarding teacher recruitment, retention, and "Grow Your Own Teacher" (GYOT) programs. An examination of the current status of teacher attrition and retention specific to the state of Texas will provide insight to some of the challenges currently faced by Texas school districts.

International

The literature shows that countries around the world are facing a teacher shortage. Research indicates Canada, Australia, New Zealand, the United Kingdom, and Sweden are among those countries outside of the United States who have identified teacher shortage as a growing problem in education. Approximately 60% of the 1995 teacher education program graduates were employed as teachers in the 2000 school year (Canadian Teachers' Federation, 2003). Australia has reported a 25% increase in the attrition rate from 1975 to 2005 for beginning teachers in their first 3 years (Goddard, O'Brien & Goddard, 2006). Worth and Lazzari (2017) reported that the United Kingdom has seen an increase in teachers leaving the profession every year from 2010 to 2014. The Swedish educational system is not exempt from teacher shortages. "In 2020, the

Swedish educational system will lack roughly 22,000 teachers or roughly 20% of the teaching workforce" (Lindqvist, Nordanger, & Carlsson, 2014, p. 94).

Teacher attrition is a critical factor, contributing to the shortage of qualified teachers in the United States and countries throughout the world (Brill & McCartney, 2008; Dove, 2004; Hudson & Hudson, 2008; Ingersoll & Smith, 2003; Macdonald, 1999; Shakrani, 2008). Causes of teacher attrition include inadequate salary, substandard quality of teacher preparation, poor working conditions, and peripheral conditions that affect service (Dove, 2004). Peripheral conditions that affect service include invasive governmental policies aimed at increasing bureaucratic functions and depersonalizing the profession (Dove, 2004). Macdonald (1999) found teacher attrition rates varied from 5% to 30% on the international scale, depending on the country. Research has also identified countries, such as the United Kingdom, Australia, France, and Germany, that have experienced shortages of teachers in general or in specific fields (Cooper & Alvarado, 2006). Much of the research conducted has focused on beginning teachers within their first 5 years in the profession.

Canada has experienced a teacher shortage because the retirement rate has increased while simultaneously the number of teacher candidates graduating has declined (Alberta Learning, 2003; British Columbia Public School Employer's Association, 2009; Kitchenham & Chasteauneuf, 2010; Nova Scotia Department of Education, 2007; Organisation for Economic Co-operation and Development Index, 2005). Researchers Kitchenham and Chasteauneuf (2010) confirmed the teacher retirement rates had accelerated from 2000 to 2010. The accelerated retirement rate of teachers is coupled with a low enrollment at the university level for teacher preparation programs. The

Organisation for Economic Co-operation and Development (2005) compared education across nations and conducted a policy analysis. The Organisation for Economic Co-operation and Development acknowledged that early career teacher attrition is not a problem for all countries, but it is a concern for Canada. Further research conducted in Canada has confirmed that beginning teachers leave the profession at a dramatic rate after their fourth year, which, combined with the accelerated retirement rates, has compounded the teacher shortage. "What does raise concerns is that although around 20% of beginning teachers leave teaching after years one, two and three, that percentage rises precipitously to around 46% in year four" (Clandinin, Downey, & Huber, 2009, p. 145). Accelerated retirement, low enrollment at the university level in teacher preparation programs, and high attrition rates for beginning teachers has had a significant effect on the teacher shortage in Canada.

Cooper and Alvarado (2006) explained the supply of teachers could be viewed as a pipeline that springs leaks over time. The researchers concluded that the supply of teachers has trouble keeping up with the demand due to population growth. Lonsdale and Ingvarson (2003) affirmed the teacher supply in New Zealand is connected to the population growth in New Zealand. Schools in New Zealand were having a more difficult time filling positions in 2003 compared to previous years due to increased enrollment in the primary and secondary schools. Lonsdale and Ingvarson also concluded that the high attrition rate out of the teaching field was compounding the problem. In addition, the researchers found beginning teacher attrition rates at the turn of the 21st century were similar to the rates found in other countries dealing with teacher

shortages. In fact, over 54% of beginning teachers had left the profession in the first 3 years.

Research conducted in the United Kingdom by Smithers and Robinson (2003) indicated patterns similar to those found in other nations previously discussed. Specifically, a high level of turnover among new entrants to the profession was identified. Smithers and Robinson also found that almost half of their respondents who left the teaching profession did not retire, but instead left the profession altogether.

The literature presented indicates numerous nations across the world are facing a common problem concerning teacher retention. In the years from 1997 to 2003, the United States, Canada, New Zealand, Australia, and the United Kingdom all had similar attrition rates of roughly 50% for beginning teachers. Lonsdale and Ingvarson (2003) surmised this phenomenon could be due to the negative perception of the teaching profession. The researchers further identified low starting salaries and increasingly stressful factors as influencing beginning teachers' decisions to leave the profession. The factors cited by Smithers and Robinson (2003)—heavy workload, burdensome government initiatives, and stress associated with testing—ranked in the top of the list of reasons beginning teachers leave the profession. In reviewing research on teacher retention and attrition rates, salary had been cited as one of the top reasons for teachers leaving the profession (Hendricks, 2014; Imazeki, 2005; Smith, 2011). Researchers have also reported a strong association between enrollment in education programs and teacher retention rates. "The quality of field experiences has a direct effect on the quality of teacher candidates' learning experience within the program. Time, resources, communication, and a variety of partnership affiliations are needed to build quality

replacements" (Gambhir et al., 2008, p. 19). Henke, Chen, and Geis (2000), who conducted a study for the National Center for Education Statistics from 1992 to 1997, found 49% of probationary certified individuals left the profession within the first 5 years; in comparison, only 14% of standard certified individuals left in the same time period. This confirms the findings that teachers' preparedness, effectiveness, and retention is more positive among traditional teacher certification programs than among alternative certified programs that offer less preparation prior to entry into the teaching profession (Boyd et al., 2008; Darling-Hammond, Chung, & Frelow, 2002; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005).

The review of international sources revealed a global teacher shortage. Following is a review of associated literature from the United States. The national review will include information about the current state of education, impact of legislation, and an analysis of recommendations targeted at increasing teacher retention rates.

National

The educational research studies that have been performed across the United States have primarily focused on teacher retention. The research has encompassed different aspects of the teacher retention model, including impact on student achievement, attrition, mobility, and the effects of legislation. Schools lose valuable human capital, and administrators lose time in recruiting and finding qualified candidates for vacant teaching positions. Past research indicates that teacher attrition has been a significant problem in the United States (Grissmer & Kriby, 1997; Hanushek, Kain, & Rivkin, 2004; Ingersoll, 2001; Ingersoll & Kralik, 2004; Johnson, Kardos, Kauffman, Liu, & Donaldson, 2004).

Additionally, researchers have argued that in high–turnover schools students are more likely to receive instruction from less experienced teachers who are less effective (Kane, Rockoff, & Staiger, 2008; Rivkin, Hanushek, & Kain, 2005). Goldhaber (2002) noted that students are the losers because teacher quality has been shown to be one of the most important factors to influence student achievement. The instability caused by a revolving door of new teachers is problematic for schools that are instituting reforms because the new teachers are likely to repeat the mistakes of the previous teachers rather than improve upon them (Boyd et al., 2008). Barnes, Crow, and Schaefer (2007) categorized the reasons for teacher turnover into eight categories. These categories include recruitment and advertising, special hiring incentives, administrative processing, training new hires, training first-year teachers, professional development for all teachers, the learning curve for new hires, and substitute teachers. Researchers Levy, Joy, Ellis, Jablonski, and Karelitz (2012) found earlier researchers had previously encountered difficulty in calculating the cost of teacher turnover and the costs associated with teacher attrition.

Contemporary researchers now look at the costs associated with teacher attrition, which are easier to estimate. "Nationally, schools lose between $1 billion and $2.2 billion in attrition costs each year through teachers moving or leaving the profession" (Schaffhauser, 2014, para. 1). This is a small amount compared to the findings of a study performed by the National Commission on Teaching and America's Future (2007). The NCTAF estimated teacher attrition accounted for over $7 billion for the U.S. public education system in 2007.

Teachers are dropping out of the teaching profession at an alarming rate. Shakrani (2008) estimated 1,000 teachers leave the field of teaching every school day, based on data collected from 2006 to 2007. This is further compounded by an additional 1,000 teachers moving to other schools, seeking more favorable working conditions. These numbers do not take into account the number of teachers who retire each year. In 2007, the national cost of teacher attrition had reached $2.2 billion per year, but the attrition costs varied from state to state. A comparison of states conducted by Skakrani (2008) revealed, "Michigan spends $180 million; Ohio spends $206 million compared to Illinois at $224 million" (p. 2). California and Texas were found to spend the most annually on teacher turnover. Shakrani estimated California expends $456 million, while Texas spends the most at $505 million annually. Boyd et al. (2008) claimed that teacher attrition is costly for schools due to the time and effort associated with continuously recruiting teachers.

Hill and Barth (2004) of Southern Utah University provided an analysis of the impact of the No Child Left Behind Act (NCLB, 2002) and its subsequent impact on teacher retention.

> The No Child Left Behind Act (NCLB, 2002) is a landmark reform reauthorizing the Elementary and Secondary Education Act (ESEA, 1965). Its intent is to close achievement gaps among students who belong to minority groups, have disabilities, are economically disadvantaged or have limited English proficiency. (Hill & Barth, 2004, p. 173)

The massive legislation was passed with intentions of increasing student performance and closing achievement gaps. Hill and Barth (2004) deduced it has caused unintended consequences for education. Teacher retention, while a historical issue, is now a problem of increasing magnitude (Hill & Barth, 2004). The NCLB Act (2002)

brought increased pressure on teachers by linking teacher competence to student performance on high-stakes testing. Researchers have indicated that teachers are leaving the profession due to low morale, which is enhanced by pressure for high student achievement on standardized tests (Boaler, 2003; Ingersoll, 2001; Justice, Greiner, & Anderson, 2003; Lobosco & Newman, 1992; Shann, 1998).

New legislation has since been enacted to replace the NCLB Act (2002). The Every Student Succeeds Act (ESSA) of 2015 was designed to address many barriers and challenges found in NCLB (Dynarski, 2015). The ESSA leaves high-stakes testing in place but returns much of the autonomy of education to the state. Rothman (2017) determined that, while offering flexibility to states and districts, ESSA allows school officials to use evidence-based interventions. The evidence-based intervention description of ESSA was taken from the Elementary and Secondary Education Act of 1965. The Elementary and Secondary Education Act of 1965 defined evidence-based intervention as "an activity, strategy, or intervention that demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes" (p. 393). The new legislation, ESSA, has a different focus for teacher retention. Instead of focusing on the "highly qualified" status of teachers, it encourages the recruitment of "high-quality" principals. Boyd et al. (2011) believed that principal quality is the second largest factor in student achievement. Boyd et al. also concluded effective principals attract and retain high-quality teachers.

Flynt and Morton (2009) attributed the national teacher shortage to two primary factors, a growing student population and an aging teacher workforce. This echoes previous research that had suggested turnover is greatest among beginning teachers and

those nearing retirement (Adams, 1996; Dworkin, 1980; Flynt & Morton, 2009; Hanushek et al., 2004; Ingersoll, 2001; Murnane, 1984). Research has been concerned with ways to identify attrition factors and effective ways to increase teacher retention rates. Ingersoll and Smith (2003), using data from 1999 to 2001 found that a high percentage of young, less experienced teachers leave the profession within the first 5 years. Similar to the teacher attrition rate in other countries, the United States is faced with 50% of beginning teachers leaving the profession within the first 5 years.

While many factors contribute to teacher attrition, Flynt and Morton (2009) highlighted four contributing factors. The factors identified include high student to teacher ratios, lack of teacher mentor programs, compensation inadequacies, and teacher's inability to balance work life with home life. Flynt and Morton then determined various ways in which schools could combat teacher attrition and increase retention. A strategy discussed was to increase teachers' salaries. This method, however, is not cost effective in the current political and economic environment. Although salaries vary by state, teacher salaries in the United States are generally lower than those offered to other college graduates (Podolsky & Kini, 2016). In other studies, researchers have found that increasing teachers' salaries had a positive relationship with attrition (Brewer, 1996; Imazeki, 2005; Kirby et al., 1999; Krieg 2006; Podgursky, Monroe, & Watson, 2004; Stockard & Lehman, 2004). Another strategy mentioned is to establish an in-depth induction program to increase new teachers' knowledge base and immerse them in the school culture. Common elements of comprehensive induction programs for beginning teachers include mentoring, social support from supervisory personnel, and opportunities for shared planning with peers (NCTAF, 2007). Ingersoll and Smith (2003) agreed that

the utilization of mentors is a critical remedy to increase teacher retention. Recent research has identified new teacher induction programs and other ways in which school administrators could provide support within their schools to improve retention rates. "Induction programs should be developed with the make-up of the school or school district in mind. No one-size-fits-all approach should be implemented" (Flynt & Morton, 2009, p. 4).

The literature reports the cost associated with teacher turnover is significant for schools. Additionally, the cost of teacher turnover is affected by different aspects inside and outside of education. The specific costs associated with teacher turnover have been addressed by different researchers, but each has had his or her own method of measuring the cost, making it difficult for comparing. The legislation associated with educational reform include the NCLB (2002) and ESSA (2015), which aim to provide high-quality teachers for all students, but each law approaches the aim from a different direction. From the review of literature, the researcher has also identified factors that influence teacher turnover rates and recommendations to increase retention rates.

Recent literature indicates that there exists a national teacher shortage. National organizations have evaluated the impact of teacher attrition and legislation aimed to increase retention rates. An analysis of the condition of education specific to the state of Texas has focused the lens of the relevant literature. A review of information specific to the state of Texas is discussed such as costs associated with teacher turnover in Texas and a snapshot of the status of teacher attrition within the state for 2015–2016 school year is presented.

Texas

The Texas education system is a dynamic system. The Texas Education Agency (TEA) provides an annual snapshot of current school district data. In the 2015–2016 snapshot summary, 1,029 school districts were operating 8,044 school campuses within the state. The annual report indicated 333,029 full-time teachers were instructing 5,037,016 students enrolled in Texas public school districts. Of these teachers, 33.7% had less than 5 years of classroom experience. The turnover rate for this school year was calculated at 15.7%. According to the *Texas Tribune*, "Texas has more kids in public school than 28 states have residents" (Ramsey, 2015, para. 1).

Research differs in regard to specific state attrition costs. The main source of information was extrapolated from a report initiated by the Texas State Board of Educator Certification. The Texas State Board of Educator Certification utilized the Texas Center for Educational Research (2000) to provide a model for estimating costs associated with replacing Texas teachers. The model was produced for the costs, which equaled 25% of the teacher's salary plus the cost of benefits. The researchers acknowledged the model could not be easily or fully applied but offered an estimation of the costs of teacher attrition. Shakrani (2008), using federal annual data for 2006 to 2007, estimated the costs of teacher attrition in Texas to be $505 million annually.

Burridge et al. (2016), from the Center for Research, Evaluation, and Advancement of Teacher Education, reviewed longitudinal data following teacher employment as they enter, leave, or move from district to district within the state. The researchers followed a cohort of 24,450 teachers for the 2009–2010 school year over a period of 5 years. Burridge et al. extrapolated the retention rate for this cohort to be at

62.5% at the end of the 5-year period, using data collected from the 1,029 school districts. The data indicated a number of the educators moved into different positions within the Texas public school system. The movement of educators into different positions caused the retention rate to increase from 62.5% to 68.4%. The researchers found that 31.6% of the cohort left the teaching profession for another career. Burridge et al. called for more research on the influence of the school and district on teachers' career development and their decisions to stay in the classroom. Recommendations from the study included increasing the number of preservice teaching experiences, creating financial or organizational incentives to retain the best teachers in the profession, and incorporating an individuals' developmental career goals.

Research in 2008 estimated teacher attrition cost the state of Texas $505 million annually (Shakrani, 2008). With an estimated five million students to educate, it is at a great cost to lose approximately 31.6% of all beginning teachers within the first 5 years. Research confirms the need to retain teachers who have been in the classroom for at least 3 years due to their improved performance (Goldhaber & Anthony, 2004; Rockoff, 2004). As the review became more specific, an analysis of the Texas urban and rural school districts provided a basis of comparison of teacher attrition and the challenges associated with each.

Texas Urban

Texas urban school districts experience unique challenges when faced with teacher recruitment, retention, and attrition. The TEA (2016) defined "major urban" school districts as located in a county with a population over 950,000, enrollment is the largest in the county, and at least 35% of students are economically disadvantaged.

Major urban school districts accounted for 11 of the 1,024 school districts in Texas during the 2015–2016 school year. Jacob (2007) conducted research to examine the challenge of staffing urban schools with effective teachers. Jacob characterized an urban school as one located within a large central city with students experiencing high rates of poverty. The data collected in the 2003–2004 school year from the Schools and Staffing Survey conducted by the U.S. Department of Education (2004) confirmed that over 56% of students attending urban schools participated in free lunch programs.

Difficult-to-staff urban schools with high-poverty and high-minority student populations experience the greatest number of out-of-field teaching, which has been linked to teacher attrition (Extrom, 2002; Jerald & Ingersoll, 2002). Ingersoll (2001) explained that out-of-field teaching is the teaching carried out by teachers who are assigned to teach subjects that do not match their certifications or education. Many urban schools face difficulties staffing their schools due to competition for candidates. Urban school districts compete for effective teachers from nearby urban districts, suburban districts, and local private schools. Jacob (2007) found urban districts have limited competition between each other, but face more competition from private schools than any other district classification. Compounding this problem is the size of the school district. An urban district has an embedded large bureaucratic system, which can hinder its administrator's ability to hire eligible candidates. This is due to the inability of large complex systems to act quickly and decisively (Jacob, 2007).

As teachers leave their teaching positions, student achievement may be negatively impacted. Research conducted by Hanushek et al. (2004) indicated that student achievement has a negative correlation with teacher turnover. Guin (2004) corroborated

the findings of Hanushek et al. by concluding a negative correlation exists between teacher turnover and student achievement. Students enrolled in urban schools are affected by higher than average teacher attrition rates. Researchers are not clear if student achievement increases teacher attrition or vice versa. Ronfeld, Loeb, and Wyckoff (2013) explained that low student achievement could cause teacher turnover rates to increase. On the other hand, Ingersoll and Smith (2003) confirmed that teacher turnover in schools negatively impacts student achievement and the school atmosphere.

Teachers are a form of human capital in which schools invest, primarily in school-specific knowledge such as daily routines, curriculum requirements, and innovative programs designed for the classroom. The amount of investment in recruiting new teachers is minimal compared to the amount of capital a school loses, concerning the school-specific knowledge (Hanushek & Rivkin, 2010). Myung, Martinez, and Nordstrum (2013) determined the human capital of teachers is the largest investment for school districts. Dallas Independent School District is one of the largest school districts in the state of Texas with 230 schools and 157,000 students. Based on a report by Commit! Partnership (2017), teacher turnover in Dallas County was approximately $80 million. The findings of the study noted that 95% of the teacher demand in Dallas was caused by teacher attrition. The reasons a teacher moves to another school may be the anticipation of a decreased workload, more appreciation for work, or any number of motivational factors within the profession. Jacob (2007) confirmed working conditions play a larger role than wages in a teacher's decision to work in an urban school.

Urban school districts are marred by both teacher shortages and stigmas of classroom management problems. The bureaucratic functions associated with urban

school districts further compound the problem. This influences the migration of teachers away from urban school districts. "Teachers are moving from poor to wealthier schools, from high-minority to low-minority schools, and from urban to suburban schools" (Ingersoll & Merill, 2010, p. 19).

The review of literature on Texas urban schools has uncovered an examination of classification criteria, the impact of teacher shortages in urban schools, and possible causal factors. Just as Texas urban districts are unique regarding staffing, so too are Texas rural districts. Following is a review of literature on Texas rural school districts' teacher recruitment and retention.

Texas Rural

The literature reviewed was that on teacher retention from the global, national, state, and urban lens. The examination of Texas urban education provided context for the largest school districts. To examine Texas schools and districts through a rural lens, a definition for Texas rural schools, challenges for teacher recruitment and retention, and rural focused recommendations are presented to further contextualize this study.

A rural school district is defined by the TEA (2016) as having an enrollment between 300, the median enrollment for the state, and a growth rate of less than 20% over the previous 5 years. In 2016, there were 459 school districts with this designation. Texas has a total of 1,024 school districts, not including charter schools; however, Texas rural classification accounts for 44.8% of all school districts. In contrast to the TEA definition of rural, the National Center for Education Statistics (2006) used a classification system consisting of 12 different indicators that classifies rural areas as fringe, distant, and remote.

The Texas Rural Schools Task Force (2017) reported five factors faced by Texas rural school districts. Teacher recruitment, teacher retention, educator and community isolation, financial resources, and human capital were the primary factors identified. Many school districts across Texas are faced with teacher shortages. Player (2015) acknowledged that rural schools feel the challenge of teacher shortages more than schools in suburban or urban settings. Texas is a large area, encompassing 268,601 square miles, an area equivalent to New England, Pennsylvania, Ohio, and Illinois combined (Gleaton, 2008). Texas rural school districts are found predominately in distant and remote areas. "Texas has more schools in rural areas than any other state in the United States" (Texas Rural Schools Task Force, 2017, p. 7). The geographic location of these school districts has an impact on the availability of teacher candidates. Smith (2014) found that school districts in close proximity to an abundance of teacher preparation institutes have more teacher candidates available than do those further away. Many of the teacher preparation institutes in Texas are found at the universities, which are located in urban or suburban areas.

Research has confirmed that Texas rural school districts, when compared to school districts of other classifications, are challenged by higher poverty levels, a larger migrant student population, a higher special education population, and a higher than average percentage of students with limited English skills (Jimerson, 2003). Hanushek et al. (2004) found that Texas public school teachers prefer working in schools with nonminority and low percentages of economically disadvantaged students. School districts with a high population of Hispanic or African American minorities as well as

high levels of economically disadvantaged students are subjected to an increased level of teacher attrition (Hanushek et al., 2004).

When a district can locate and then hire a teacher, the focus then turns to teacher retention. Texas rural school districts have unique challenges in addressing the issue of teacher retention, and there is no guarantee that teachers will stay with the district for an extended period. Rural school districts have found retention strategies that include furnishing housing, promoting a positive culture, offering retention bonuses, and partnering with nearby districts to reduce isolation (Dessoff, 2010). When employed by rural school districts, these strategies require time and fiscal resources but have been shown to reduce teacher turnover rates (Murphy & DeArmond, 2003).

The rural school districts of Texas comprise a large percentage of all school districts in the state. The review of literature pertaining to teacher recruitment, retention, and recommendations for Texas rural schools has yielded successful strategies these districts can utilize for recruitment and retention in spite of teacher shortages. The review of the literature has unearthed similarities and differences, which will be discussed in the following section.

Similarities and Differences Found in Literature

An analysis of literature pertaining to rural schools has yielded similarities and differences concerning teacher recruitment and retention specific for rural schools. Researchers have agreed there is a teacher shortage in all parts of the United States, and classifications of schools correspond with attrition rates. The teacher shortage has been attributed to different factors such as a high percentage of teachers reaching retirement age, beginning teachers leaving the profession, and an increasing student population

(Swanson, 2011). Research indicates two primary contradictions with respect to teacher pay and teacher retention rates, specific to rural school districts.

A primary contradiction found in the literature focused on teacher retention rates for rural schools. The high teacher attrition rate is a common theme found in the literature. Swanson (2011) found retirement is a primary cause for the teacher shortages across the United States. The findings of Swanson echoed previous research conducted by Der Bedrosian (2009), who found that a third of the population is part of the baby boomer generation, which is reaching retirement ages. Teacher attrition is amplified by the fact that a high percentage of beginning teachers leave the profession within the first 5 years (Darling-Hammond, Berry, & Thoreson, 2001; Ingersoll, 2001).

Another common contradiction discussed pertains to teacher salaries. Research has confirmed many rural school districts offer lower pay than do their counterparts in more suburban areas (Jimerson, 2003). Jimerson (2003) reported the average teacher salary at nonrural schools was 13.4% higher than that at their rural school counterparts. Collum (2011) confirmed the attrition rate for urban and rural areas may be affected by the attraction of higher salaries associated with suburban areas. A lower cost of living could compensate for the lower salary when compared to a higher cost of living and a higher salary associated with nonrural areas (Monk, 2007). The lower salaries in small rural school districts may be attributed to a higher percentage of beginning teachers. "High turnover and an inclination to hire inexperienced people will lower average salaries" (Monk, 2007, p. 164). The average salary would naturally decline if a higher percentage of inexperienced teachers were hired to replace the more experienced teachers leaving the school, primarily because teacher salary is dependent on years of experience.

Research regarding teacher turnover rates in rural school districts has also been contradictory. Monk (2007) indicated rural schools' teacher turnover rates are often high while hiring is difficult. This contradicts the research conducted by Ingersoll (2001) in which he compared teacher turnover rates for the three different school classifications; based on data from 1991–1992 school year, the teacher turnover rate for rural schools was (11.2%) compared to urban school rates at (14%) and suburban rates of (13%). In some documented cases, rural schools were able to retain teachers at a higher rate than that of other school districts due to the predisposition of rural communities (Boyd et al., 2005).

Unique Characteristics of Rural Schools

Rural schools across the United States have unique characteristics and must be reviewed in context. A rural school district found in the Midwest is different than a rural district found in one of the Eastern or Western states. A rural school district found in East Texas will differ from one of similar size in South Texas. There are advantages and disadvantages to the education received at a rural school when compared to that obtained at a nonrural school (Osterholm, Horn, & Johnson, 2006).

Several challenges faced by rural schools include retaining effective principals and teachers, building community relationships, and meeting accountability standards without an increase in financial resources (Erwin, Winn, & Erwin, 2011; Monk, 2007). Recruiting teachers in rural schools can be a complex process (Osterholm et al., 2006). Many rural school districts had lower teacher turnover rates compared to those of urban and suburban schools. The rural school also has a lower percentage of teacher vacancies compared to the national average (Ingersoll, 2001). The impact of losing a teacher in a

rural school district is more significant compared to the impact in other school districts. When a rural school district loses a math teacher, a replacement is much less likely to be available (Beesley, Atwill, Blair, & Barley, 2010). The small size of many rural school districts requires teachers to maintain multiple teaching certifications (Monk, 2007; Osterholm et al., 2006).

In small rural schools, teachers may be responsible for teaching more subjects than they are qualified to teach (Beesley et al., 2010). NCLB (2002) and ESSA (2015) have placed difficult mandates for all school districts for securing teaching candidates. Osterholm et al. (2006) acknowledged that new regulations have increased the districts' competition for teachers; the rural schools are disadvantaged due to their budgets and locations. Research indicates rural school districts are twice as likely to have educators teaching subjects outside of their certification field (Lazarus, 2003). For example, a high school certified math teacher may be required to teach a science course to provide the necessary courses for students to graduate. Reeves (2003) attributed "out of field" teaching to smaller, rural schools' lack of financial resources to hire additional staff.

Research indicates school size may pose additional problems for rural school districts. School size has been found to be a significant factor in affecting teacher retention rates. A school with less than 300 students experiences a higher teacher turnover rate than schools with more than 300 students (Strizek, Pittsonberger, Riordan, Lyter, & Orlofsky, 2006). This research is significant for Texas education due to the number of school districts with a rural classification.

Monk (2007) identified various disadvantages for rural school districts that must be overcome to continue functioning. One of the most pressing challenges for rural

communities is the problem of retaining younger populations (Monk, 2007). Many rural school educators return to their respective hometowns to participate in the maintenance of local traditions. Orr (1992) described a common characteristic of rural schools and communities, a deep connection to place, where homegrown teachers understood the culture and traditions. This is beneficial for the students who obtain the proper education to become a certified teacher. However, Monk found that rural populations have a higher percentage of students who do not go to college. This characteristic of rural students has a direct negative impact on the ability of rural schools to recruit and retain teachers.

Geographic location of rural communities can be a deterrent for many possible teacher candidates. Teachers unfamiliar with a rural setting experience social and geographic isolation, which are significant barriers for recruitment and retention (McClure & Reeves, 2004; Zhang, 2008). Monk (2007) described the inherent characteristics of rural communities that impact teacher recruitment and retention efforts. Characteristics of these communities are also associated with aging populations, job loss, and high levels of poverty. The level of poverty found in these locations can be attributed to various economic responses such as a decline in wood production or textiles, agribusiness consolidation, and the disappearance of family farms (Monk, 2007). Higher levels of poverty affect the ability of rural school districts to recruit and retain teachers due to their lack of financial resources. Rural school teachers may be compensated at lower levels due to the fiscal capacity of their geographic locations, which lack industries that accommodate fiscal growth (Monk, 2007). The graying of rural communities has been increasing and may increase further if retirees on fixed incomes reject tax increases for their communities (Howley & Pendarvis, 2002).

Rural school districts have many obstacles to overcome to recruit and retain teachers. Researchers have emphasized specific characteristics of rural school districts that have been found to increase recruitment and retention rates. Class sizes are typically smaller in rural school districts, allowing more one-to-one instruction (Osterholm et al., 2006). The small class sizes in rural schools are an attractive feature for teachers (Monk, 2007). Classroom management problems are typically fewer in rural school districts compared to those in districts of other classifications. This also reinforces the perception that rural school districts are safer working environments (Monk, 2007; Osterholm et al., 2006). In many rural communities, school teachers are personally connected to the community through the school. Osterholm et al. (2006) noted, "In rural schools, where most everyone knows each other and their families, there is always someone helping to keep track of students" (p. 5). These are a few of the positive characteristics associated with rural school districts.

Rural school districts across the United States are fundamentally different, but share a few common characteristics. A number of studies have examined the disadvantages and advantages associated with teaching in a rural school district. Researchers have recommended that rural school districts utilize the GYOT approach to solving the localized teacher shortages (Monk, 2007). A review of the GYOT programs found across the country will be discussed in the following section.

Grow Your Own

Research identified positive and negative characteristics of rural school districts that affect teacher recruitment. "Recruitment and retention challenges are once again leading to teacher shortages across the nation. Especially in urban and rural school

districts, low salaries and poor working conditions often contribute to the difficulties" (Guha, Hyler, & Darling-Hammond, 2017, p. 31). This could prove detrimental for rural school districts that are attempting to fill vacant positions.

Teacher candidates have the option of obtaining a teacher certification through the traditional university route or an alternative route for working professionals with degrees outside of education. Researchers have indicated a GYOT approach may help provide the necessary candidates for rural school districts. Monk (2007) highlighted the strategy of a GYOT approach for school districts to supplement the localized teacher market. The GYOT programs capitalize on people within their own communities who have expressed interest in teaching and have the ability to become a teacher (McClure et al., 2003).

GYOT initiatives target individuals within the community to fill teaching vacancies. Research indicates school districts pursuing a GYOT approach to fill teaching vacancies should capitalize on the idea of "rootedness" (Boyd et al., 2005). Boyd et al. (2005) affirmed a teacher's hometown has a strong effect on his or her employment location decision. Research recommends rural school administrators should focus recruitment efforts on targeting teacher candidates with educational experiences related to rural areas (Collins, 1999). Many teachers seeking positions look for locations and characteristics associated with their hometowns or nearby regions. "Prospective teachers whose hometown is in a rural region prefer to locate in other rural regions relative urban or suburban locations" (Boyd et al., 2005, p. 124).

The GYOT approach was introduced in 1937, starting with programs such as Future Teachers of America. Since the induction of Future Teachers of America, other organizations have focused on recruiting candidates from the high school setting. These

programs include Future Educators of America and local Grow Your Own initiatives. GYOT programs currently available are found in different states such as Grow Your Own Illinois, Recruiting Washington Teachers, and the Minnesota Collaborative Urban Educator Program. These programs were developed in collaborations between school districts and institutions of higher education to meet the contextual needs of each unique school district (Washington Professional Standards Board report, 2016). This approach could include identifying specific high school students interested in the teaching profession, identifying paraprofessionals capable of completing college coursework, or finding community members with college degrees who are interested in changing careers.

A school district also has paraprofessionals, working alongside teachers, who can be tapped to increase the number of qualified teachers. The positive findings of programs that provide paraprofessionals working in the school with the necessary training and education to become teachers have been cited in several studies (Clewell & Villegas, 2001; Eubanks, 2001; Fairgood, 2008; Vaughn & Paugh, 2009). Fairgood (2008) found a 92% retention rate from 1995 to 2005, for paraprofessionals who completed a bachelor's degree and obtained the proper teaching credentials in California. Monk (2007) confirmed that the targeting and training of paraprofessionals in the school has shown promise. A pathway for paraprofessionals to become teachers—the Teacher Preparation, Retention, and Empowerment Project—has been developed by the University of Colorado. Since its inception in 2009, 166 candidates have graduated from the program; they were placed into 124 school districts including 93 rural districts (Chopra, 2011).

The success of GYOT programs relies upon the collaboration between the school district, community organizations, and institutions of higher education. Exposing

students of younger ages to a future opportunity of teaching, instead of turning to it as a backup career choice in their college years, may help produce more teachers acclimated for rural schools. Collins (1999) recommended that universities should identify students interested in teaching in rural districts and provide specific preparation for teaching in rural communities. Additional researchers have also substantiated that a partnership between school districts and universities has the ability to yield positive results with GYOT approaches. McClure and Reeves (2004) recommended, "Collaborations among school districts and universities can improve teacher preparation programs by making them responsive to local needs. Such collaborations are also a vital component of many GYOT programs" (p. 9).

Rural school districts' recruitment efforts are affected by the unique characteristics of their respective communities. The number of candidates produced by the traditional university teacher preparation programs is limited for these school districts. School administrators are beginning to look within their own communities for possible teacher candidates. This approach of growing your own has shown promise in the limited number of programs currently in existence. The programs can vary regarding who is targeted, what resources are provided, and the specific outcomes. The research recommends these programs be developed in a collaborative manner to fulfill the unique needs of individual districts (McClure & Reeves, 2004).

Summary

A review of recent research indicates several countries, including the United States, are experiencing teacher shortages. The shortage experienced can be affected by factors such as geographical location, the age of the workforce, or policies enacted by

governments. Other countries are experiencing similar retention rates of approximately 50% for beginning teachers.

The problem of teacher attrition in the United States has been thoroughly investigated and is compounded by the age of U.S. teachers. Ingersoll, Merrill, and Stuckey (2014) verified the teaching force has been getting older and teacher retirements have increased. The trend of a graying teacher workforce may also be explained by the lack of interest in teaching by the younger generations. In 2005, the Alliance for Excellent Education, using data from the U.S. Department of Labor, estimated the annual cost of teacher attrition at $4.9 billion (Barnes et al., 2007). The reforms enacted by policy makers, the perceptions of the teaching profession, and lower salaries than those of other professions continue to place pressure on school districts to find eligible teaching candidates.

Texas has experienced a surge of student enrollment, which has enhanced the need to increase the number of teacher candidates. The total student enrollment has increased to 5,299,728 students in 2016 from 4,521,043 students in 2006 (TEA, 2016). This represents an increase of 17.2% in student enrollment. As student enrollment climbs across the state, the need for teachers increases.

Urban and rural districts in Texas have few appealing characteristics with which to recruit and retain teachers. The two school district classifications have clear differences in many areas, but find commonalities in poverty levels, teacher salaries, and difficulty hiring teachers. The literature suggests recruitment and retention efforts should take a collaborative approach.

The need to find teacher candidates is paramount for education. A teacher shortage has been well documented through educational research. The lack of research on GYOT approaches specific to rural schools points to a clear need of evaluation in this area. Further research is warranted for GYOT programs developed in collaboration between school districts and higher education institutions.

Chapter III will provide a description of the methodology employed in this research study. It is the goal of the researcher to seek additional information specifically related to teacher recruitment and retention in rural school districts of West Texas. This information will add to the body of knowledge on teacher shortage, recruitment, retention, and GYOT programs.

CHAPTER III

METHODOLOGY

In Chapter III, the researcher will present the overall structure of the proposed study. The design of the qualitative case study will be described, and justification for selecting a qualitative methodology instead of a quantitative methodology will be offered. An explanation of the site and participant selection will be provided in order to impart the foundation of the data collection process. The data analysis process will utilize coding software in order to increase speed and efficacy.

Research Design

A qualitative research methodology was selected to enable the researcher to find and extrapolate realities of a complex subject. The qualitative case study methodology allows researchers to study a selected phenomenon within their own context (Baxter & Jack, 2008; Erlandson et al., 1993; Merriam & Tisdell, 2016). This form of research is appropriate to understand the underlying issues associated with teacher recruitment and retention in Texas rural schools. Strauss and Corbin (1990) asserted that qualitative methods can be used to extrapolate complex details from phenomena that may be difficult to obtain with more conventional research methods. Many successful public school teachers are already acclimated to rural Texas school districts. Why are these teachers staying in rural locations when many of their counterparts are leaving?

The researcher has elected a qualitative approach in lieu of a quantitative approach primarily due to the intrinsic nature of qualitative research. As the research progressed, the data guided the direction of the study. Concerning qualitative research, it is best to allow the data to guide the study instead of vice versa. Typical quantitative

research stands on the ground of knowing the exact direction and extrapolating information from specified variables. The researcher relied upon the interpretations of rich data to determine the direction of the study.

Qualitative research is a form of exploratory research, which allows the researcher to discover unseen insights to complex phenomena. The study was guided by a semi structured approach to allow the researcher to uncover more abstract and context specific data. "Educators live in a world where everyone has an array of thoughts about education. This multitude of ideas, opinions, and beliefs, generated throughout people's lives, makes the world of qualitative evidence both rich and confusing" (James, Milenkiewicz & Bucknam, 2008, p. 65). Qualitative research allows the researcher to discover various points of view of a selected topic and reconstruct the meaning. Denzin and Lincoln (2008) stated, "Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry" (Denzin & Lincoln, 2008, p. 14). A qualitative research method was used to explore perspectives and experiences regarding Grow Your Own strategies used by administrators, university officials, and teachers themselves in a rural school district.

As the researcher approached the subject of teacher recruitment and retention for Texas rural school districts, the interpretive nature of this qualitative study contributed to the search of best practices for recruiting and retaining teachers. "Qualitative data analysis involves a deductive dimension. As patterns or relationships were discovered in the data, hypothetical categories were formed, and the data was then read deductively to determine if these categories were supported by the overall data set" (Hatch, 2002, p. 10).

The qualitative research approach was most appropriate for formulating a thorough understanding of the social phenomena and its setting. A qualitative paradigm allowed the researcher to gather data in rich detail, via thick description. Previously conducted quantitative and mixed methods research has highlighted the abstract finding underlying the low teacher retention rates. In using the qualitative approach, the researcher was able to extrapolate information via thick description of the study setting and participants, which increased the studies' transferability to other Texas rural school districts.

In the proposed research plan, the researcher had chosen to utilize the descriptive case study approach. Baxter and Jack (2008) characterized the descriptive case study as an approach to research that facilitates exploration of a phenomena within its context using a variety of data sources. A variety of data sources allowed the researcher to examine multiple perspectives of the phenomena within the same boundaries of the study. "Innovative programs and practices are often the focus of descriptive case studies in education. Such studies often form a database for future comparison and theory building" (Merriam, 1998, p. 38). For the purpose of this study, qualitative method tools were used to study the programs and practices Texas rural school districts utilized to retain teachers.

The validity and reliability of a qualitative approach relied on the skill and rigor of the researcher. The researcher drew upon background experience and a thorough review of qualitative research methodology and adhered to consistent processes in collecting, coding, and synthesizing data. This adherence to method and process strengthened the trustworthiness of the findings.

Setting and Participants

The researcher selected a rural school district located in West Texas. Several schools were identified through discussions at Texas Tech University for the purpose of this research study. Texas Tech University has introduced a Grow Your Own Teacher program designed to increase the number of teachers available to Texas rural districts from within their own respective communities. This program has enabled Texas rural schools to begin producing their own Grow Your Own teachers in an effort to increase teacher retention. The selected school district was identified by the Texas Education Agency as rural. In addition, information extrapolated from the Texas Academic Performance Report will be used for comparing teacher retention rates, class sizes, and performance indicators. The information collected from this report will serve as a necessary baseline pertaining to transferability.

The researcher of this study used purposeful sampling in the process of selecting a rural school district in West Texas. "Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling" (Patton, 1990, p. 169). Random sampling would not provide a beneficial starting point in the qualitative context. The researcher believed analyzing the relationship between a Texas rural district located in West Texas and its partnering university provided meaningful information. "Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (Merriam & Tisdell, 2016, p. 96).

University officials involved with the GYOT program were identified and asked to participate in the study. The officials were asked to participate via a questionnaire. The initial invitation to participate was delivered via electronic email. A link to the questionnaire was embedded within the electronic mail. Officials who agreed to participate were then asked to participate in a follow-up interview. The researcher believed the officials provided additional insight into the governance and implementation practices associated with the program.

Participant selection involved district leadership such as the superintendent and campus leadership. These individuals were considered the gatekeepers; those who can limit access to the required locations and necessary participants. Erlandson, Harris, and Skipper (1993) concluded that gaining access to a selected site must be planned and included in the site selection process. The district and campus leadership were also invited to participate in the research study via a questionnaire. A link to the initial questionnaire was embedded within an electronic email. The leadership who agreed were then asked to participate in a follow-up interview. The researcher believed district and campus leadership provided an additional perspective about the implementation and effectiveness of the GYOT program.

The final group of participants included the teacher whom had completed the GYOT program within rural school. The teacher was asked to complete an initial questionnaire that was embedded in an electronic email. Once the questionnaire was completed, the teacher was asked to participate in a follow-up interview. The teachers' perspective offered a vital point for comparison of each level of the GYOT program. In

the process of analyzing the different hierarchical levels of a GYOT program, the researcher was able to produce an encompassing representation of the program.

Data Collection and Procedures

The first step in the data collection process was to select a school district located in West Texas. It was the intention of the researcher to discuss the practices of the district leadership regarding teacher retention and innovative programs to produce their own teachers. The district leadership was able to confirm possible participants of the study. A mass email to the district was sent to all staff in order to reduce coercion. Possible participants responded to the email on their own accord. After responding to the email, a consent form was completed to participants selected for the study. The study involved district and campus personnel, such as the district superintendent, mentor teachers, and participating teachers who have been involved with the GYOT program. The next level of participants included university officials who facilitated the program such as the dean and instructors. The study included six participants to gain insight into the program's development and utilization. By including the various perspectives of this program, the study incorporated triangulation. Flick (2004) described triangulation of data as combining information from various sources and collected at different points in time as well as from different locations and people. Triangulation of data is a critical cornerstone of qualitative research. Semi-structured interviews, observations, and artifacts were cross-referenced for triangulation.

In the initial phase of data collection, university personnel involved with the GYOT program were asked to complete a Qualtrics questionnaire. The Qualtrics questionnaire was delivered to university personnel via electronic email. Officials who

agreed and wre selected for the study then participated in a semi-structured, follow-up interview. The secondary phase consisted of meeting with the district leadership, the district superintendent involved with the GYOT program. The researcher discussed the possible participants with university officials and district leadership involved with the program. Possible program participants were invited to participate in the study via mass email. A consent form was completed prior to the questionnaire for participants selected for the study. The questionnaire was administered via Qualtrics online survey software and delivered via electronic mail.

The researcher analyzed qualitative data collected via semi-structured interviews. The study was not entirely focused on the GYOT program but explored the different ways Texas rural school districts followed a semi-structured protocol to maintain a direction of the conversations while allowing a certain degree of flexibility to evoke rich data from participants. The semi-structured interview lasted between 20 and 30 minutes. The questions guiding the study the interview focused on teacher retention and the effects of the GYOT program on Texas rural schools. Furthermore, an analysis of the partnership developed between the local school district and the university provided additional insight into the program's effectiveness. The questions selected for the semi-structured interview were associated with the guiding research questions.

Artifacts and documents were an additional data source for the study. Public school records, such as the Texas Assessment Performance Report and yearly reports from the school's Public Education Information Management System were acquired from the Texas Education Agency website. The data was then used to determine if there had been any improvement in teacher retention rates from the GYOT program or if the

GYOT program had prepared alternatively certified teachers more effectively. Records and documents included de-identified administrative performance evaluations of individuals in the program, comparative student performance data, or program evaluations. Additionally, the Tech Teach Teacher Candidate Handbook, and printed information from the Tech Teach Across Texas (2018) website also informed the findings of the study. Patton (2015) described the importance of documents "not only because of what can be learned directly from them but also as stimulus for paths of inquiry that can only be pursued through direct observation and interviewing" (p. 377). The search for documents, however, was more of a fluid process than a structured process. Erlandson et al. (1993) resonated that the search for documents can be affected by a researcher's emerging design.

Over the course of the study, a researcher's reflexive journal was maintained. The researcher reflected on the process and documented his own thoughts as they unfolded. Erlandson et al. (1993) discussed the importance of a reflexive journal by acknowledging it is capable of supporting the transferability, dependability, and confirmability of the study.

An audit trail, researcher's reflexive journal, and codebook are documents that were utilized throughout the course of the study. Merriam and Tisdell (2016) described an audit trail related to the qualitative study as a guide on how data were collected, how the process of categorizing data was carried out, and how general decisions regarding the study were made.

This qualitative case study was designed to determine an effective method of increasing teacher recruitment and retention for Texas rural schools. The design of the

study allowed for an examination of the selected research questions from multiple perspectives. Triangulation was achieved via questionnaires, semi-structured interviews, and artifacts.

Data Analysis

This study was performed with a grounded theory methodological framework. The researcher believed grounded theory was the most applicable approach to the research study. A primary basis for grounded theory relies upon the constant comparative method in which the researcher constantly compares. The process of data analysis was conducted in tandem with data collection (Erlandson et al., 1993; Merriam & Tisdell, 2016). "Perhaps the best way to elicit the various and divergent constructions of reality that exist within the context of a study is to collect information about different events and relationships from different points of view" (Erlandson et al., 1993, p. 31).

Research began with a list of preset questions to guide the study. Merriam and Tisdell (2016) described the process of selecting questions,

> Neither the exact wording nor the order of the questions is determined ahead of time. This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic. (p. 111)

The qualitative researcher was able to explore different ideas and directions as the information changed. "In this methodology, theory may be generated initially from the data, or, if existing grounded theories seem appropriate to the area of investigation, then these may be elaborated and modified as incoming data are meticulously played against them" (Strauss & Corbin, 1994, p. 273). The following are components of grounded theory that were beneficial for the study:

1. Data collection and analysis will occured simultaneously.
2. The constant comparative method allowed for comparisons to be made throughout the study (Glaser, 1965).
3. Categories and codes were constructed directly from the data. (Glaser & Strauss, 2012, pp. 101–103).

Time constraints during various phases of the study were anticipated. The constant comparative method allowed the researcher to continue working with data and formulating categories. The coding of interviews was in tandem with the observations and documents.

Decoding software was utilized for this study. The decoding software of QSR NVivo (Version 12) allowed for open coding of the data and subsequent classification into categories. The open coding process occurred after collecting questionnaire data and after transcribing interviews. An open coding process was beneficial to the beginning of qualitative research because the researcher was open to any possible outcomes (Merriam & Tisdell, 2016). The researcher transcribed the interviews and wrote observer comments in the progression.

Qualitative researchers agree that using electronic software enables the researcher to filter through larger amounts of data with a higher degree of efficiency (Briggs, Coleman & Morrison, 2012). As the categories began to emerge from the data, new data was analyzed and determinations were made regarding creating new categories or fitting them within previous categories. In this fashion, the categories were fluid and ever evolving. This process also followed the constant comparative methods procedures.

Once the open-coding process was completed, axial coding began in order to evaluate any relevant relationships between data sets.

The data analysis process led to the finding of trends and themes. At the conclusion of the data analysis, using the constant comparative method, the researcher drafted a final report of the findings. In the final report, findings were presented in a sequential and logical order.

Trustworthiness

Efforts to strengthen trustworthiness of qualitative research methodology was the responsibility of the researcher. Extra measures to increase confidence in the findings of the study were utilized and explained. "Qualitative research must demonstrate its truth value, provide the basis for applying it, and allow for external judgments to be made about the consistency of its procedures and the neutrality of its findings or decisions" (Erlandson et al., 1993, p. 29).

Various strategies to develop rigor and trustworthiness through the naturalist paradigm have been developed. The strategy selected for this study was developed by Lincoln and Guba. The following four qualities included in the research study were a measure of the study's trustworthiness: credibility, transferability, dependability, and confirmability (Denzin & Lincoln, 2018; Erlandson et al., 1993; Lincoln & Guba, 1985).

Credibility

In the context of a qualitative study, credibility is established by an interpretation of the constructed realities within the context of the study and the minds of the participants (Erlandson et al., 1993). Lincoln and Guba (1985) proposed prolonged engagement, persistent observation, triangulation, referential adequacy materials, peer

debriefing, and member checks as possible strategies to address credibility. This study increased credibility through triangulation, peer debriefing, and member checks.

Triangulation of data was achieved by the use of multiple sources of data collected from questionnaires, interviews, and documents (Erlandson et al., 1993; Merriam & Tisdell, 2016). Merriam and Tisdell (2016) acknowledged the use of multiple sources of data as a powerful strategy for increasing credibility within the context of the study. Peer debriefing is the process of asking a colleague to review the raw data and then determine if the findings are plausible (Merriam & Tisdell, 2016). Peer debriefing of the information took place during the data analysis phase of the study. A peer was a recent doctoral graduate whom was familiar with qualitative data analysis, but did not have a stake in the findings of the study (Hail, Hurst, & Camp, 2011). Finally, member checks were performed by the study participants following the interview process. "The researcher solicits feedback on your preliminary or emerging findings from some of the people you interviewed" (Merriam & Tisdell, 2016, p.246). Participants were asked to member check the accuracy of the documentation of their perceptions and experiences.

Transferability

The transferability within a qualitative study is dependent upon the quality and rigor of the researcher. "The investigator needs to provide sufficient descriptive data to make transferability possible" (Lincoln & Guba, 1985, p. 298). Erlandson et al. (1993) described thick description and purposive sampling in order to facilitate transferability. The researcher employed both thick description and purposive sampling in the study. Schwandt (2007) described thick descriptive data as "narrative developed about the

context so that judgments about the degree of fit or similarity may be made by others who may wish to apply all or part of the findings elsewhere" (p. 19). Thick description included a thorough description of the research setting and participants in the study, as well as an adequate description of the findings utilizing quotes from interviews and notes found in the reflexive journal. Purposive sampling was the second strategy that was incorporated to facilitate transferability. Patton (2015) asserted purposive sampling is a valid research technique as long as the researcher does not attempt to overgeneralize.

Dependability

"An inquiry must also provide its audience with evidence that if it were replicated with the same or similar respondents in the same or similar context, its findings would be repeated" (Lincoln & Guba, 1985, p. 290). The reader provided the details pertaining to how the study was conducted so that the study could be repeated. Merriam and Tisdell (2016) compared the audit trail of a researcher to that found in the accounts of business. Examples of the data collection in the study's audit trail will include the following categories suggested by Lincoln and Guba (1985): (a) raw data (questionnaire, interview protocol, journal, documents), (b) data reduction and analysis (codebook, data analysis evidence), (c) data reconstruction and synthesis products (data analysis sheets, reports), (d) process notes (reflexive journal), and (e) materials relating to intentions and dispositions (inquiry proposal, reflexive journal, peer debriefing notes, member checks).

The reflexive journal supports all four qualities of trustworthiness: credibility, transferability, dependability, and confirmability. Lincoln and Guba (1985) recommended the reflexive journal provide information about the logistics, insights, and determinations for decisions. The reflexive journal became part of the audit trail.

Confirmability

In a qualitative study, the researcher is an instrument. "The researcher is the primary instrument for data collection and analysis" (Merriam & Tisdell, 2016, p. 16). The qualitative researcher may have an impact on the study simply by his or her own subjectivity. Merriam and Tisdell (2016) recommended, instead of working to eliminate the biases, the researcher worked to make known and monitor his or her own subjectivity. A researcher's tool used to monitor these biases is a reflective journal maintained throughout the course of the study. "The naturalistic researcher does not attempt to ensure that observations are free from contamination by the researcher but rather to trust in the 'confirm-ability' of the data themselves" (Erlandson et al., 1993, p. 34). The reader is able to observe the consistent flow of data, emerging categories, and subsequent classifications.

Conclusion

This descriptive qualitative case study was focused on determining factors that could increase teacher retention rates and the effect of university program collaboration with Texas rural school districts. It was the hope of the researcher, through the study, to discover ways for school district administrators to work with university programs to identify and increase the number of qualified teaching applicants in order to improve teacher retention in Texas rural school districts.

CHAPTER IV

RESULTS

The purpose of this case study was to evaluate the partnership and effectiveness of a Grow Your Own Teacher (GYOT) approach for rural schools to address teacher recruitment and retention. The GYOT program examined in the case study was TechTeach Across Rural Texas. The TechTeach Across Rural Texas is an extension of the TechTeach 2+1 program. TechTeach 2+1 is a specific program for teacher candidates to accelerate their education to obtain a teacher certification. A teacher candidate is required to complete an Associates of Arts in Teaching degree before entering the program. Once they have completed the program prerequisites, teacher candidates enter a yearlong internship program in a specified school district. At the conclusion of the internship, the teacher candidates graduate with a bachelor's degree and are able to obtain a teaching certification. The Texas Education Agency supplied a grant for the TechTeach Across Rural Texas to expand its efforts in providing rural school districts with quality and diverse teachers.

Data were collected from the TechTeach website, candidate handbook, qualitative survey, and semistructured interviews. The qualitative case study employed the use of research techniques aligned with grounded theory practices. These grounded theory research techniques included the constant comparative method (Glaser, 1965). The data collection and analysis were conducted simultaneously, and codes and categories were extrapolated directly from the data. Qualitative surveys comprised of open-ended questions were used to identify possible participants, and follow-up semistructured interviews were conducted to gain a thorough understanding of the TechTeach program

and its impact on rural schoolteacher recruitment and retention. The researcher interviewed six people, who were selected from the collected surveys, to gain insight about their collective experiences. Selection criteria for the research participants included direct involvement with the TechTeach GYOT program. To gain an encompassing perspective of the program itself, participants were invited based upon their positions within the program. These positions were a university program administrator, TechTeach professional development coordinator, TechTeach site coordinator, district administrator, mentor teacher, and teacher candidate.

Chapter IV is organized into the following sections: (a) description of the research sample, (b) participant background, (c) data collection and analysis, (d) the coding process, (e) findings, and (f) summary of the chapter. The first section presents background information of the research sample in the study. The description of the research participants will provide the necessary context of the study. The section describes the data collection and analysis by which the comments from the semistructured interviews and qualitative questionnaires were coded for themes. The coding process consisted of a three-phase approach beginning with open coding, transitioning to axial coding, and concluding with selective coding. Common themes discovered during the data analysis and coding process will be discussed. The findings for each of the three research questions will be presented. Excerpts from the raw data are provided within the findings to enhance the credibility of the study. The results of the designed case study helped the researcher to answer the following research questions:

1. Is the Grow Your Own Teacher strategy effective in providing qualified teacher candidates?
2. What are rural school perceptions and experiences regarding teacher candidates completing a Grow Your Own Program?
3. What are the essential components of a Grow Your Teacher Program?

Description of Research Sample

Erlandson, Harris, Skipper, and Allen (1993) recommended when employing purposive sampling that the potential participants criteria should be established before starting the study. The study focused on the TechTeach Across Rural Texas 2+1 Teacher Education Program. The TechTeach Across Rural Texas 2+1 Teacher Education Program is a GYOT program established by Texas Tech University. A review of the handbook indicated the purpose of the program. "TechTeach is a clinically intensive, competency-based program aimed at improving K-12 student achievement, increasing teacher candidates' qualifications upon entry into their careers, and fostering within them the dispositions important for helping them remain and thrive in the teaching profession" (Ridley, 2011, p. 8).

Reviewing the handbook gave the researcher a more thorough understanding about how the program is structured, prior to sending out questionnaires and conducting interviews. In reviewing the university website and program handbook, the researcher discovered the hierarchy of the individuals connected with the program. The participants included a total of six research subjects. The subjects were three university officials and

three district personnel from the selected school district. Sanford ISD was identified through the university website as a rural school district participating in the program. The researcher verified that the attributes of Sanford ISD qualify it as a rural school district as defined by the Texas Education Agency.

Participant Background

The participants for the study were selected after reviewing the TechTeach handbook. The researcher wanted to determine a hierarchy established by the program and to gain different perspectives from each level. These participants included three from the university side of the program and three from the participating rural school district. Program participants from the university included a program administrator, professional development coordinator, and site-based coordinator. The school district participants included a school administrator, a mentor teacher, and a teacher candidate who had completed the program.

The current university program administrator for the Tech Teach program is a longtime faculty member. A native of the area, the program administrator has extensive experience with teacher preparation programs and became involved with TechTeach at the beginning of the program's inception in 2012. The administrator has helped facilitate the TechTeach program with local school districts. The role of the administrator involves overseeing the program and the recently acquired grant from the Texas Education Agency. The oversight includes attending governance meetings with participating schools and working with the professional development facilitator.

The professional development facilitator for the TechTeach program has been with the program for the past 3 years. As a professional development facilitator, she is charged with coaching the site coordinators and ensuring there is consistency and fidelity across the spectrum of site coordinators. The professional development coordinator has many different responsibilities, including most aspects of the program as well as recruiting for the GYOT programs. Additionally, she acts as an academic advisor to ensure students complete the required courses throughout their program.

The site coordinators lend the next level of support. They are responsible for coaching the mentor teachers and teacher candidates. The site coordinator has a background in working with GYOT programs as a secondary site coordinator for the previous 6 years. In the past year, her duties have included overseeing teacher candidates in the TechTeach 2+1 program. Candidates enter the TechTeach 2+1 program with a completed Associate of Arts in Teaching degree and then complete a yearlong internship at a designated school district. As the site coordinator, the liaison acts as a link between the university and the school district. The site coordinator regularly meets with the school administration, mentor teachers, and the teacher candidates. Similar to a district administrator, she evaluates teacher candidates in the classroom and works with their mentor teachers to coach the teacher candidates and provide the necessary guidance.

The school district superintendent is an experienced superintendent and has primarily been involved with rural school districts throughout his career. As the superintendent of the school district, he acts as a human resource officer, and his approval is required for the program to take place within the district. The superintendent is also a

contributing member of the monthly governance meetings that take place with the university officials and mentor teachers.

Mentor teachers are required to be on the campus with their teacher candidates. Mentor teacher qualifications include teaching on the campus for a minimum of 3 years. A local mentor teacher with the school district, who volunteered for the study, is currently in her second year as a mentor teacher and has a teacher candidate on the campus. Coteaching with the teacher candidate takes place on a regular basis. The mentor teacher maintains contact with the site coordinator and submits regular evaluations of the teacher candidates' progress.

The participating teacher, who completed the program in the 2017–2018 school year, agreed to be a participant in the research study. A native to the community, the participating teacher was recruited by the school to become a teacher. As a member of the community, the teacher wanted to work in her hometown. The program required the candidate to have completed her associate degree prior to beginning the TechTeach 2+1 program. The TechTeach 2+1 program includes a yearlong intensive, internship program at a school district while simultaneously completing required coursework. The mentor teacher coaches them in the classroom on a regular basis. The site coordinator also maintains contact with the teacher candidate as well as performs evaluations of their classroom teaching. On occasion, the teacher is given the opportunity to participate virtually in the monthly governance meetings to discuss the progress and performance of the program.

Data Collection and Analysis

The data collection process began by reviewing the university website to understand the structure of the TechTeach program. After identifying TechTeach Across Rural Texas as an established GYOT program located within the teacher preparation routes found in the Texas Tech Department of Education, the next step was to research the schools connected with the GYOT program. All of the schools connected to the TechTeach Across Rural Texas program met the criteria the Texas Education Agency assigned to the definition as a rural school.

The research continued with the analysis of the program handbook to determine contacts within the program who could help the researcher identify possible participants. A number of individuals associated with the university were identified as being connected with the program. After reviewing the handbook for possible contacts, contact information from the university website was obtained to establish communication.

This initial phase of identifying the target program and uncovering possible contacts occurred while simultaneously obtaining the necessary permission from the Texas Tech University Institutional Review Board. Once permission was obtained from the Institutional Review Board, potential participants were sent a recruitment email with a required consent form attached by a third party. The consent forms were completed by the participants and returned to the researcher. The participants associated with the university were then sent a link to a digital questionnaire comprised of open-ended questions about the GYOT program. A total of five invitations were sent to possible university participants. Three of the five possible participants agreed to participate and completed the required consent form with the online questionnaire. The participant

responses were analyzed to ensure the semistructured interview questions would extend the responses provided in the questionnaire.

All of the participants were read the consent form prior to the interview and verbally granted permission to record the interview. During the first interview, the researcher took notes to compare with the transcription. After comparing notes with transcripts of the first interview, the researcher realized that he needed to be a better conversationalist to extract rich responses from the participants in the interviews. Therefore, the researcher decided to limit notetaking to specific responses. After each interview, it became easier with the subsequent interview to find different avenues that needed to be explored for the project.

The first interview conducted was with the TechTeach program administrator; the research subject who could give a more detailed view of the entire program, which would allow the researcher to alter subsequent interview protocols based the administrator's response. This interview allowed the researcher to not only view the program from the inside out but also perform a self-analysis on his own interview skills.

After completing an interview and transcribing the conversation, a copy of the transcription was sent to the research participant. The member checking process described in the previous chapter was effective in collecting additional information. Research participants reviewed the transcription and sent back clarifying remarks or additional information they wanted to share regarding the study. The opportunity to check transcripts and provide additional information increases a study's validity and reliability (Creswell, 2003).

The interviews involving the three university officials led the researcher to select a single rural school participating in the GYOT program for the past 3 years to search for possible participants. The school was selected based on its remote location and its experience with the GYOT program. The school's experience with the program was important to determine if a GYOT program could help a school district recruit and retain teachers.

The researcher contacted the school superintendent via phone to establish contact and gain permission to conduct the study in his district. Once contact was established and permission was granted, the researcher collected email addresses from the school website to send out a mass email to recruit potential participants. A third party was used to send the mass email to ensure study validity. A mass email system was used to remove the perception of coercion and avoid influencing a participant's decision to participate in the study. The email included recruitment materials and the required consent form.

After sending the mass email, a total of six people from the school district expressed interest in participating in the study. The researcher selected individuals based off predetermined criteria. Potential participants had not completed the TechTeach program during the data collection phase of the study. The superintendent, a mentor teacher, and a teacher who had completed the program the previous year returned the signed consent form, indicating their willingness to participate in the study. The researcher then sent the open–ended questionnaire to the participants to complete prior to the interview. Information collected from the questionnaire allowed the researcher to

purposefully craft the interview protocol questions and search for answers to the research questions.

The interview process involving the school district personnel followed a pattern similar to that with the university officials. As information was collected and analyzed from previous interviews, questions changed and different avenues were explored. After each interview, the transcription and member checking process followed. The member checking process included changing names to pseudonyms to ensure confidentiality and making sure the research subjects were comfortable with their responses. After concluding the process, none of the research subjects indicated they were uncomfortable with their responses or with the process.

Coding Process

Corbin and Strauss (2015) suggested qualitative research analysis follow three phases consisting of open coding, axial coding, and then selective coding. The coding process occurred simultaneously with data collection as discussed in the previous section. The coding process began with open coding by which the researcher became familiar with the data as they were collected. Open coding followed the process of disaggregating the raw data extensively and identifying themes and categories of interest (Creswell, 2009 & Esterberg 2002).

Questionnaire data were collected from Qualtrics online software program. The questionnaire information was reviewed and uploaded into NVivo (Version 12). Information collected from the questionnaire served two purposes. First, it was used to start case files for each of the participants. Second, it allowed the researcher to review

the semistructured interview protocol. The interview protocol could then be modified to discuss areas reflected in the interview questions as needed.

After transcribing interviews, individual interviews were uploaded to NVivo to further enhance participants' case files. All of the raw data from the questionnaires and interviews were saved within files and placed into the NVivo program. Merriam and Tisdell (2016) discussed the need to organize all raw materials into a case study database. Utilizing computer software allowed the researcher to place all data within categories. This also allowed for the tagging of data units that were found to be pertinent to the research questions.

The coding process then shifted to axial coding. Axial coding began by relating categories and refining relevant data extracted from the raw data. The researcher used NVivo (Version 12) to process the data into categories and then verify those categories against the raw data. Richards (2015) asserted that axial coding is derived from interpretation of meaning. Open codes were analyzed after each interview and compared for relatable categories. Merriam and Tisdell (2016) suggested the researcher keep in mind codes from previous transcripts while examining subsequent transcripts to determine any commonalities. This process continued until all relevant open codes had been explored.

The objective of the three coding phases was to reduce the raw data to the core categories that pertained to the research questions. Selective coding was the final coding process to refine into specific categories. The research had been reviewed, categorized,

and reduced to relevant categories pertaining to the research questions. A final consolidation yielded seven themes associated with the guiding research questions.

Findings

Merriam and Tisdell (2016) indicated the purpose of qualitative data analysis is to identify categories or themes to answer research questions. After completing the triple coding process and some common emergent themes were uncovered. The researcher then compared the common themes against the context of the guiding research questions. Creswell (2014) described a description of the study site and themes are important to the value of qualitative research. The themes included (a) increased teacher retention, (b) quality candidates, (c) intensive preparation, (d) professional support, (e) partnerships, (f) supply of candidates, (g) a pathway to certification, and (h) financial support. Lastly, themes were organized with the corresponding research question. The themes collected from the raw data are presented with the corresponding research question.

Research Question 1:

Is the Grow Your Own Teacher strategy effective in providing qualified teacher candidates?

The research study sought to determine if the GYOT program could help rural schools alleviate the teacher shortage that many experience. In determining the effectiveness of the program, the data indicated there had been a change in retention rates. The school selected for the study reported an increase in teacher attrition or teachers leaving the school district in the past decade. The mentor teacher confirmed this in the interview.

> There was lots of stability a few years ago. Then we had a large number of teachers leave because they were at retirement age. And then also, you know just with that type of change, we lost a lot of teachers. And what that did was open a revolving door.

A revolving door signifies a high turnover rate for teachers. The statement confirmed findings from previous research on teacher retention and attrition rates were affected by retirement. The mentor teacher also mentioned the lack of experience of the new faculty was a concern. When the researcher asked if anyone at the school was interested in being a mentor teacher, the mentor teacher explained that the district criteria for such was 3 years' experience in the classroom. They went on to say, "There was only a handful of people in the district that could qualify. So that kind of tells you what we had on staff."

Theme 1: A Grow Your Own Teacher program is capable of increasing retention rates for beginning teachers.

Retention is the rate at which teachers stay within their respective district. A high retention rate indicates stability in a school district. In contrast, a low retention rate may indicate a revolving door for a school district. When interviewing the mentor teacher, she mentioned that at the time of the study the district was experiencing an increase in retention rates. "This year we have five candidates that completed the program, and we employed four of the five." The four teachers identified by the mentor teacher had completed their internship the previous year and agreed to work an additional 2 years with the district. The site coordinator confirmed an increase of retention rates from the program.

> Last year I was at Sanford, and I had five candidates. Four of them stayed in Sanford and are still teaching there, some have even moved there. One of them was [from] Sanford, like born and raised, so she will stay there. Another . . . had children attending Permian ISD last year, but she has moved them to Sanford. I do think they [will] stay there, especially the one that moved her children.

Even though some of the teacher candidates are currently living in the district, having completed their internship, they are moving their families to the town to continue their career in the district. The teacher candidate confirmed the site coordinator's perception of an increasing retention rate.

> What I can see, it's [TechTeach is] positive because we retain most of the teachers that have come through the program. If they get hired on, they have to stay for 2 years. But beyond that 2 years, who stays and who goes, it depends on how invested they are.

The superintendent also corroborated the claim that the retention rate had increased and provided a background of the retention rates prior to the start of the program. "Right now we have gone through [a] turnover of 35% of our elementary staff 5 years ago. This year, we have reduced the turnover to 8%." The superintendent reported that they had lost 35% of their elementary staff they had 5 years ago and 8% of the staff they had last year. This statement confirmed the state of a revolving door for the district. The district utilized the TechTeach 2+1 program, but also executed other strategies to achieve such a drastic reduction in turnover. When discussing other strategies the school district utilized, the superintendent confirmed the use of other programs.

> We actually had a teaching assistant that had an associate's degree plus a few more hours in applied science. The applied science hours were not good for the 2+1 program, but she had enough hours to work through another university that offered her a bachelor of applied science. She was able to finish the applied

> science online, and then we got her in an alternative certification program and hired her on as a full-time teacher.

The result of the school district's finding avenues for teaching assistants or community members to finish teaching requirements has yielded positive results.

Theme 2: Quality Candidates capable of completing a teacher preparation program and all requirements for a teaching certification.

Quality candidates can have a subjective definition. In this study, "quality" means they are capable of completing a teacher preparation program and all requirements for a teaching certification. The program itself promotes teacher candidates' qualification, "TechTeach, is a clinically intensive, competency-based program aimed at improving K-12 student achievement, increasing teacher candidates' qualifications" (Ridley, 2017, p. 8). The professional development facilitator from the program confirmed the need for quality candidates. "All of the programs are different, but we are here to provide quality teachers." Candidates may find it difficult to complete the TechTeach 2+1 program; a desire to become a teacher and a good work ethic are required to finish the yearlong internship.

Interviewing the superintendent confirmed the need for quality candidates and the requirement of a good work ethic. In describing the internship and coursework that must be carried out concurrently, the requirements were broached.

> We give them an ID. We give them a laptop, just about everything our regular teacher would have to make them feel part of the community. They attend all the teacher meetings and preservice trainings as part of the program to function just like a staff member. So then, you layer on top of all that during the 2+1 program, you get in that fulltime job all day, then you're doing your coursework on top of that at night. So, these folks' work ethic is not an issue. If you survive that 1-year internship with everything that goes on, you are prepared for the classroom.

The district has been able to find candidates from their own community capable of completing the TechTeach program. This process yields positive results with all teacher candidates completing the program as they have been able to obtain a standard teaching certification.

Research Question 2:

What are rural school perceptions and experiences regarding teacher candidates completing a Grow Your Own program?

Recent literature on GYOT programs has focused on the type of candidates and successful completion of the program. The researcher wanted to discern the study participants' perceptions of the program compared to other types of certification pathways. A rural school is limited in the number of potential teachers to prepare for the classroom. Many rural school administrators have experience working with teachers who obtained their certification by way of the traditional certification route or alternative certification programs. All participants indicated they had worked with individuals from each of the pathways. The participants were asked questions regarding each pathway to certification and how TechTeach candidates compare with candidates pursing other pathways. The questions pertaining to the various routes of certification allowed the researcher to compare perspectives of each certification pathway.

Theme 3: GYOT candidates undergo intensive preparation throughout the course of the program.

The TechTeach 2+1 program combines 2 years of study into a single year. This includes a yearlong internship program in the classroom combined with the required

courses, which are considered "intensive." Teacher candidates take the necessary education courses, prepare for certification tests, write lesson plans, and provide instruction in a coteaching environment. The teacher candidate described the expectations for prospective program participants, "You can be successful, if you are self-disciplined because I don't think you can be a procrastinator and complete it. I think they have to fully understand the rigor of it because it's not for the faint of heart."

The data determined that TechTeach candidates were more prepared and successful in the classroom than their counterparts completing an alternative certification program and even the traditionally prepared teachers. The internship part of the program seemed to prepare and solidify them as teachers. The district superintendent went into detail in discussing the value of their preparation.

> The alternative certified people are not as prepared academically or emotionally for the classroom. They are not prepared for all the challenges you face when you are in that classroom, even the traditional program where you just do student teaching January through May. The yearlong internship allows them to get a lot of the mistakes we make as first year teachers out of the way when they are interns.

Theme 4: Teacher candidates require professional support at all levels of the program.

Professional support addresses many different facets within the program such as access to a site coordinator, coteaching with a mentor teacher, and communication with university officials. All participants in the case study acknowledged there were many levels of support throughout the hierarchy of the program. The site coordinators were provided support from the professional development facilitator. The professional development coordinator indicated support was similar to an umbrella.

> My job is to ensure and coach the site coordinators. Then my job is to ensure that there's fidelity and consistency across all site coordinators so that regardless of which site coordinator you are assigned, you get a quality preparation.

In turn, the mentor teachers and teacher candidates receive support from the site coordinators. The professional development facilitator stated, "The site coordinators are charged with coaching and teaching the teacher candidates." The program administrator confirmed the university's dedication to providing the necessary resources to support the teacher candidates. "We have an individual that is allocated to just three districts. Her job is to circulate through those three districts and support the teacher candidates that are there."

Research Question 3:

What are the essential components of a Grow Your Own Teacher program?

Research specific to GYOT programs has been primarily concerned with urban school districts. In addition to the lack of research regarding GYOT programs for rural schools, minimal research has been conducted to identify the components of success required of these programs. The researcher sought to illicit information from the university officials and rural school administration, the components of the program that are necessary for its success. The components were labeled as "essential" for the success of the program. The questions associated with this research question were specifically targeted for the university officials and district administration due to their expertise.

Theme 5: Responsive partnerships must be established between the university and the school district.

The researcher investigated the partnership between the university and the rural school district. It was evident that the partnership and communication within the partnership was pivotal to the program success. The researcher discovered the importance of the program meetings but also their cyclic nature. University officials met regularly with the district administration to get updates regarding the program and the candidates. These meetings were also used for planning purposes. In turn, the district administration gathered feedback from mentor teachers and the candidates themselves. Teacher candidates also have direct connections with the university officials through site coordinators and participating in the governance meetings. This relationship is depicted by the following figure.

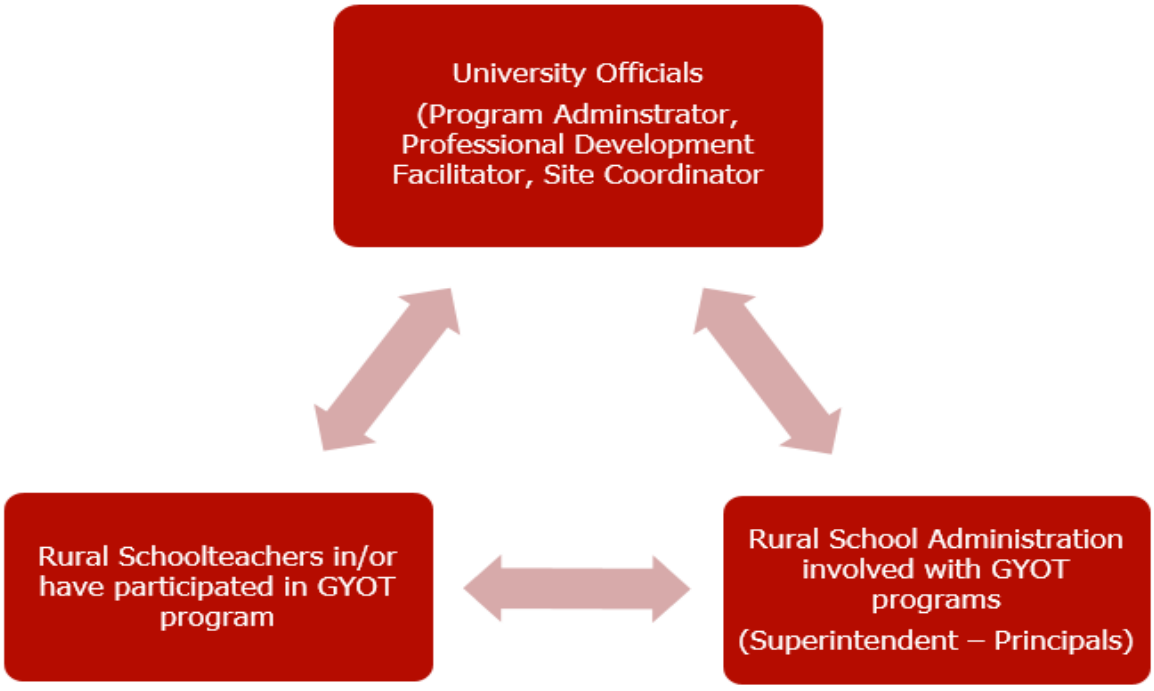

Figure 4.1 Model of study TechTeach partnerships

The site coordinator associated with the school district described the monthly governance meetings.

> We have monthly governance meetings once a month, and in those all the superintendents, or if a superintendent can't be there, then a district representative comes to those meetings. They're virtual, and you know we're listening to their needs, and that's how we're recruiting for next year; it's based on what they predict that they're going to need.

The interviews not only indicated the nature of the partnership, but also yielded data on the responsive nature of the university personnel. The responsive nature of the partnership was indicated by all university official participants and the district administration. The program administrator characterized the program as a responsive teacher preparation program, a quality to which he attributed the program's success. "A willing teacher preparation program willing to do what it takes to work in a rural setting." The district superintendent was very appreciative of this relationship and believed it was fundamental. "The university is responsive and does it's best to meet our needs. They were the first ones to lend us a hand in getting a handle on turning the school around." This responsive nature was further described by the professional development facilitator.

> We have coursework online for an elementary candidate. We did not have this for a secondary candidate, but you can imagine how difficult it would be for a secondary math teacher. We had to create a whole entire degree housed in the College of Education so we could put the coursework all online to prepare secondary candidates.

The researcher concluded effective partnerships are central to making these programs successful at the rural school level, as rural school districts do not have the necessary resources to establish and maintain an entire GYOT model.

Themes 6: A steady supply of candidates familiar with the geographical location.

A steady supply of candidates capable of the coursework and motivation is needed to provide rural schools with teachers. If there is an insufficient number of candidates, school districts are unable to fill vacancies, let alone maintain a GYOT program. A rural school district must look at its own assets within their community.

A supply of candidates was a concern for all university officials participating in the study. The program administrator expressed the supply of candidates was a concern, and identified it as a requirement for the GYOT program. As rural communities continue to lose population, the number of individuals able to participate in the GYOT program from the community itself has decreased. "The challenge we face in terms of a GYOT program is the pipeline of students that will go back to the community to become teachers."

After interviewing the district superintendent, it seemed there is a sufficient level of interest and number of available candidates in the community. The district has evaluated its own assets and recruited primarily from within. The discussion on the availability of candidates confirmed many of the candidates were currently working as paraprofessionals at the school or had a connection with the school.

> We have several individuals working on their degrees in the evening. They meet up here at night or after work and work on their associates degree. Most of them, are doing online classes through the local junior colleges. Three of the individuals are aides for us now. They are doing a good job for us, and we want to get them in the classroom so we can pay them what they are worth.

The researcher contrasted the two discussions on the topic with the university program administrator and the district superintendent. The university program administrator expressed a concern about the availability of candidates to participate in the

program. The district superintendent believed there were sufficient assets within the community; the need to find them was important. Each participant agreed a steady supply of quality candidates would be crucial to provide rural schools with teachers.

Theme 7: A pathway to certification must be established.

The university program administrator discussed the need for having a pathway to certification for community members of rural schools. Community members are the assets that can help provide stabilization to the school district and slow the revolving door. As discussed in the previous section, there are quality candidates in the community who are willing to complete these programs. They need a pathway from start to finish culminating with a full teaching certification. The university program administrator confirmed the need for a pathway to certification: "A pipeline that leads to a pathway to certification through community college so that individuals from the community can get into and start that pathway and ultimately end up as teachers in the community."

After discussing the need for a pipeline, all participants believed a starting point is working with a local community college. The professional development facilitator stated, "We work directly with community colleges. So, it's kind of a pipeline that community colleges prepared them to make sure that they have an Associates of Arts in Teaching before entering in the TechTeach 2+1 program."

Theme 8: Financial Supports

Study participants from the university and school district indicated the need of financial supports. The financial supports discussed included tuition scholarships and program stipends for the teacher candidates. A stipend of Fifteen thousand dollars during

their yearlong internship was important to help alleviate living and transportation costs. The university site coordinator stated, "The stipend they are getting…is a life changer for a lot of the teacher candidates. Some of these candidates would not have ever been able to complete the program if they had not received a stipend." A support claim was also made by the teacher candidate participating in the study, "I don't know how someone would do it if they didn't have any support… such as financial aid scholarships, the stipend, or someone that could financially support them." The financial aid scholarships to provide tuition and the stipend were both widely supported.

The university also receives financial support from the Texas Education Agency in the form of a grant. At the inception of the program, a single rural district was being served through the TechTeach model. The university depends on a site coordinator to provide its own signature brand of teacher preparation. After receiving the grant, the university has been able to expand operations and provide additional site coordinators. In doing so, they have been able to expand to thirty school districts.

Summary

Chapter IV provided a description of the process taken to gather data from six participants associated with the TechTeach 2+1 program. The data collection included the TechTeach handbook, university website, qualitative questionnaires, and finally semistructured interviews. The three phases of coding the data followed the guidelines discussed by Corbin and Strauss (2015). Results were presented in eight themes categorized as related to each of the three guiding research questions. Transferability is increased by providing thick description of the research setting and participants. The

themes included: (a) Increased retention rates, (b) Quality candidates, (c) Intensive preparation, (d) Professional support, (e) Partnerships, (f) Supply of candidates, (g) Pathway to certification, and (h) Financial supports. The final chapter will include a summary of the study, conclusions, a discussion and recommendations for future practices and research.

CHAPTER V

Chapter IV presented the results of the research study. The researcher provided the appropriate context for the study by providing a description of the study sample and participants background. A description of the data collection and analysis process provided a foundation of the audit trail within the study. The coding process followed a triple coding process to narrow down the necessary information pertinent to the study. The coding process then yielded eight common themes found in the data. These themes were organized by the selected research questions. Thick description from the raw data was provided with the themes to enhance credibility.

The purpose of this study was to evaluate the partnership and effectiveness of a GYOT approach for rural schools to address teacher recruitment and retention. This chapter includes a summary of the study and, conclusions drawn from the data organized by their corresponding research questions. A discussion of the findings in relation to current research literature is provided, including limitations and design flaws uncovered during the research study. Chapter V concludes with recommendations for future practice and research followed by a conclusion of the chapter.

Summary of Study

Several studies have estimated between 40% and 50% of teachers leave the profession entirely within the first 5 years (Ingersoll, 2003). Current studies have found a wave of teacher shortages across the United States. Hammond and Podolsky (2019) indicated that by the 2016 over 40 states were reporting teacher shortages in most core subjects. Rural schools, outside the realm of urban and suburban schools, face unique challenges in not only recruiting teachers but also retaining them. The challenges of

teacher recruitment and retention specific to rural schools has been largely overlooked (Jimerson, 2005). An increase in the alternative certification programs available has shown promise for rural schools. However, many of these programs require a candidate to complete a bachelor's or master's degree prior to enrolling (Peterson & Nadler, 2009). Many community members found in rural schools lack the necessary education to enroll in these programs.

While there has been limited research about GYOT programs in urban school districts, research on GYOT in rural school districts is limited. Rural schools may be unaware that these programs are available to their communities. Furthermore, rural schools, policymakers, community members, and university officials would benefit from a better understanding of how to develop and implement GYOT program strategies specific to the rural setting as was demonstrated through this study.

The findings of this study are intended to be useful to rural school district administrators who struggle with recruiting and retaining qualified teachers. An analysis of the GYOT programs and strategies revealed in this study could be utilized by rural school districts in need of qualified teachers. The state of Texas has recognized the need to increase the number and quality of rural school teachers as well as the impact of a GYOT program. The Texas Education Agency announced a Grow Your Own grant for the 2018–2019 school year. It was even indicated that the program is designed to target rural school districts. "The purpose of the 2018-19 Grow Your Own grant is to assist eligible applicants increase the quality and diversity of the teaching force, especially in small and/or rural districts" (Texas Education Agency, 2018, para. 2).

The researcher collected questionnaires and interviewed six individuals involved with the TechTeach Across Rural Texas Program. Six individuals were selected for the study in order to reach a level of saturation. Merriam & Tisdell (2016) explained saturation is reached when no new insights could be yielded from further data collection. The individuals selected were determined to yield the most conclusive investigation of the selected case study. Approval from the Texas Tech University Institutional Review Board (IRB) was received in January 2019. Recruitment occurred between February 2019 and March 2019. The data collection process occurred simultaneously with recruiting. Data collection began in February 2019 and concluded April 2019. The researcher established contact with the university officials after collecting their contact information from the university website. An invitation email was sent with an attached consent form to a total of five potential participants at the university. A total of three agreed to participate in the research study. After receiving the required consent form, university participants were sent a qualitative questionnaire. Once the questionnaire was completed, potential participants were invited to participate in a semistructured interview.

After concluding the university official's interviews, the researcher had selected a rural school district associated with the TechTeach Across Rural Texas program. The researcher established contact with the district superintendent and obtained permission to conduct the study. Study participants contact information was collected from the school district's public website. The email addresses were compiled and recruiting materials were sent out in a mass email. A total of six individuals from the school district expressed interest. From the six individuals, three were selected based on predetermined criteria.

The data was coded and then subsequently categorized into eight different themes. The themes included: (a) Increased retention rates, (b) Quality candidates, (c) Intensive preparation, (d) Professional support, (e) Partnerships, (f) Supply of candidates, (g) Pathway to certification, and (h) Financial support. The themes were then used to answer the three predetermined research questions.

The first research question explored the effectiveness of a GYOT program in providing qualified candidates for rural school districts. Two themes, (a) increased retention rate and (b) quality candidates, were matched with this research question. The second research question examined the perceptions and experiences of school district personnel regarding teachers having completed a GYOT program. The data established (c) intensive preparation and (d) professional support as perceptions and experiences associated with a GYOT program. The third research question determined components of the GYOT considered essential to the success of the program. The data found the following four components as essential to the GYOT program: (e) partnerships, (f) supply of candidates, (g) pathway to certification, and (h) financial support.

Conclusions

The conclusions reached by the researcher are organized by their corresponding research questions. The research results support the following conclusions from the qualitative case study.

Is the Grow Your Own Teacher strategy effective in providing qualified teacher candidates?

A Grow Your Own Teacher model impacts teacher retention rates by recruiting quality candidates. Rural schools also supplement a GYOT program by providing

additional avenues of teacher certification. Literature findings indicated GYOT program retention rates were a significant challenge. Gist, Bianco, & Lynn (2019) indicate rates are higher for community members that complete the preparation phase of a GYOT program. Current findings in the literature corroborate that nontraditional teacher candidates from within the community or from a similar setting are more inclined to stay within the school district. (McCollum, 2011). Research participants in the study agree with an increasing retention rate due to the GYOT recruiting people from the local community to participate in the program. The mentor teacher was in agreement, "I can see it's positive because we retain most of the teacher that have come through the program." Research conducted with paraprofessionals completing the program discovered a 60% retention rate after six years (Lau, Dandy, & Hoffman, 2007). Additionally, other studies cite retention rates ranging from 62% to as high as 95% (Fornter, Kershaw, Bastian, & Lynn, 2015; Ross & Ahmed, 2016; & Clewell & Villegas, 2001).

Quality candidates were indicated as a caveat for increasing teacher retention. Several research participants indicated a strong work ethic and passion to become a teacher must be present for candidates to be successful. The district superintendent revealed:

> "During the 2+1 program you have a full time job in addition to the one year internship. Then you are doing your coursework on top of that at night. So…the work ethic is not an issue if you can survive that one year internship with everything else going on."

The site coordinator indicated the teacher candidates are under a lot of pressure trying to balance the internship phase, coursework, and many have an additional job to supplement their income.

A GYOT program can supplement the recruitment of teachers, but a rural school must also evaluate other avenues for potential candidates. Fenwick (2001) discussed the importance of carefully selecting people from the community able to become teachers. Many of the candidates within the TechTeach program were starting without many college credits or any at all. As a rural school tries to fill their ranks, there may be someone starting the GYOT program; but there is also a need to fill vacancies. As rural schools look for possible GYOT candidates, there have also been candidates with a bachelor's degree or close to completing a bachelor's degree. These teacher candidates could complete their bachelor's degree and then enroll into an alternative certification program to achieve their teaching certification in a shorter amount of time.

Some of the rural school personnel indicated that as they recruit from the community for possible candidates, the school helps evaluate their options in pursuing a teaching certification. The district superintendent explained the process of recruiting and evaluating by explaining some of the different scenarios:

> We have a teaching assistant that had an Associates plus a few more hours of applied science. The applied science credits wouldn't apply towards the 2+1 program, so we helped her find another university to complete her bachelor's degree. After she completed the bachelor's degree in a year, she then enrolled in iTeach Texas and we hired her as a full time teacher.

The literature affirms that GYOT programs are unable to meet all staffing needs, but they are a possible avenue to increase retention rates. The Mississippi Grow-Your-Own Teacher Task Force Report (2018) verified recruiting from within the community

can reinforce retention efforts but not solve the teacher shortage crisis. As the rural school works to meet staffing needs, the GYOT is a long term recruiting plan. The immediate needs must be met by becoming innovative with recruitment and retention practices. The university program administrator believes TechTeach 2+1 is a supplementary program that is yielding positive results. He stated, "I think of the reasons we've been successful is we have several different pathways to offer in addition to the 2+1."

What are the perceptions and experiences regarding teacher candidates completing a Grow Your Own Teacher program?

The researcher explored the perceptions and experiences of school district personnel regarding GYOT candidates. GYOT teacher candidates were perceived as more prepared for the classroom following the internship compared to traditional or alternative certified teachers. The research study confirmed a perception that the candidates participating in the program undergo intensive preparation. Literature revealed an intensive internship allowed for an immersive experience and better equipped candidates for the classroom (Miller, 2016). The district personnel believed teacher candidates were held to a high standard of classroom preparation. The higher standard was attributed to a longer internship coupled with coteaching opportunities. A confirmation of this conclusion was presented by the district superintendent, "GYOT candidates are more prepared than the alternative certification people. And even a traditional program where you just do a January through May. We have those candidates on campus from August to May."

Professional support provided by the university and school district increased the probability of students completing the program. The university provided a site coordinator that provided support to the mentor teacher. The mentor teacher in turn would support the teacher candidate in the classroom. The site coordinator could address factors and fill gaps of knowledge of the mentor teacher. Numerous teacher recruitment and retention studies confirm the need for new teacher mentoring. GYOT studies also indicate coteaching with a mentor teacher is essential for teacher candidates to build efficacy in the classroom.

What are the essential components of a Grow Your Own Teacher program?

A quality GYOT program requires the incorporation of reflective partnerships, recruitment efforts at the district and university levels to create a pipeline of candidates, education of potential candidates of the pathway to certification, and financial support during the internship. Research participants discussed the need of a reflective partnership between the university and rural school district. A reflective partnership was dependent upon communication among all participants ranging from the university program administrator to the teacher candidates. This was achieved by monthly governance meetings with the university and participating school districts attending. The rural school district was primarily represented by the superintendent but other individuals such as the mentor teacher or teacher candidates were also invited to participate. This allowed for everyone to be represented in order to collect and disseminate feedback. Communication provided the university an opportunity be responsive to the needs of the school district and in turn, the school district could relay their needs. The needs discussed would include the number of teacher candidates and teaching fields the school district is

anticipating in the coming years. Communication and recognition of program needs were relayed by all study participants.

A pipeline of candidates is a requirement for the program's success. The school district must look within their own local assets for possible candidates at the same time the university is recruiting within the current teacher preparation programs offered. A conflicting finding occurred between the university program administrator and district superintendent. A supply of candidates was problematic on the university level when discussed with university program administrator. This contrasted with the district superintendent whom believed there were sufficient candidates within their own community to continue administering the program. Research studies confirmed the need to search for candidates within the community due to their preference of teaching in their hometowns or similar geographical setting. Employing tactics recommended by Future Teachers of America such as providing secondary courses for students interested in teaching or classroom internships can increase the possible number of candidates. By consistently recruiting from within the community, supplementing from local community colleges, and within programs at universities; a GYOT program can create a regular pipeline of candidates.

Potential candidates must be educated about the pathway to certification. School districts should be recruiting from their own community assets while communicating the requirements of completing a GYOT program. A pathway to certification could begin at a local community college for individuals starting with minimal or no college credits. Study participants agreed a path should begin by working with a local community college

to obtain an associate's degree. After completing the basic requirement of an associate's degree, candidates should then enter into a GYOT program.

GYOT candidates receiving financial support in the form of stipends was confirmed by research participants. Literature indicated an agreement of financial support for candidates. Many candidates are career changers or paraprofessionals within the school. A large number have established families that rely upon a steady income. Once they began the internship phase of the program, it was difficult to simultaneously maintain a full time job. Financial incentives were determined to mitigate the need for an additional job. The literature supports that many GYOT programs provide financial incentives in the form of scholarships and stipends.

People, Support, and Program (PSP) model

The researcher concluded eight themes from the research study. A model incorporating the themes is presented by the researcher. People includes quality candidates to develop a steady supply of teacher candidates. People participating in the program must be supported professionally to develop efficacy in the classroom and financial supports to decrease additional stressors. The program itself must be collaborative in nature between the university and school district. Additionally, the program must be accessible and streamlined for teacher candidates to obtain their teaching certification.

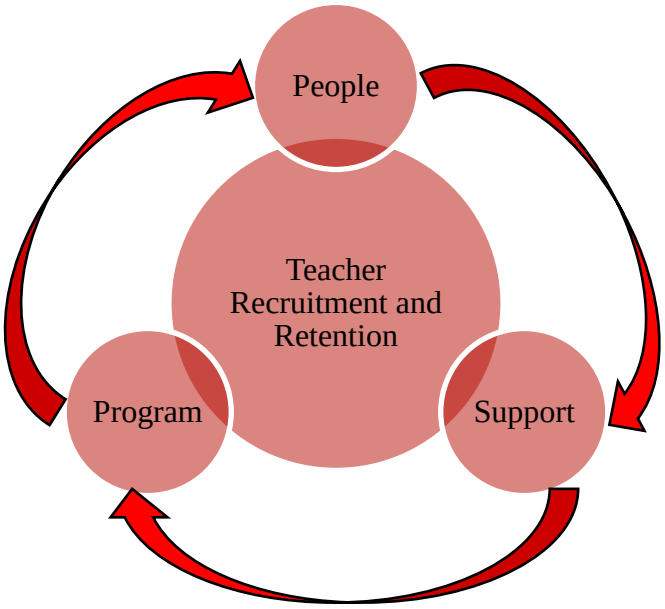

Figure 5.1 PSP model

Discussion

The conclusions reached in the research study enhance the body of knowledge around GYOT programs with rural school districts. It also substantiates and expands on evidence supporting recruiting and retention strategies employed by rural school districts. Previous studies found that GYOT candidates have a significantly higher rate of retention (Fortner, Kershaw, Bastian, & Lynn, 2015). Sources indicate GYOT strategies are capable of impacting the teacher shortage over time (Mississippi Grow Your Own Teacher Task Force Report, 2018). The GYOT strategy impacts the teaching shortage by increasing the number of candidates that want to stay within their hometown communities (Atwell, 2007 & Dwyer, 2007). The district superintendent confirmed the implementation of the program is a long term investment in addressing the teacher shortage. An individual recruited from within the community that has zero college credits would be at least a three year commitment for the school district.

A large number of candidates recruited by the school district were paraprofessionals currently working in the school district. Research indicated this pool of candidates are more likely to complete a teacher preparation program and stay within the school district. This pipeline of candidates is more readily available to most rural schools. Other recommendations include beginning the recruitment phase during a student's high school programs such as Future Teachers of America. Programs such as these are difficult for many school districts to implement due to the lack of resources and current legislative requirements for graduation.

GYOT candidates were perceived as more effective in the classroom than traditional or alternative certified teacher candidates. Recent studies conducted by Fortner, Kershaw, Bastian, and Lynn (2015) corroborate these findings. "Our overall value-added results indicate that teaching assistants that became teachers in elementary and middle grades are at least effective (and in some cases more effective—elementary mathematics and reading) as the group of All other teachers" (Fortner et al., 2015, p.23). This finding could be attributed to the length of the internship compared to other preparation groups associated with the traditional or alternative certification route.

GYOT program components were discussed in depth during the course of the study. Research participants confirmed the four major aspects of the program required for success. Reflective partnerships, a supply of candidates, education of teaching certification pathways, and financial support were cited by study participants. Hanover Research (2016) confirmed each of the elements of GYOT programs. The need for strong partnerships involved school districts, community colleges, and the university.

This research study was focused on the partnership between the university and a single rural school district. The university officials involved with the program believed a steady supply of candidates was a concern. This was contradicted by the district superintendent which believed they were able to find a reasonable number of candidates from the community or from paraprofessionals currently working in the school district. Hanover Research (2016) indicated most programs were designed to recruit candidates from high school students, paraprofessionals, and community members. The rural school indicated its approach was focused on paraprofessionals and local community members. The researcher believed if there were sufficient resources, the supply of candidates could be increased by recruiting at the high school level.

An area overlooked in the research was associated with educating the possible candidates on different pathways to certification. GYOT literature is primarily focused on the evaluations of single programs at the state or local levels found at urban school districts. A GYOT program is a long term approach for increasing the supply of teacher candidates. Rural school districts must also supplement with traditional and alternative certified programs to meet staffing needs. Elements of the GYOT approach are still associated such as recruiting from with the community or school district for possible candidates that have a significant amount of higher education credits.

All research participants indicated financial support in the form of living stipends as important to the GYOT program. Literature confirmed a large number of GYOT programs provide candidates with some form of financial support. Ross and Ahmed (2016) discussed the common design structures included living stipends or tuition scholarships for teacher candidates. The teacher candidate discussed how the stipend

didn't cover all expenses but prevented her from having to take out student loans. The living stipend was in addition to full tuition scholarships for the teacher candidates once they entered the internship phase of the program. The limited amount of research on funding GYOT programs should be addressed in future studies.

Limitations of Study

The study included a number of limitations. Sampling is considered a limiting factor for qualitative research studies. Bloomberg and Volpe (2012) discussed sampling is a major limitation associated with qualitative studies. Purposeful sampling was employed due to the nature of qualitative case study research. The study relied upon a single rural school district that had participated in a GYOT approach for a number of years. Nascent research has been conducted on GYOT programs for rural schools, this study was limited in the availability of rural schools participating in the program. Geographical location was also considered a limiting factor. The study established a common definition for rural school districts. The diversity and nature of rural school districts limit making appropriate recommendations for all (Barter, 2008).

The interview procedures followed by the researcher affect the generalizability and transferability of the study. Semistructured interviews were performed with a total of six participants which included three university officials and three school district personnel. The study was able to evaluate the hierarchy of the program, but interviewing a single person on each level affects the studies transferability.

Despite the limitations, this study established that a GYOT program can provide rural schools with additional avenues to address the teacher shortage. The study also found that despite the positive impact of a GYOT program, rural schools should employ

all strategies at their disposal to meet their immediate staffing needs. Lastly, the study determined components of the TechTeach 2+1 partnership that could provide a framework for other universities to use in the development of a GYOT program tailored to rural school districts.

Recommendations

The ever-increasing teacher shortage has been a catalyst for school districts to seek different avenues to meet their staffing needs. Literature surrounding GYOT programs have indicated it is a viable strategy to make an impact on the teacher shortage (Learning Policy Institute, 2016). A review of the literature determined most GYOT research focused on (a) recruitment of candidates, (b) short term retention, (c) impact on student achievement, and (d) evaluations of single programs. There is limited research specific to rural schools employing GYOT programs. Solutions for long term funding of these programs is also an area of concern. The recommendations provided by the study will fill a gap in the literature.

Recommendations for School Leaders

School districts can benefit from working with a university and following the PSP model developed from this study. The model is recommended for a long term commitment to recruitment and retention. People, Support, and Program are the pillars required for a successful GYOT strategy. By recruiting quality candidates from the local community or geographical area, a school district can develop a steady supply of candidates. These candidates require professional support to develop efficacy in the classroom and financial supports to alleviate additional stressors. The teacher preparation program must be developed via a partnership between the school district and university.

It must include an accessible and streamlined pathway to a teaching certification for teacher candidates.

Recommendations for Future Practice

The study utilized an asset-based lens approach to teacher recruitment and retention for rural schools. The participating school district followed the asset-based approach by recruiting paraprofessionals from within the school and candidates interested in the profession from the local community. Results from the study and previous research indicate this practice is effective at improving teacher retention rates (Mahan, 2010 & McCullom, 2011). This practice requires a long term investment depending on the amount of previous education attained by interested candidates. Despite the investment, once a pipeline of candidates has been established, the school is able to readily fill vacancies as needed. The researcher recommends rural school districts should evaluate the possibilities of a GYOT program and find the assets from within their own communities.

Recommendations for Further Research

The research study concluded the reflective nature of the relationship between the rural school district and their partner university. GYOT programs are expanding across the United States. A concern addressed by the university program administrator was the lack of collaboration among these programs on the state level. Each university program follows a different structure at the university level. The researcher recommends research on collaboration across GYOT programs to establish best practices.

The literature indicated high retention rates across the spectrum for GYOT programs. GYOT retention rates range from 60% to as high as 92% (Gist, Bianco, &

Lynn, 2019). A gap in literature was discovered on the retention rate beyond 6 years for GYOT candidates. This could be attributed to a larger portion of universities offering GYOT programs. The researcher recommends longitudinal research pertaining to long term retention rates beyond 6 years to provide additional evidence to the recruitment and retention studies.

The limited research studies covering financial support of GYOT programs provides an additional avenue of research. The university personnel and district superintendent expressed concerns on the longevity of the program since funding was based on a year to year grant. The grant supports university funding to provide a site based coordinator and stipends for teacher candidates in rural communities. The researcher recommends additional scholarship regarding long term funding of GYOT programs at the state and federal levels.

Summary

In conclusion, the qualitative case study evaluated the partnership and effectiveness of a GYOT approach for rural schools to address teacher recruitment and retention. An asset based theoretical framework provided a different lens to analyze teacher recruitment and retention. Rural school literature is scarce in the field of education. Research for GYOT programs specific for rural schools is even more limited. Findings support that GYOT programs are useful strategies for rural schools to supplement current recruitment and retention strategies to fulfill staffing requirements. Research participants concluded GYOT teacher candidates were effective in the classroom. The study also identified components that were considered essential to a GYOT program. Literature was not available to determine the most effective model.

The sample size was small, but yielded findings that confirm benefits for rural schools utilizing GYOT strategies.

REFERENCES

Adams, G. J. (1996). Using a cox regression model to examine voluntary teacher turnover. *The Journal of Experimental Education, 64*(3), 267–285. doi:10.1080/00220973.1996.9943807

Aragon, S. (2016, May). *Teacher shortages: What we know*. Retrieved from http://www.ecs.org/ec-content/uploads/Teacher-Shortages-What-We-Know.pdf

Ashiedu, J. A., & Scott-Ladd, B. D. (2012). Understanding teacher attraction and retention drivers: Addressing teacher shortages, *Australian Journal of Teacher Education, 37*(11). Retrieved from http://ro.ecu.edu.au/ajte/vol37/iss11/2

Alberta Learning. (2003). *Report of the Advisory Committee on Future Teacher Supply and Demand in Alberta.* Edmonton, AB. Retrieved from http://education.alberta.ca/media/354979/committeereport.pdf

Atwell, N. (2007). *Increasing the supply of highly qualified teachers from culturally and linguistically diverse backgrounds.* Retrieved from ERIC database. (ED495649).

Bard, J., Gardener, C., & Wieland, R. (2006). Rural school district consolidation. *Academic Leadership: The Online Journal, 4*(2). Retrieved from http://scholars.fhsu.edu/alj/vol4/iss2/9

Barley, Z. A., & Beesley, A. D. (2007). Rural school success: What can we learn? *Journal of Research in Rural Education, 22*(1). Retrieved from http://www.umaine.edu/jrre/22-1.pdf

Barnes, G., Crow, E., & Schaefer, B. (2007). *The cost of teacher turnover in five school districts: A pilot study.* National Commission on Teaching and America's Future, Washington, DC. Retrieved from https://files.eric.ed.gov/fulltext/ED497176.pdf

Barter, B. (2008). Rural education: Learning to be rural teachers. *Journal of Workplace Learning, 20*(7/8), 468-479. doi:10.1108/13665620810900292

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report,* 13(4), 544–559.

Beesley, A. D., Atwill, K., Blair, P., & Barley, Z. A. (2010). Strategies for recruitment and retention of secondary teachers in central U.S. rural schools. *The Rural Educator, 31*(2), 1–9.

British Columbia Public School Employers' Association. (2009). *BCPSEA resources & services*. Retrieved from http://www.bcpsea.bc.ca/documents/resource_manual.pdf

Bloomberg, L. A., & Volpe, M. (2012). *Completing your qualitative dissertation: A road map from beginning to end.* Thousand Oaks, CA: SAGE publications.

Boaler, J. (2003). No child left behind: Implications for rural school administrators and teachers. *Phi Delta Kappan, 84*(7), 502–506. doi:10.1177/003172170308400706

Borman, G. D., & Dowling, N.M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *American Education Research Association, 78*(3), 367-409. doi:10.3102/0034654308321455

Boyd, D., Grossman, P., Ing, M., Lankford., Loeb, S., & Wyckoff, J. (2011). The influence of school administrators on teacher retention decisions. *American Educational Research Journal, 48*(2), 303–333. doi:10.3102/0002831210380788

Brewer, D. J. (1996). Career paths and quit decisions: Evidence from teaching. *Journal of Labor Economics, 14*(2), 313–339. doi:0734-306x/96/1402-000580150

Briggs, R. J., Coleman, M., & Morrison, M. (2012). *Research methods in educational leadership and management*. Thousand Oaks, CA: Sage Publications.

Brill, S., & McCartney, A. (2008). Stopping the revolving door: Increasing teacher retention. *Politics and Policy, 36,* 750–774. doi:10.1111/j.1747-1346.2008.00133.x

Canadian Teachers' Federation. (2000). *Demographics of the teaching profession.* Ottawa, ON, Conference Proceeding

Clandinin, D. J., Downey, C. A., & Huber, J. (2009). Attending to changing landscapes: Shaping the interwoven identities of teachers and teacher educators. *Asia-Pacific Journal of Teacher Education, 37*(2), 141–154. doi:10.1080/13598660902806316

Clewell, B. C., & Villegas, A. M. (1999). Creating a nontraditional pipeline for urban teachers: The pathways to teaching careers model. *Journal of Negro Education,* 306-317.

Collins, T. (1999). Attracting and retaining teachers in rural areas. Retrieved from http://files.eric.ed.gov/fulltext/ED438152.pdf

Cooper, J. M., & Alvarado, A. (2006). *Preparation, recruitment, and retention of teachers.* Brussels: International Institute for Educational Planning.

Darling-Hammond, L., Berry, B., & Thoreson, A. (2001). Does teacher certification matter? Evaluating the evidence. *Educational Evaluation and Policy Analysis, 23*(1), 57-77. Retrieved from https://www-jstor-org.lib-e2.lib.ttu.edu/stable/pdf/3594159.pdf

Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education, 53*(4), 286–302. doi:10.1177/0022487102053004002

Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, teach for America, and teacher effectiveness. *Education Policy Analysis Archives, 13*(42). Retrieved from http://epaa.asu.edu/epaa/v13n42

Darling-Hammond, L., & Podolsky, A. (2019). Breaking the cycle of teacher shortages: What kind of policies can make a difference? *Education Policy Analysis Archives, 27*(34), 1-15. Retrived from https://epaa.asu.edu/ojs/article/view/4633/2226

Denzin, N. K., & Lincoln, Y. S. (2008). *Strategies of qualitative inquiry* (Vol. 2). Thousand Oaks, CA, Sage Publications.

Dove, M. (2004). Teacher attrition: A critical American and international education issue. *Delta Kappa Gamma Bulletin, 71*(1). Retrieved from http://eds.a.ebscohost.com.lib-e2.lib.ttu.edu

Dure, B. (2014, October 21). Millennials continue urbanization of America, leaving small towns. *National Public Radio.* Retrieved from http://www.npr.org/2014/10/21/357723069/millennials-continue-urbanization-of-america-leaving-small-towns

Dworkin, A. G. (1980). The changing demography of public school teachers: Some implications for faculty turnover in urban areas. *Sociology of Education, 53*(2), 65–73. doi:10.2307/2112489

Dwyer, C.A. (Ed.). (2007). *America's Challenge: Effective teachers for at-risk schools and students.* Washington, DC: National Comprehensive Center for Teacher Quality. Retrieved from ERIC database. (ED543777).

Dynarski, M. (2015). Using research to improve education under the Every Student Succeeds Act. *Economic Studies*, *1*(8), 1–5.

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. San Bernardino, CA: Sage Publications.

Erickson, F. (1985). *Qualitative methods in research on teaching* (Occasional Paper No. 81). Retrieved from http://files.eric.ed.gov/fulltext/ED263203.pdf

Erwin, S., Winn, P., & Erwin, J. (2011). A comparison of urban, suburban, and rural principal leadership skills by campus student achievement level. *Administrative Issues Journal, 1*(2). Retrieved from https://dc.swosu.edu/aij/vol1/iss2/3?utm_source=dc.swosu.edu%2Faij%2Fvol1%2Fiss2%2F3&utm_medium=PDF&utm_campaign=PDFCoverPages

Escandon, E. (2007, July). Teacher attrition: Why do teachers stop teaching in Utah and what policies will encourage them to stay? (Report No. 679). Retrieved from http://www.utahfoundation.org/img/pdfs/rr679summary.pdf

Fairgood, M. (2008). California school paraprofessional teacher training program: An annual report to the Legislature as required by SB 1636 (Chap. 1444, Stats, 1990). Sacramento, CA: Commission on Teacher Credentialing. Retrieved from http://www.ctc.ca.gov/reports/PTTP_2008_LegRpt.pdf

Fenwick, L. T. (2001). *Patterns of excellence: Policy perspectives on diversity in teaching and school leadership*. Atlanta, GA: Southern Education Foundation.

Flick, U., Kardoff, E., & Steinke, J. (2004). *A companion to qualitative research*. Thousand Oaks, CA: Sage Publications.

Flynt, S. W., & Morton, R. C. (2009). The teacher shortage in America: Pressing concerns. *National Forum of Teacher Education Journal*, *19*(30), 1–5.

Fortner, C. K., Kershaw, D. C., Bastian, K. C., & Lynn, H. H. (2015). Learning by doing: The characteristics, effectiveness, and persistence of teachers who were teaching assistants first. *Teachers College Record, 117*(11), 1-30.

Gambhir, M., Broad, K., Evans, E., & Gaskell, J. (2008). Characterizing initial teacher education in Canada: Themes and issues. Toronto, Canada: Ontario Institute for Studies in Education, University of Toronto.

Gerald, D. E., & Hussar, W. J. (1998). *Projections of education statistics to 2008*. Washington, D.C.: National Center for Educational Statistics, U.S. Department of Education.

Gist, C.D., Bianco, M., & Lynn, M. (2019). Examining grow your own programs across the teacher development continuum: Mining research on teachers of color and nontraditional educator pipelines. *Journal of Teacher Education, 70*(1), 13-25. doi:10.1177/0022487118787504

Glaser, B. (1965). The constant comparative method of qualitative analysis. *Social Problems, 12*(4), 436-445. doi:10.2307/798843

Glaser, B. G., & Strauss, A. L. (2012). *The discovery of grounded theory: Strategies for qualitative research* (7th ed). New Brunswick, NJ: Transaction Publishers.

Goddard, R., O'Brien, P, & Goddard, M. (2006). Work environment predictors of beginning teacher burnout. *British Educational Research Journal, 32*(6), 857–874.

Goldhaber, D. (2002). Teacher quality and teacher pay structure: What do we know, and what are the options? *Georgetown Public Policy Review, 7*(2), 81–94.

Gonzalez, L., Brown, M. S., & Slate, J. R. (2008). Teachers who left the teaching profession: A qualitative understanding. *The Qualitative Report, 13*(1), 1–11. Retrieved from http://nsuworks.nova.edu/tqr/vol13/iss1/1

Grissmer, D., & Kirby, S. N. (1997). Teacher turnover and teacher quality. *Teachers College Record, 99*(1), 45–56. Retrieved from https://eric.ed.gov/?id=EJ557686

Guarino, C.M., Santibanez, L., & Daley, G.A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *American Educational Research Association, 76*(2), 173-208. Retrieved from http://www.jstor.org/stable/3700588

Guha, R., Hyler, M. E., & Darling-Hammond, L. (2017). The teacher residency: A practical path to recruitment and retention. *American Educator, 41*(1), 31–44.

Halcomb, S. T. (2007). Are they being retained: An analysis of the effect on the cumulative new teacher retention rate of Oklahoma career tech new teacher induction process. (Doctoral dissertation) Retrieved from http://shareok.org/handle/11244/7419

Hail, C., Hurst, B., & Camp, D. (2011). Peer debriefing: Teachers' reflective practices for professional growth. *Critical Questions in Education, 2*(2), 74-83. Retrieved from http://education.missouristate.edu/AcadEd/75532.htm

Hanford, E. (2017). Schools in poor, rural districts are the hardest hit by nation's growing teacher shortage. *American Public Media*. Retrieved from https://www.apmreports.org/story/2017/08/28/rural-schools-teacher-shortage

Hanover Research. (2016). *Strategies for addressing critical teacher shortages*. Arlington, VA: Hanover Research. Retrieved from http://www.gssaweb.org/wp-content/uploads/2016/05/Strategies-for-Addressing-Critical-Teacher-Shortages.pdf

Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (2004). Why public schools lose teachers. *The Journal of Human Resources, 39*(2), 326–354. Retrieved from file:///D:/Doctoral%20Dissertation/Dissertation%20Literature/why%20public%20schools%20lose%20teachers.pdf

Hanushek, E. A., & Rivkin, S. G. (2010). *Constrained job matching: Does teacher job search harm disadvantaged urban schools?* (NBER Working Paper No. 15816). Cambridge, MA: National Bureau of Economic Research.

Hatch, J. A. (2002). Doing qualitative research in education settings. Albany, NY: State University of New York Press.

Hendricks, M. D. (2014). Does it pay to pay teachers more? Evidence from Texas. *Journal of Public Economics, 109,* 50–63. doi:10.1016/j.jpubeco.2013.11.001

Henke, R. R., Chen, X., Geis, S., & Knepper, P. R. (2000). *Progress through the teacher pipeline: 1992–93 college graduates and elementary/secondary school teaching as of 1997* (NCES 2000-152). Washington, DC: National Center for Educational Statistics, U.S. Department of Education.

Hill, D. M., & Barth, M. (2004). NCLB and teacher retention: who will turn out the lights? *Education and the Law 16*(2–3), 173–182. doi:10.1080/0953996042000291588

Hudson, P., & Hudson, S. (2008). Changing preservice teachers' attitudes for teaching in rural schools, *Australian Journal of Teacher Education, 33*(4), 67–77. doi:10.14221/ajte.2008v33n4.6

Imazeki, J. (2005). Teacher salaries and teacher attrition. *Economics of Education Review, 24*(4), 431–449. doi:10.1016/j.econedurev.2004.07.014

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal, 38*(3), 499–534. doi:10.3102/00028312038003499

Ingersoll, R. M. (2003). *Is there really a teacher shortage?* Consortium for Policy Research in Education Research Reports. Retrieved from Graduate School of Education, University of Pennsylvania website: http://repository.upenn.edu/cpre_researchreports/37

Ingersoll, R. M., & Kralik, J. M. (2004). *The impact of mentoring on teacher retention: What the research says*. Retrieved from http://www.environmentalconclusions.com/resources/WORKSHOP_3_-_OPTIONAL_-_Houston_-_The_Impact_of_Mentoring_on_Teacher_Retention.pdf

Ingersoll, R. M., Merrill, L., & Stuckey, D. (2014). Seven trends: The transformation of the teaching force (CPRE Report #RR–80). Philadelphia, PA: Consortium for Policy Research in Education, University of Pennsylvania.

Ingersoll, R. M., & Smith, T. M. (2003). The wrong solution to the teacher shortage. *Educational Leadership, 60*(8), 30–33. Retrieved from https://pdfs.semanticscholar.org/62eb/a3fb558446a652222515d542f1db53dd34a6.pdf

Jacob, B. A. (2007). The challenges of staffing urban schools with effective teachers. *The Future of Children, 17*(1), 129–153.

James, E. A., Milenkiewicz, M. T., & Bucknam, A. (2008). Participatory action research for educational leadership: Using data-driven decision making to improve schools. Newbury Park, CA: Sage Publications.

Jimerson, L. (2005). The competitive disadvantage: Teacher compensation in rural America. *The Rural School and Community Trust.* Washington, DC: Rural School and Community Trust.

Johnson, S. M., Kardos, S. M., Kauffman, D., Liu, E., & Donaldson, M. L. (2004). The support gap: New teachers' early experiences in high-income and low-income schools. *Education Policy Analysis Archives, 12*(61). Retrieved from https://files.eric.ed.gov/fulltext/EJ853526.pdf

Justice, M., Greiner, C., & Anderson, S. (2003). Determining the influences of traditional Texas teachers vs. teachers in the emergency teaching certification program. *Education, 124*(2), 376–389. Retrieved from http://eds.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=b90b02a6-be13-4717-bea9-12a71797287d%40sessionmgr120

Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2008). What does certification tell us about teacher effectiveness? Evidence from New York City. *Economics of Education Review, 27*(6), 615–631. doi:10.1016/j.econedurev.2007.05.005

Kena, G., Hussar, W., McFarland, J., de Brey, C., Musu-Gillette, L., Wang, X., Dunlop Velez, E. (2016). *The condition of education 2016* (NCES 2016-144).Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from http://nces.ed.gov/pubsearch

Kirby, S. N., Berends, M., & Naftel, S. (1999). Supply and demand of minority teachers in Texas: Problems and prospects. *Educational Evaluation and Policy Analysis, 21*(1), 47–66. doi:10.3102/01623737021001047

Kitchenham, A., & Chasteauneuf, C. (2010). Teacher supply and demand: Issues in northern Canada. *Canadian Journal of Education, 33*(4), 869–896.

Knauer, C. E. (2014). *Teacher attrition: A case study of a title 1 school.* (Doctoral dissertation). Retrieved from Northeastern University website: https://repository.library.northeastern.edu/files/neu:336478/fulltext.pdf

Krieg, J. M. (2006). Teacher quality and attrition. *Economics of Education Review, 25*(1), 13–27. doi:10.1016/j.econedurev.2004.09.004

Lau, K. F., Dandy, E. B., & Hoffman, L. (2007). The pathways program: A model for increasing the number of teachers of color. *Teacher Education Quarterly, 34*(3), 27-40.

Learning Policy Institute. (2016). *Addressing the problem of teacher shortage: What districts can do*. Retrieved from https://learningpolicyinstitute.org/product/teacher-shortage-what-districts-cando-factsheet

Levy, A., Joy, L., Ellis, P., Jablonski, E., & Karelitz, T. (2012). Estimating teacher turnover costs: A case study. *Journal of Education Finance, 38*(2), 102-129. Retrieved from https://files.eric.ed.gov/fulltext/ED497176.pdf

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Thousand Oaks, CA: Sage Publications.

Lobosco, A. F., & Newman, D. L. (1992). Teaching special needs populations and teacher job satisfaction. *Urban Education, 27*(1), 21–31. doi:10.1177/0042085992027001003

Loeb, S., Rouse, C., & Shorris, A. (2007). Introducing the issue. *The Future of Children, 17*(1), 3–14. doi:10.1353/foc.2007.0008

Lonsdale, M., & Ingvarson, L. (2003). Initiatives to address teacher shortage. *Australian Council for Educational Research, 5.* Retrieved from http://research.acer.edu.au/workforce/4

Lindqvist, P., Nordanger, U., & Carlsson, R. (2014). Teacher attrition the first five years – A multifaceted image. *Teaching and Teacher Education, 40,* 94–103. doi:10.1016/j.tate.2014.02.005

Macdonald, D. (1999). Teacher attrition: A review of literature. *Teaching and Teacher Education, 15*(8), 835–848. doi:10.1016/S0742-051X(99)00031-1

Mahan, C. (2010). *Home-grown teachers: Will their rural root keep them in Virginia's rural schools.* Retrieved from https://scholarscompass.vcu.edu/etd/2082/

McClure, C., & Reeves, C. (2004). *Rural teacher recruitment and retention review of the research and practice literature.* Charleston, WV: Appalachia Educational Laboratory.

McCollum, D. (2011). *A mixed methods study identifying reoccurring themes in policies and processes in grow your own teacher recruitment and retention programs.* Retrieved from https://mospace.umsystem.edu/xmlui/handle/10355/14437

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass Publishers.

Monk, D. H. (2007). Recruiting and retaining high-quality teachers in rural areas. *The Future of Children, 17*(1), 155–174. Retrieved from http://files.eric.ed.gov/fulltext/EJ795884.pdf

Miller, L. C. (2012). *Working paper: Understanding rural teacher retention and the role of community amenities*. Working paper, Center on Education Policy and Workforce Competitiveness, University of Virginia, Charlottesville, VA.

Miller, T.P. (2016, November 30). *Recruiting and retaining high achievers for the teaching profession: Options beyond financial aid.* Retrieved from https://www.in.gov/che/files/CHE%20Teacher%20Recruitment%20and%20Retention%20Report%20FINAL.PDF

Mississipi Department of Education. (2018). *Mississippi grow-your-own teacher task force report*. Retrieved from https://www.mdek12.org/OETA/Mississippis-Grow-Your-Own-Teacher-Initiative

Murnane, R. J. (1984). Selection and survival in the teacher labor market. *The Review of Economics and Statistics, 66*(3), 513–518. doi:10.2307/1925013

National Commission on Teaching and America's Future. (2007). *The high cost of teacher turnover*. Retrieved from https://nctaf.org/wp-content/uploads/NCTAFCostofTeacherTurnoverpolicybrief.pdf

No Child Left Behind Act of 2001, Pub. L. 107–110, § 115, Stat. 1425 (2002). https://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf

Nova Scotia Department of Education. (2007). *Nova Scotia public education teacher supply and demand: 2007 update report*. Halifax, NS. Retrieved from http://www.ednet.ns.ca/pdfdocs/reports/teacher_supply_and_demand_report.pdf

Nvivo (Version 11) [Computer software]. QSR International Pty Ltd.

Organisation for Economic Co-operation and Development. (2005). *Education at a glance* 2005. Retrieved from https://www.oecd.org/education/skills-beyond-school/35341210.pdf

Organisation for Economic Co-operation and Development Staff. (2008). *OECD factbook 2008: Economic, environmental and social statistics.* Paris: OECD.

Osterholm, K., Horn, D., & Johnson, W. (2006). Finders keepers: Recruiting and retaining teachers in rural schools. *National Forum of Teacher Education Journal, 17*(3). Retrieved from http://www.nationalforum.com/Electronic%20Journal%20Volumes/Osterholdm,%20Karen,%20Finders%20Keepers%20-%20Recruiting%20and%20Retaining%20Teachers%20in%20Rural%20Schools.pdf

Patton, M. Q. (1990). *Qualitative Evaluation Methods*. (2nd ed.). Thousand Oaks, CA: Sage Publications.

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods.* Thousand Oaks, CA: Sage Publications.

Peterson, P.E., & Nadler, D. (2009) What happens when states have genuine alternative certification? We get more minority teachers and test scores rise. *Education Next, 9*(1), 70-74. Retrieved from http://eds.b.ebscohost.com.lib-e2.lib.ttu.edu/ehost/detail/detail?vid=11&sid=ebe53cec-6c9a-472d-8afa-21b257a0acb7%40sessionmgr102&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=508120564&db=eue

Perrachione, B. A., Rosser, V. J., & Petersen, G. J. (2008). Why do they stay? Elementary teachers' perceptions of job satisfaction and retention. *Professional Educator, 32*(2). Retrieved from http://files.eric.ed.gov/fulltext/EJ862759.pdf

Player, D. (2015). *The supply and demand for rural teachers.* Retrieved from http:// http://www.rociidaho.org/wp-content/uploads/2015/03/ROCI_2015_RuralTeachers_FINAL.pdf

Podgursky, M., Monroe, R., & Watson, D. (2004). The academic quality of public school teachers: An analysis of entry and exit behavior. *Economics of Education Review, 23*(5), 507–518. doi:10.1016/j.econedurev.2004.01.005

Podolsky, A., & Kini, T. (2016). *How effective are loan forgiveness and service scholarships for recruiting teachers?* Retrieved from http://www.ecs.org/ec-content/uploads/Loan_Forgiveness_Brief.pdf

Rivkin, S., Hanushek, E., & Kain, J. (2005). Teachers, schools, and academic achievement. *Econometrica, 73*(2), 417-458. Retrieved from https://www-jstor-org.lib-e2.lib.ttu.edu/stable/pdf/3598793.pdf

Ronfeldt, M., & Loeb, S. (2013). How teacher turnover harms student achievement. *American Educational Research Journal, 50*(1), 4–36. Retrieved from http://journals.sagepub.com/doi/abs/10.3102/0002831212463813

Ross, F., & Ahmed, A. (2016). Fostering globalism: Community partnership to grow your own teachers. In C. Schmidt & J. Schneider, *Diversifying the teaching force in transnational contexts: Critical Perspectives* (pp.73-86). Rotterdam: Sense Publishers.

Rothman, R. (2017). Improving school leadership under ESSA: Evidence-based options for states & districts. *National Institute for School Leadership.* Retrieved from http://www.nisl.org/wp-content/uploads/2017/05/NISLWhitepaperPrint050417.pdf

Schaffhauser, D. (2014). The problem isn't teacher recruiting; It's retention. *THE Journal.* Retrieved from https://thejournal.com/articles/2014/07/17/the-problem-isnt-teacher-recruiting-its-retention.aspx

Schwandt, T. A. (2007). Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Evaluation,* 11–25. doi:10.1002/ev.223

Shakrani, S. (2008). Teacher turnover: Costly crisis, solvable problem. Retrieved from https://eric.ed.gov/?id=ED502130

Shann, M. H. (1998). Professional commitment and satisfaction among teachers in urban middle schools. *The Journal of Educational Research, 92*(2), 67–73. http://dx.doi.org/10.1080/00220679809597578

Sharplin, E., O'Neill, M., & Chapman, A. (2010). Coping strategies for adaptation to new teacher appointments: Intervention for retention. *Teaching and Teacher Education, 27,* 136–146. doi:10.1016/j.tate.2010.07.010

Simon, F. A. (2011). *Efficacy development in new teacher study groups* (Doctoral dissertation). Retrieved from https://repository.arizona.edu/handle/10150/145392

Smith, E. (2011). Faculty mentors in teacher induction: Developing a cross-institutional identity. *The Journal of Educational Research, 104*(5), 316–329. doi:10.1080/00220671.2010.482948

Smithers, A., & Robinson, P. (2003). Factors affecting teachers' decisions to leave the profession. Retrieved from http://dera.ioe.ac.uk/4759/1/RR430.pdf

Stockard, J., & Lehman, M. B. (2004). Influences on the satisfaction and retention of 1st-year teachers: The importance of effective school management. *Educational Administration Quarterly, 40*(5), 742–771. doi:10.1177/0013161X04268844

Strauss, A., & Corbin, J. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage Publications

Strizek, G.A., Pittsonberger, J.L., Riordan, K.E., Lyter, D. M., & Orlofsky, G.F. (2006). *Charatacteristics of schools, districts, teachers, principals, and school libraries in the United States: 2003-04 Schools and Staffing Survey* (NCES 2006-313 Revised). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

Texas Education Agency. (2016). *District type data, 2015–2016*. Retrieved from http://www.tea.texas.gov/acctres/analyze/1516/level.html

Texas Education Agency, Texas Rural Schools Task Force (2017). *Elevating support for Texas rural and small schools.* Retrieved from https://tea.texas.gov/Texas_Educators/Educator_Initiatives_and_Performance/Rural_Schools_Task_Force/

U.S. Department of Education. (2017). *Teacher loan forgiveness.* Retrieved from http://studentaid.ed.gov/sa/repay-loans/forgiveness-cancellation/teacher

Worth, J. & De Lazzari, G. (2017). Teacher retention and turnover research. Research update 1: Teacher retention by subject. *National Foundation for Educational Research.* Slough, UK.

Wushishi, A.A. (2013). Additional discoveries on causes of teacher attrition. *Greener Journal of Educational Research, 3*(10) 462–468. Retrieved from http://www.gjournals.org/GJER/GJER%20PDF/2013/December/1210131021%20Aminu%20et%20al.pdf

APPENDICES

Appendix A

TEXAS TECH UNIVERSITY
Human Research Protection Program

Jan 24, 2019 12:59 PM CST

Fernando Valle
Educational Psychology Leaders

Re: IRB2018-861 Grow Your Own Teachers: A Case Study of Strategies Used by Rural Texas Schools to Produce and Retain Qualified Teachers

The expiration date was set for November 30, 2019 to accommodate the winter break in December.

Expiration Date: *November 30, 2019*

Dear Dr. Fernando Valle, Dusty Palmer, Cathy Gabro, Brandon Mahler:

A Texas Tech University IRB reviewer has approved the proposal referenced above within the expedited category of:
6. Collection of data from voice, video, digital, or image recordings made for research purposes.
7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Sincerely,

Scott Burris, Ph.D.
Chair Texas Tech University Institutional Review Board
Professor, Department of Agricultural Education and Communications
Human Research Protection Program
357 Administration Building
Lubbock, Texas 79409-1075
T 806.742.2064
www.hrpp.ttu.edu

Appendix B

Grow Your Own Teachers

Texas Tech University

Dissertation Study Questionnaire

This questionnaire has been developed with the purpose of identifying and evaluating the effectiveness of the Grow Your Own Teacher approach for rural schools to address teacher recruitment and retention. Your anonymous responses to this questionnaire will help determine the effectiveness of the Grow Your Own model for rural schools compared to other teacher education pathways. I would like to thank you for taking the time to complete the questionnaire. It should take no more than 15 minutes to complete. If you have any questions about the questionnaire, please contact Brandon Mahler at Brandon.mahler@ttu.edu or 806-549-9491.

1. Are you currently involved with a Grow Your Own Teacher program? Yes or No
2. If yes, what is your role pertaining to the program?
3. Describe your experience monitoring or participating in the Grow Your Own program.
4. What is the goal of the Grow Your Own Teacher program?
5. Describe the components which contribute most to its success.
6. Describe the components which contribute least to its success.
7. How does the program prepare teacher candidates differently than other teacher education pathways?
8. In what ways does the Grow Your Own impact, teacher recruitment or retention practices?
9. Would you be willing to participate in a follow-up interview? If yes, please include your email address.

Appendix C

Interview Protocol – University Officials

Grow Your Own Teacher Program

Intro: Thank you for being willing to give your time for this interview. The purpose of this qualitative research study is to identify and evaluate the effectiveness of the Grow Your Own Teacher approach for rural schools to address teacher recruitment and retention. Your experience with this program is beneficial for understanding the recruitment, retention, and preparation practices involved with this type of teacher preparation program.

The topic of today's interview relates to your experience involved with the Grow Your Own Teacher program. This interview is expected to require 30 minutes of your time, depending upon how much information you would like to share for the study. If at any time you do not want to finish the interview or prefer to skip a question, please feel free to do so. All answers will be kept in the strictest of confidence and pseudonyms will be utilized for people and places to ensure the highest levels of confidentiality.

Let's review the consent form to see if you have any further questions that I need to address before we begin. I would like to audio record the interview so that I can accurately capture your words. May I have your permission to record this interview? (If YES, start recorder. If NO, state that you will take notes).

(THIS IS A SEMI-STRUCTURED INTERVIEW, SO ADDITIONAL QUESTIONS WILL BE ASKED AS A FOLLOW-UP TO THE PARTICIPANT'S RESPONSES)

INTERVIEW QUESTIONS

1. Tell me about yourself, your background, your experience with a Grow Your Own programs.
2. What do you believe is essential components of a successful Grow Your Own Teacher program?
3. What are some challenges associated with the Grow Your Own Teacher model compared to other teacher certification pathways?
4. How does the Grow Your Own teacher program recruit candidates? Is there a specific process involved with matching students with school districts?
5. How does the Grow Your Own teacher program meet the needs of your partner school districts?
6. Please describe the partnership involved between the University and school districts participating in the Grow Your Own Teacher program.
7. What (if anything) does the program do differently to prepare teacher candidates for working in rural schools?
8. Do you believe there is an impact in teacher retention rates due to the Grow Your Own strategy?

9. What additional information would you like to share?

Closure: I appreciate your honesty in your answers. Please be assured that the answers will be kept in confidence and pseudonyms will be utilized. If I need further clarification to an answer, may I contact you again? I would like to send you a copy of the transcription of this interview for you to check for accuracy and it would require approximately 4 minutes of your time. How would you like for me to send a copy of the transcript to you for member checking? Thank you for your time.

Stop recording. *Immediately download recording to password protected computer*

Interview Protocol – Superintendent – Teacher Mentor

Grow Your Own Teacher Program

Intro: Thank you for being willing to give your time for this interview. The purpose of this qualitative research study is to identify and evaluate the effectiveness of the Grow Your Own Teacher approach for rural schools to address teacher recruitment and retention. Your experience with this program is beneficial for understanding the recruitment, retention, and preparation practices involved with this type of teacher preparation program.

The topic of today's interview relates to your experience involved with the Grow Your Own Teacher program. This interview is expected to require 30 minutes of your time, depending upon how much information you would like to share for the study. If at any time you do not want to finish the interview or prefer to skip a question, please feel free to do so. All answers will be kept in the strictest of confidence and pseudonyms will be utilized for people and places to ensure the highest levels of confidentiality.

Let's review the consent form to see if you have any further questions that I need to address before we begin. I would like to audio record the interview so that I can accurately capture your words. May I have your permission to record this interview? (If YES, start recorder. If NO, state that you will take notes).

(THIS IS A SEMI-STRUCTURED INTERVIEW, SO ADDITIONAL QUESTIONS WILL BE ASKED AS A FOLLOW-UP TO THE PARTICIPANT'S RESPONSES)

INTERVIEW QUESTIONS

1. Tell me about yourself, your background, your experience with a Grow Your Own programs.
2. How long has your school been involved with the Grow Your Own Teacher program?
3. What do you believe are essential components of a successful Grow Your Own Teacher program?
4. What are some challenges associated with the Grow Your Own Teacher model compared to other teacher certification pathways?
5. Please describe the partnership involved between the school district and the University sponsoring the Grow Your Own Teacher program.
6. What (if anything) does the program do differently to prepare teacher candidates for working in rural schools?
7. What impact does the Grow Your Teacher program have on teacher recruitment and retention for rural schools?
8. Would you consider the teachers participating in the program more prepared for the classroom compared to other teacher preparation programs? If YES, How does the program better prepare the candidates? If NO, what could be improved?

9. Do the teacher candidates participating in the program have experience with rural schools? Would you consider it important for the candidates to understand the differences involved with rural schools compared to other district classifications?
10. What additional information would you like to share?

Closure: I appreciate your honesty in your answers. Please be assured that the answers will be kept in confidence and pseudonyms will be utilized. If I need further clarification to an answer, may I contact you again? I would like to send you a copy of the transcription of this interview for you to check for accuracy and it would require approximately 4 minutes of your time. How would you like for me to send a copy of the transcript to you for member checking? Thank you for your time.

Stop recording. *Immediately download recording to password protected computer*

Interview Protocol for Teacher Candidate

Grow Your Own Teacher Program

Intro: Thank you for being willing to give your time for this interview. The purpose of this qualitative research study is to identify and evaluate the effectiveness of the Grow Your Own Teacher approach for rural schools to address teacher recruitment and retention. Your experience with this program is beneficial for understanding the recruitment, retention, and preparation practices involved with this type of teacher preparation program.

The topic of today's interview relates to your experience involved with the Grow Your Own Teacher program. This interview is expected to require 30 minutes of your time, depending upon how much information you would like to share for the study. If at any time you do not want to finish the interview or prefer to skip a question, please feel free to do so. All answers will be kept in the strictest of confidence and pseudonyms will be utilized for people and places to ensure the highest levels of confidentiality.

Let's review the consent form to see if you have any further questions that I need to address before we begin. I would like to audio record the interview so that I can accurately capture your words. May I have your permission to record this interview? (If YES, start recorder. If NO, state that you will take notes).

(THIS IS A SEMI-STRUCTURED INTERVIEW, SO ADDITIONAL QUESTIONS WILL BE ASKED AS A FOLLOW-UP TO THE PARTICIPANT'S RESPONSES)

INTERVIEW QUESTIONS

1. Tell me about yourself, your background, your family, where you went to school.
2. Was education your first career choice? If not, what influenced your decision to change career paths?
3. How did you come to the decision to attend this University program? Did you attend a community college before entering this Grow Your Own program?
4. What other teacher education pathways are you aware of?
5. How have you financed your higher education classes? Have you received any financial aid during the course of your Grow Your Own program?
6. Why have you chosen to work in a rural school setting during your program?
7. What advantages or disadvantages do you believe are associated with completing your program in a rural school compared to other districts?
8. What kinds of support have you be given by your University supervisor? Your site coordinator?
9. Have you had any negative experiences during the Grow Your Own program? What do you believe could be done differently?
10. How has the course work assisted or not assisted in preparing you for the teaching in the classroom?

11. What additional information would you like to share?

Closure: I appreciate your honesty in your answers. Please be assured that the answers will be kept in confidence and pseudonyms will be utilized. If I need further clarification to an answer, may I contact you again? I would like to send you a copy of the transcription of this interview for you to check for accuracy and it would require approximately 4 minutes of your time. How would you like for me to send a copy of the transcript to you for member checking? Thank you for your time.

Stop recording. *Immediately download recording to password protected computer*