

The Effect Financial Incentives, Mentor Programs, and Grow Your Programs Have on
Teacher Retention in Texas Rural School Districts

By
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Approved

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INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECTS
Letter of Approval

Dr. Hooper:

The West Texas A & M University Institutional Review Board is pleased to inform you that upon review, proposal #2022.05.001 for your study titled, "Teacher Retention Strategies: Effectiveness in Texas Rural School Districts," meets the requirements of the WTAMU Standard Operating Procedure (SOP) No. 15.99.05.W1.01AR Institutional Review Board (Use of Human Subjects in Research). Approval is granted for one calendar year. This approval expires on June 1, 2023.

Principal investigators assume the following responsibilities:

1. **Continuing Review:** The protocol must be renewed on or before the expiration date if the research project requires more than one year for completion. A [Continuing Review form](#) along with required documents must be submitted on or before the stated deadline. Failure to do so will result in study termination and/or loss of funding.
2. **Completion Report:** At the conclusion of the research project (including data analysis and final written papers), a [Close out form](#) must be submitted to AR-EHS.
3. **Unanticipated Problems and Adverse Events:** Pursuant to [SOP No. 15.99.05.W1.13AR](#), unanticipated problems and serious adverse events must be reported to AR-EHS.
4. **Reports of Potential Non-Compliance:** Pursuant to [SOP No. 15.99.05.W1.05AR](#), potential non-compliance, including deviations from the protocol and violations, must be reported to the IRB office immediately.
5. **Amendments:** Changes to the protocol must be requested by submitting an [Amendment form](#) to AR-EHS for review by the IRB. The Amendment must be approved by the IRB before being implemented. Amendments do not extend time granted on the initial approval
6. **Consent Forms:** When using a consent form, only the IRB approved form is allowed.
7. **Audit:** Any proposal may be subject to audit by the IRB Administrator during the life of the study. Investigators are responsible for maintaining complete and accurate records for five years and making them available for inspection upon request.
8. **Recruitment:** All recruitment materials must be approved by the IRB. Recruitment materials distributed to potential participants must use the approved text and include the study's IRB number, approval date, and expiration dates in the following format: WTAMU IRB##-##-## Approved: ####/#### Expiration Date: ####/####.

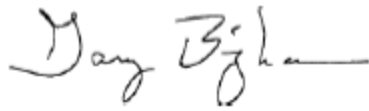
9. **FERPA and PPRA:** Investigators conducting research with students must have appropriate approvals from the Family Education Rights and Privacy Act (FERPA)

administrator at the institution where the research will be conducted in accordance with the Family Education Rights and Privacy Act (FERPA) if applicable to the research being proposed. The Protection of Pupil Rights Amendment (PPRA) protects the rights of parents in students ensuring that written parental consent is required for participation in surveys, analysis, or evaluation that ask questions falling into categories of protected information.

Sixty days prior to the expiration of this proposal, you will receive a notification of the approaching expiration date at which time you will need to submit an [Amendment/Continuation/Close out](#) form.

Thank you for your cooperation with the IRB and we wish you well with your research project.

Sincerely,



Dr. Gary Bigham
Chair, WTAMU IRB



Dr. Angela Spaulding
Vice President of Research and Compliance

Acknowledgments

In the last three year I have received support and encouragement from several individuals. I would like to start by thanking my family. My parents, brother, and extended family have been my biggest supporters and encouragers in this journey. My parents were there for me through all of the ups and downs that go with this process. I could not have achieved this accomplishment without them.

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**The Effect Financial Incentives, Mentor Programs, and Grow Your Programs Have
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Abstract

Purpose: The purpose of this quantitative study was to identify effective teacher retention strategies in rural school districts in Texas. The study collected superintendents' use of three categories of commonly employed retention strategies and their effectiveness ratings for reducing teacher turnover. **Research Methods:** This quantitative study employed a retrospective, exploratory design to describe trends and test four hypotheses linking data from a researcher-constructed survey about district retention strategy use and perceived effectiveness to Texas Education Agency (TEA) data on teacher turnover rates. Data on economic disadvantage students, teacher salaries, and English Language Learner populations were also examined mediating the effects of retention initiatives. **Results:** Rural school district superintendents who participated in the survey indicated the retention strategies implemented were effective. Overall research indicated financial incentives were somewhat effective for teacher retention. **Implications:** None of the most commonly used strategies had clear and consistent effects on teacher retention. While financial incentives had the most effect of the three broad categories of programs studied, the effects mentor programs and Grow Your Own initiatives were mediated by declines in the percent of economic disadvantaged and English Language Learner students.

Keywords: Grow Your Own, Mentor, Teacher Retention, Teacher Incentives

Introduction

The field of education is suffering from a mass exit of professionals, which has been negatively trending since the 1990s (Parker et al., 2009; Rooks, 2018). During the 2004-2006 school years, Parker et al. (2009) reported a national demand exceeding two million new teachers needed to fill vacancies across the United States. Teacher turnover is a concern for many school administrators, especially for teachers in their first year of teaching (Spoon et al., 2018). While rural school districts encourage and foster good working relationships and collaboration between educators to strengthen instruction (Hartman, 2017), in Texas there is a 40% attrition rate for teachers in their first three years in the profession (Brown & Wynn, 2007). Texas spends about \$329 million on the recruitment and training of new teachers annually (Brill & McCartney, 2008; Brown & Wynn, 2007; You & Conley, 2014).

The Every Student Succeeds Act (ESSA) informs that “states and districts can close equity gaps by increasing access to high-quality teacher preparation programs, ensuring that all new teachers have strong support and high-quality mentoring, and improving teaching conditions by supporting principals’ ability to create productive teaching environments” (Cook-Harvey et al., 2016, p. 12). Goodpaster et al. (2018) found three main factors related to the retention of teachers in rural schools: strong interpersonal relationships and ties to the community, school factors, and professional factors. Rural school districts that struggle with teacher retention lack one or more of these factors (Barley & Beesley, 2007). Many beginning teachers struggle with the demand to produce student achievement results and maintain a classroom environment conducive to learning (Spoon et al., 2018). The following are considered effective

strategies for teacher retention in rural school districts: developing a Grow Your Own teacher program and hiring local teachers (Beesley et al., 2019; Lowe, 2006; Miller, 2020; Tran et al., 2020), mentor programs (Lowe, 2006; Painter et al., 2007), and competitive salaries and incentives (Haar, 2018; Podgursky & Springer, 2011; Zavelevsky et al., 2021). Examining effective strategies in rural school districts may reduce their teacher turnover.

Research Problem

With the teacher shortage at an all-time high across the United States, rural school districts are typically even greater. strategies to break the teacher turnover cycle happening in rural school districts. Retention of new teachers in rural school districts can vary from district to district (Wallin, 2008; Beesley et al., 2019). The most common reason for vacancies in districts were related to retention issues. Once teachers are hired by a school district, the challenge of retaining the teacher begins. Rural school districts need to be able to identify effective teacher retention strategies to break the teacher turnover cycle happening in rural school districts. Rural school districts have a hard time competing with urban school districts. Urban school districts have an easier time retaining their quality and experienced staff because of the access to large city amenities, salary, and advancement opportunities for teachers. The problem is that rural school districts struggle to retain quality teachers to their districts and need effective strategies to lessen teacher turnover (Monk, 2007).

Research Question and Hypotheses

When determining what factors, both financial and environmental, affect a teacher's decision to stay or leave rural school districts, specific strategies were

recommended in the literature to enhance teacher retention. Each of these strategies individually were successful to an extent in rural school districts. This study built on previous findings to determine if one strategy was more effective than another, as well developing a better understanding of what strategies superintendents believe are most effective strategies in reducing teacher turnover. Based on this prior research, this study's research question and alternative hypotheses are focused on teacher financial incentives, mentor programs, Grow Your Own teacher programs, and different teacher relationships.

RQ: What is the reported frequency of use of the financial incentives, mentor programs, and Grow Your Own program strategies studied among rural school superintendents? **H₁1:** Rural school districts that have implemented financial incentives in the last five years and whose superintendents rate these incentives as effective or highly effective would have a greater decrease or less of an increase in teacher turnover rates over a 5-year period compared to rural school districts that did not implement financial incentives.

H₁2: Rural school districts that have implemented a mentor program in the last five years and whose superintendents rate mentor programs as effective or highly effective would have a greater decrease or less of an increase in teacher turnover rates over a 5-year period compared to rural school districts that did not implement a mentor program.

H₁3: Rural school districts that have implemented a Grow Your Own program in the last five years and whose superintendents rate Grow Your Own programs as effective or highly effective would have a greater decrease or less of an increase

in teacher turnover rates over a 5-year period compared to rural school districts that did not implement a Grow Your Own program.

H₁₄: Superintendents who reported the use of more than one retention strategy will have a greater reduction in teacher turnover than districts that report only using one or none of the three strategies.

Review of Literature

Motivation-Hygiene Theory

The Motivation-Hygiene theory (Two-Factor theory) assumes a person's level of contentment in a profession is influenced by motivations within the job and the conditions of the working environment (Herzberg et al., 1993). According to Herzberg's theory, the satisfaction (motivators) and either a motivator or demotivated (hygiene) teachers find in their job exist on a dual continuum (Tran & Smith, 2020). Herzberg redefined what satisfies and motivates employees explaining that "all employees need to grow psychologically, and interpersonal relations are more likely to lead to dissatisfaction than satisfaction" (Sachau, 2007, p. 377). In the field of education, motivators "include factors such as job recognition, responsibility, advancement, and the actual performance of the duties of the work itself" (Tran & Smith, 2020, p. 91). Alternatively, hygiene factors are related to working conditions, relationships, salary, and policies (Tran & Smith, 2020).

Herzberg explained the factors that contributed to satisfaction were different from the variables that contributed to dissatisfaction. Motivators are factors that employees see as a reason to continue working in less than ideal conditions, while hygienic factors are

specific parts of the environment an employee works in (Herzberg et al., 1993). Sachau (2007) explained the stories in Herzberg's work found:

Job satisfaction involved opportunities for employees to experience achievement, recognition, interesting work, increased responsibility, advancement, and/or learning. Most of the stories about job dissatisfaction involved unfair company policies, incompetent or unfair supervisors, bad interpersonal relations, unpleasant working conditions, unfair salary, threats to status, and job insecurity. (p. 379)

In the education profession, teachers cite their love of teaching and the children as their motivation (Phillips, 2015). Although hygienic factors, such as lack of administrative support, salary, class size, and school climate, can contribute to burnout and teacher turnover. When looking at the education system, addressing hygiene in a school can reduce dissatisfaction, but is less effective than influencing satisfaction with motivators in the education system (Tran & Smith, 2020).

Financial Incentives

Teachers retention is typically improved in school districts that provide opportunities for teachers to grow, convey appreciation to teachers for the work they do and recognize them for their competence, compensate teachers adequately for the work they do, and maintain a culture of continual growth and improvement (Haar, 2018). Farrell and Morris (2004) found teachers value job security, income, contribution to the community, pension, and the opportunity to work in a field of interest to them. Each of these affected the attitude they had toward their jobs.

For school districts to successfully motivate and retain highly qualified teachers, they need to have adequate teacher compensation structures (Podgursky & Springer, 2011; Podolsky et al., 2019). With the differences in the social and economic circumstances in each rural school district, funding varies from district to district (Beesley et al., 2019; Wallin, 2008). Salary for novice teachers was a top point of

discussion, and if school districts cannot reward their novice teachers for their successes, administrators will struggle with retention (Zavelevsky et al., 2021). Student enrollment is a major factor affecting school funding. The reduced number of students enrolled in most rural school districts results in fewer dollars flowing to smaller rural school districts (Abshier et al., 2018). School district financial costs can be up to \$8000 for every teacher who decides to leave and the district has to start the search for a replacement (You & Conley, 2014). When teachers are deciding which school district to work in, teacher compensation plays a major role in the decision-making process (Kolbe & Strunk, 2012). While most public schools offer different teaching atmospheres and varied school cultures, the pay scale is often different from district to district (Podgursky & Springer, 2011).

Because rural schools often have to hire inexperienced teachers due to the lower pay they offer, these districts have a hard time attracting experienced teachers. This leads to an initial appearance of a higher retention rate in rural school districts when teachers remain with the district to gain a few years of experience, but ultimately results in an increased turnover rate when these teachers leave the rural school district for an urban school district with better pay (Monk, 2007).

School districts with a high-poverty student population see high teacher turnover rates. This includes rural school districts. Rooks (2018) discovered turnover in low socioeconomic school districts is over 22%. With a larger gap in a school's high- and low-performing students (often high and low-socioeconomic students), there has been a push for performance pay for teachers (Podgursky & Springer, 2011). However, for this suggestion to be successful, expectations and standards should be established. There must be a specific test for all individuals in the profession, and success should be rewarded and

attainable (Farrell & Morris, 2004). Although it should not be limited to just a test, there needs to be other parameters teachers must achieve.

Novice teachers who are just finishing college can be drawn to a rural school district that offers housing and relocation assistance (Beesley et al., 2019). A major reason teachers are in and out of school districts, especially rural school districts, is their living situation or lack thereof. Often, teachers must travel from other towns for work because of the lack of housing available in the rural community. A way to overcome the lack of housing in rural school districts is for the school district to provide teacher housing. While school housing is beneficial for teachers and the rural teacher retention issues, there are rural school districts that struggled to adequately maintain these properties (Lowe, 2006).

Employee benefits can also be an incentive many do not factor into their decision when comparing school districts for employment. If rural school districts can contribute to some or all of the cost of their teachers' insurance and retirement benefits, as well as offering other options such as pre-paid flex plans, identity theft protection, alternative insurance plans, and childcare options and benefits to name a few, teachers might be more motivated to maintain their employment with the district. Thus, when novice teachers are considering employment in any school district, they would be prudent to consider not only salary but the total package (Painter et al., 2007).

Painter et al. (2007) suggested that novice teachers also should consider enhancing their salary through supplemental pay, although supplemental pay means taking on extra duty. However, in most rural school districts, extra duties are typically not accompanied with a stipend. Teachers in rural districts are expected to perform extra

duties as assigned without supplemental pay. This can result in teachers feeling overworked and an increase in teacher attrition.

Another approach instituted by some districts is a loan forgiveness incentive. These loan forgiveness incentives commit the school districts to assist with the payment in part of student loans for teachers new to the district (Lowe, 2006). This incentive comes with the promise that the teacher will maintain employment with the school district for a specified amount of time. Unfortunately, Beesley et al. (2019) reported that loan forgiveness programs were advantageous for many novice teachers, but they did not result in enhanced teacher retention.

Beesley et al. (2019) determined that signing bonuses were also unsuccessful when trying to retain teachers to a school district. While deemed effective in the short term, signing bonuses, salary increases, and crash course training for novice teachers are not a long-term effective approach to teacher retention (Tyler, 2008). However, salary incentives are appealing to teachers as evidenced by their increased response to position openings. Arguably, these incentives should be available to all teachers in the school, and not be limited to only new hires (Lowe, 2006).

Mentor Programs

Effective mentoring programs can be a way to deter novice teachers from leaving the profession (Lowe, 2006). When looking at professionalism, candidates searched for opportunities to collaborate with teachers, and effective mentoring programs were cited as reasons that teachers stayed in the school district (Painter et al., 2007). Mentoring programs can be an effective part of the induction process for novice teachers when mentors are intentionally and methodically appointed. Ideally, mentors should be assigned to the same grade level or subject area as the mentees. However, in rural school

districts, this may not always be possible. A mentor in the same building can be just as effective (Parker et al., 2009; Beesley et al., 2019). Successful mentor programs are characterized as having clearly organized programs, effective mentor training, reduced teaching loads to allow for training and mentor/mentee coaching, and effective and efficient peer reviews. In addition to the mentee and the mentor working in the same subject and grade level, they should also have a common planning time during each school day (Brill & McCartney, 2008). The relationship mentees have with their mentors can make or break the mentoring experience (Hudson & Hudson, 2016). Mentors can be a crucial part of a new teacher's first year of teaching (Ingersoll & Smith, 2003). Mentor programs are strategically used by many school leaders to reduce the isolation often experienced by new teachers by matching them with experienced teachers (Drago-Severson & Pinto, 2006). Mentoring programs can help new teachers receive real-time feedback without the pressure of formal evaluative observations. This feedback can be a key component in keeping novice teachers at schools and in the profession (Lowe, 2006). An effective mentoring program should be extended into a new teacher's first few years of teaching and adopt a gradual release model (Lowe, 2006; Parker et al., 2009).

Mentor programs provide a powerful opportunity for colleagues to reflect on their experiences and can lead to new ways of thinking (Drago-Severson & Pinto, 2006). Novice teachers who received a significant amount of help were more likely to stay in the profession than those who received minimal help (Parker et al., 2009). A skilled mentor should be adept at goal setting, modeling teaching practices, and providing effective and constructive feedback (Hudson & Hudson, 2016). Forty-four percent of new teachers who met and had discussions with their mentors a few times a month were more likely to stay in the profession than those who met with their mentors daily (Parker et al., 2009).

Not only did novice teachers benefit, but mentor teachers felt after their year-long experience that they were more confident in their teaching and more aware of evidence-based practices than they did at the outset of the mentorship (Mathur et al., 2012). Having both a novice teacher and an experienced teacher in the classroom helped both teachers to be ready to excel each day. They were able to provide new ideas and resources they could use in their classroom (Simpson et al., 2007). Mentees who receive support and instructional guidance feel a greater sense of community when they are connected with an experienced teacher (Drago-Severson & Pinto, 2006). Mentoring programs can also help new teachers improve and expand their teaching skills and subject knowledge (Lowe, 2006). Mentoring plays a major role in the induction process for new teachers (Ingersoll & Smith, 2011).

New teachers who receive some form of induction have higher job satisfaction and commitment to a school district (Brill & McCartney, 2008; Ingersoll & Smith, 2011). The first few weeks to months for new teachers in a district can be overwhelming and challenging (Lowe, 2006). This is especially true in rural school districts. Effective administration should have an induction or assistance program in place for novice teachers who are new to the school district. These programs should start as soon as a teacher signs their contract (Lowe, 2006). Acclimating novice teachers to a school district can help with teacher retention in the district. This acclimation process needs to include a formal or informal mentor program, peer supervision, administration support, formal induction, and a thorough understanding of school policies and vision (Beesley et al., 2019). New teachers who participated in an induction program had a positive first year teaching, resulting in some intending to stay in the profession of teaching, and some intending to remain within the school district (Ingersoll & Smith, 2011). Mentor

programs can help new teachers adjust to the expectations, systems, and policies of the school district (Lowe, 2006). Both novice and experienced teachers expressed that working with another teacher provided better student outcomes and that the new teacher had the opportunity to see innovative ways of teaching the students (Simpson et al., 2007). Also, mentees viewed themselves as having more knowledge of their subject matter, classroom management, and district policies. This shows a significant advantage of mentor programs (Mathur et al., 2012). When novice teachers felt supported in all aspects of their first year of teaching, it decreased the likelihood of attrition (Ingersoll & Smith, 2011). Effectively run mentoring and induction programs have been found to be the most successful way of retaining teachers. Although, if a mentoring program is not set up effectively and efficiently, it can do more harm than good (Brill & McCartney, 2008).

If novice teachers feel a lack of support from their mentors, and mentors have not been properly trained, the process fails both participants (Brill & McCartney, 2008). The downside to the school operating mentoring programs was the pressure and time the experienced teachers had to invest to be good mentors, and remain effective in their own classrooms (Simpson et al., 2007). This pressure can lead to mentors trying themselves in the mentee to the exclusion of allowing them to develop their own teaching styles. This can have a negative effect on novice teachers' progress. This can lead to the novice teacher wanting to leave the district (Brill & McCartney, 2008). There are a few experienced teachers who served as mentors who felt that they were teaching two separate classes, one for their regular students and one for their mentees (Simpson et al., 2007). There are some schools that considered assigning veteran teachers the duty of checking on novice teachers a few times a year as a mentor program. However, novice teachers did not feel that simply being checked on by other teachers is a formal

mentorship (Beesley et al., 2019). Alternatively, Wynn et al. (2007) found that there was no significant correlation between the mentoring programs or specific mentoring support on a teacher's decision to stay within the district. There was also no relationship found between the mentoring program and teacher satisfaction with the school district or novice teachers' decision to stay with the school district, although most teachers were generally satisfied with the mentoring program provided (Wynn et al., 2007).

Grow Your Own

Rural school districts have had success hiring teachers with rural backgrounds. When teachers were asked why they chose their positions, many responded they enjoyed the rural lifestyle. A successful approach rural school districts have had in the last few years is the Grow Your Own programs (Lowe, 2006). The Grow Your Own movement is a training program for local people who have been paraprofessionals, aids, or former students in the district (Beesley et al., 2019; Lowe, 2006). These programs provide training to paraprofessionals, retaining service-oriented people, and partner with teacher preparation programs at local universities. The Grow Your Own programs have had a positive correlation between teaching positions and locations in students' hometowns, high schools, or colleges. The Grow Your Own programs target teachers who enjoyed their rural life at school as children or young adults and see the benefits that a small rural school and community can provide. By using these Grow Your Own programs, universities have teacher preparation programs in rural schools that give student teachers the opportunity to receive rural school district experience (Beesley et al., 2019).

Many of these student teacher preparation programs did not have any opportunities for student teachers to receive experience in rural school settings, which led to added stress for novice teachers who must adjust to the working environments and

living in rural communities (Tran et al., 2020). Rural school districts employ the highest number of teachers who have an emergency or provisional certificates, specifically in special education. One way to overcome this issue is to initiate Grow Your Own teacher programs. Rural school districts have to use alternative certification routes to be able to staff their campuses adequately. This brings former students who are familiar with the school districts and communities back into teachers' positions (Brownell et al., 2018).

Method

Research Design

This quantitative study employed a retrospective, exploratory design. "In retrospective research, comparisons are made between the past (as estimated by the data) and the present for the cases in the data set" (Johnson, 2001, p. 10). In this longitudinal study, Texas Education Agency (TEA) data were collected and analyzed from 2016 to 2021 to attempt to explain the effectiveness of three different categories of teacher retention efforts on teacher turnover in rural school districts. This study used a researcher-constructed survey to gather information on district retention initiatives, matching respondents' answers with data regarding their district's teacher turnover rates data, economically disadvantaged (ED) populations, teacher salaries, and English Language Learner (ELL) populations for the years studied. Combined, this data allowed the researcher to answer the one descriptive research question and test the four hypotheses regarding the effect of retention strategies on teacher turnover.

Participants

The TEA distinguishes between three types rural school districts, Rural-Fringe, Rural-Distant, and Rural-Remote. Rural-remote school districts are defined as school districts that are more than 25 miles from an urban area. Rural-distant school districts are

defined as school districts that are more than 5 miles but less than or equal to 25 miles from an urban area. Rural-fringe school districts are classified as school districts that are less than or equal to 5 miles from an urban area. (National Center for Education Statistics (NCES) District Types). All three rural classifications were used for this study. Once schools were identified as rural, superintendents were identified using their school district websites. Superintendents serving in 434 rural Texas school districts (inclusive of rural-fringe, rural-distant, and rural-remote) as defined by TEA (Texas Education Agency, 2017) comprised the study population. Email addresses for 10 superintendents could not be located. Five were no longer with their districts but provided contact information for their replacements. Nine were out of the office at the time of survey distribution. Two superintendents were no longer employed by the districts and provided no contact information for their replacements. Accordingly, invitational emails requesting participation were sent to 434 rural school superintendents. Affirmative responses were received from 80 superintendents, comprising the sample, resulting in an 18% response rate.

Data Collection

Instrumentation

Superintendents' emails were also collected using the school district's website. Two data sets were created for this study. The participants surveyed answered one question and indicated a willingness to participate in additional 2 more survey questions, including school district identification and years of service. To be able to connect superintendents' responses to their school district's data, they were asked to identify their school district in the survey (data were collected from Texas Academic Performance Reports TAPR, publicly accessible from the TEA website). In the next three questions,

superintendents were asked to indicate what retention strategies their school district had used in the last five years. Superintendents were asked to rate the effectiveness of the implemented strategies on a 5-point Likert scale, ranging from “not effective” to “highly effective.” The strategies examined were categorized as financial incentives, mentor programs, and Grow Your Own programs. Superintendents were emailed the information about the study and provided a link to access the survey during the first week in June. Two reminders were emailed one and three weeks after the initial email was sent. The survey tool was administered through Qualtrics.

The second set of data came from each school district’s TAPRs reported by TEA. Data obtained from TAPR reports included teacher turnover percentages, ED percentages, ELL percentages, and average teacher salary over five-years. Five TAPRs for each of the 80 rural school districts who participated were collected and organized from the 2016-2017 school year to the 2020-2021 school year. Rural school districts were identified and moved to a separate dataset. This was done for the five years being researched. After survey responses were collected, school districts that had superintendent survey participants were identified in the spreadsheet.

Data Analysis

Analysis began by describing the frequency and percent of teacher retention program type by district location, answering the first research question. With this comparison, the researcher could determine a trend of strategies used in the different rural school district classifications. Change in teacher turnover rates for each rural school district was calculated by subtracting the earliest data point from the most recent data point.

Observation Oriented Modeling (OOM) was used to test the four hypotheses. This technique was developed to help researchers go beyond relying on measures of central tendency and focus on patterns at the level of the unit of analysis (Grice et al., 2017). Observation Oriented Modeling provides “a number of practical benefits compared with traditional statistics, including transparency of results, immunity to outliers, relatively assumption-free analysis, and clear and readily interpretable ‘effect sizes’.” (Grice et al., 2017, p. 858). In OOM, two main outcomes are the PCC index and chance value, or c-value. The PCC index represents the number (0-100) of individual observations that conform to a specific pattern. The c-value is the percent of individual cases that produce the PCC index when data is randomized (the default of 1000 randomization tests was used for all analyses). If there is a low c-value, it is less plausible the pattern observed was due to chance. The Ordinal Pattern Analysis (Crossed Orderings) test (hereafter OPA). For each hypothesis, districts were grouped into two conditions: those that reported having used a retention strategy, and the district leadership rated that strategy as “effective” or “highly effective” (hereafter referred to simply as “effective”) in reducing teacher turnover. It was expected that districts who met these conditions would have either a greater decrease or less of an increase in teacher turnover than districts who did not meet these conditions. The results for each of the three types of retention initiatives were then compared. The same approach was used to determine the degree to which changes in a district’s demographic characteristics mediated the effect of teacher retention strategies. For these tests, the percent change for economically disadvantaged students, change in teacher salary, and percent change in the ESL population were binned into high and low groups using a median split. Teacher turnover rates for districts that

had one or more initiative rated "effective" were then analyzed in relation to each of these changes.

Data from the survey were exported from Qualtrics and combined with the TEA data. The combined data were then imported into the OOM software for analysis. Superintendent responses were checked for any anomalies, but no responses were removed. Descriptive statistics for all survey items were created.

The OPA test was used to test hypotheses 1-4 and whether changes in the percentages of ED and ELL students and changes in average teacher salary affected changes in teacher turnover. OPA requires the researcher to determine a predicted pattern and then compare each observation to that pattern. Ordinal analysis was the best option to test hypotheses 1-4 because they were stated as ordinal relations between individual school districts in three different conditions. The PCC index values found indicated the degree to which observed patterns matched the predicted pattern.

Results

There were a total of 13 strategies superintendents could indicate they had implemented in their district. Of the 13 strategies, 5 were financial incentives strategies, 5 were mentor program strategies, and were Grow Your Own program strategies (Table 1). The most implemented financial incentive was cash bonuses for years of service, with 38.46 % of districts reported using this strategy ($n = 15$). Mentor program strategies were the most frequently implemented strategies in rural remote school districts. Mentor teachers were implemented in 79.49% of school districts ($n = 31$). Although Grow Your Own programs strategies were not the most used strategies among rural remote school districts, every strategy was used by at least one of the 80 districts responding to the

survey. More than 50 percent of districts (56.42%) reported helping support staff obtain their teaching certification and providing professional development (n = 22).

Rural distant school superintendents indicated that 120 teacher retention strategies were implemented. School housing or housing stipends were implemented in 15.79% of surveyed school districts (n = 6). Mentoring teachers was the most frequently implemented strategy at 86.84% (n = 33). Helping support staff obtain their teaching certification was implemented in 57.89% of rural distant school districts (n = 22).

Rural fringe was the smallest sample of the study; these districts reported using only 6 strategies. No rural fringe school district superintendent indicated they implemented financial incentives. Around 66% of these school districts used mentor teachers and common planning periods (n = 2). Only one rural fringe school implemented professional development for its Grow Your Own program.

Table 1

*Frequency of teacher retention program type by district location **

Program	NCES Descriptor						
	Rural remote		Rural fringe		Rural distant		All Districts
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
School Housing / Housing Stipend	10	25.64	0	0.0	6	15.79	16
Cash Bonus for Year of Service	15	38.46	0	0.0	4	10.53	19
Student Loan Assistance	5	12.82	0	0.0	1	2.63	6
Moving Stipend	2	5.13	0	0.0	3	7.89	5
Travel / Commute Stipend	0	0.00	0	0.0	0	0.00	0
Total Financial Incentive	32		0		14		46
Mentor Teacher	31	79.49	2	66.67	33	86.84	66
Mentor/ Mentee Training	10	25.64	1	33.33	6	15.79	17
Mentor Support in the Classroom Setting	0	0.00	0	0.00	0	0.00	0

Mentor/ Mentee Common Planning Period	9	23.08	2	66.67	5	13.16	16
Informal Mentor Observation	15	38.46	0	0.00	16	42.11	31
Total Mentor	65		5		60		130
Obtain Certification	22	56.41	0	0.00	22	57.89	44
Obtain Degree	11	28.21	0	0.00	8	21.05	19
Professional Development	22	56.41	1	33.33	16	42.11	39
Total Grow Your Own	55		1		46		102
Total Teacher Retention Programs	152		6		120		278

Note. * Program adopted anytime between 2016 and 2021

On average, teacher turnover declined from the 2016-2017 school year to the 2020-2021 school year (2016-2017, *Mdn* = 16.95, *SD* = 11.65, 2020-2021, *Mdn* = 17.50, *SD* = 9.05). Although some districts had increase in teacher turnover and some had decrease in teacher turnover, on average, there was a decrease in teacher turnover for the population of the study. The average teacher salary increased from 2016-2017 to 2020-2021 for surveyed districts (2016-2017, *Min* = \$34,787, *Max* = \$57,224, *Mdn* = \$43,933, 2020-2021, *Min* = \$44,698, *Max* = \$66,618, *Mdn* = \$50,858).

Thirty-nine of 203 rural remote school district superintendents responded to the survey. Thirty-eight of 218 rural-distant superintendents participated in the survey. Only 3 of 13 rural-fringe school district superintendents responded to the survey. Two hundred seventy-eight strategies were implemented with 80 out of 434 rural schools responding (Table 1).

Sixty-four percent of rural districts in Texas experienced a decrease in teacher turnover from 2016 to 2020. Of the 80 superintendents who participated in the study, 67% experienced a decrease in teacher turnover. The superintendents who participated were not representative of all rural school districts, the study's sample over represents

districts with increased teacher turnover rates by about 5%. A proportional analysis test in the OOM software, similar to a chi square goodness of fit test, indicated that 93% of cases matched the expected values. The c-value indicated the pattern was rare, occurring about 100 out of 1000 times with randomized data.

Twenty-one out of 59 district superintendents reported that they had implemented one or more financial incentive strategies and rated them effective. The median for teacher turnover in the districts who implemented at least one financial incentive was 0.20, with a standard deviation of 15.09 (Table 2). Forty-two out of 78 district superintendents reported implementing one or more of the mentor program strategies and that they were effective. The median for teacher turnover in the districts who implemented at least one mentor program was -1.00, with a standard deviation of 11.41. Twenty of 63 school superintendents reported that they implemented one or more of the Grow Your Own program strategies and that they were effective. The median for teacher turnover in the districts who implemented at least one mentor program was -2.90, with a standard deviation of 9.92. Sixty-two out of 80 district superintendents answering reported that they had implemented 2 or more retention strategies and rated them effective. The median for teacher turnover in the districts who implemented 2 or more retention strategies was -6.80, with a standard deviation of 11.17. This portion of the study looked at school districts that implemented two or more strategies from different programs.

Table 2

Descriptive statistics for change in teacher turnover by initiative and effectiveness rating

Initiative and effectiveness rating condition	Change in teacher turnover (2016-17 - 2020-21)			
	<i>Min</i>	<i>Max</i>	<i>Md</i>	<i>SD</i>

Financial Incentive				
1 or more rated "effective" or "highly effective"	-50.80	18.00	0.20	15.09
All other conditions	-18.20	19.30	-2.35	8.99
Mentor Program				
1 or more rated "effective" or "highly effective"	-25.4	19.30	-1.00	11.41
All other conditions	-50.8	17.20	-1.90	11.62
Grow Your Own				
1 or more rated "effective" or "highly effective"	-25.40	18.20	-2.90	9.92
All other conditions	-20.80	19.30	-1.05	9.63
2 or more Strategies				
2 or more rated "effective" or "highly effective"	-25.40	13.80	-6.80	11.17
All other conditions	-18.20	19.30	-1.30	8.91

Note. Rural remote school districts implemented 152 teacher retention strategies.

Results for hypotheses, 1-4

Twenty-one of the 59 district superintendents reported that they had implemented at least one financial incentive program and rated the program(s) “effective”. Teacher turnover rates for this group were expected to decrease more (or increase less) than for districts that did not use financial incentives and did not rate them as “effective.” This ordinal pattern was expressed as: teacher turnover for all other districts greater than teacher turnover for districts with one or more financial incentives that were rated effective. Pairwise comparisons were performed to test this hypothesis, one for districts with an increase in teacher retention, and one for districts with a decrease in teacher retention. Thirty-three surveyed superintendents reported a decrease in teacher retention, 10 of whom had rated their financial incentive programs “effective.” Results in table 3 show that 161 out of the 230 possible comparisons (23 observation 1st group x 10

observations 2nd group) matched the predicted pattern (PCC = 70.00). This pattern is not plausibly due to chance as only 20 times out of 1000 the pattern observed with randomized data (c -value = 0.04). Results for districts with increased teacher turnover were far less impressive. Of the 26 superintendents who reported an increase in teacher retention, 11 had at least one financial incentive program rated “effective” or higher. For this group, only 80 of 165 (15 x 11) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 48.48). Additionally, these results are plausibly due to chance (c -value = 0.55).

Forty-two of the 78 district superintendents reported that they had implemented at least one mentor program and rated the program(s) “effective”. Teacher turnover rates for this group were expected to decrease more (or increase less) than for districts that did not use mentor programs and did not rate them as “effective.” This ordinal pattern was expressed as: teacher turnover for all other districts greater than teacher turnover for districts with one or more mentor programs, rated effective. There were 44 surveyed superintendents who reported a decrease in teacher retention, 22 of which had rated their mentor programs “effective.” Pairwise comparisons were performed to test this hypothesis. Results show that 286 out of the 484 possible comparisons (22 x 22) matched the predicted pattern (PCC = 59.09). This pattern is somewhat plausibly due to the chance (c -value = 0.16). Results for districts with increased teacher turnover were far less impressive. Of the 34 superintendents who reported an increase in teacher retention, 20 had at least one mentor program rated “effective” or higher. For this group, 84 of 280 (14 x 20) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 30.00). Additionally, these results are very plausibly due to chance (c -value = 0.97).

Twenty-three of the 63 district superintendents reported that they had implemented at least one Grow Your Own program and rated the program(s) “effective”. Teacher turnover rates for this group were expected to decrease more (or increase less) than for districts that did not use Grow Your Own programs or did not rate them as “effective.” This ordinal pattern was expressed as: teacher turnover for all other districts greater than teacher turnover for districts with one or more Grow Your Own programs, rated effective. Pairwise comparisons were performed to test this hypothesis. There were 37 surveyed superintendents who reported a decrease in teacher retention, 14 of which had rated their Grow Your Own programs “effective.” Results show that 189 out of the 322 possible comparisons (23 x 14) matched the predicted pattern (PCC = 58.70). This pattern is plausibly due to the chance (c -value = 0.19). Results for districts with increased teacher turnover were again less impressive. Of the 26 superintendents who reported an increase in teacher retention, nine had at least one Grow Your Own program rated “effective” or higher. For this group, 79 of 153 (17 x 9) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 51.63). Additionally, these results are plausibly due to chance (c -value = 0.44).

Table 3

Teacher turnover trends by initiative and effectiveness

Condition: 1 or more initiative rated "effective" or "highly effective"	Greater decrease in teacher retention than districts not meeting condition		Lesser increase in teacher retention than districts not meeting condition	
	PCC	c-value	PCC	c-value
Financial incentive	70.00	0.04	48.48	0.55
Mentor program	59.09	0.14	30.00	0.97
Grow Your Own	58.70	0.21	51.63	0.45

Condition: 2 or more initiative
 rated "effective" or "highly
 effective"

2 or more Initiative	46.62	0.64	50.34	0.41
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Note. Ordinal Pattern Analysis (Crossed Orderings) test.

The study then analyzed how rural school districts that implemented one or more retention strategies rated "effective" and had a decrease in economic disadvantage population percentage affected teacher retention. There were 44 surveyed superintendents who reported a decrease in the percent of economically disadvantaged students, 12 of which had rated their financial incentive “effective.” According to table 4, results show that 83 out of the 238 possible comparisons (23 x 6) matched the predicted pattern (PCC = 60.14). This pattern is, however, plausibly due to the chance (*c*-value = 0.25). Of the 36 superintendents who reported an decrease in economic disadvantage population percentage and an increase in teacher turnover, 9 had at least one financial incentive rated “effective” or higher. For this group, 48 of 90 (15 x 6) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 53.33). Additionally, these results are plausibly due to chance (*c*-value = 0.40).

Of the 44 surveyed superintendents who reported a decrease in ED population percentage, 22 of which had rated their mentor programs “effective.” Results showed that 153 out of the 264 possible comparisons (22 x 12) matched the predicted pattern (PCC = 57.95). This pattern is not plausible due to the chance (*c*-value = 0.23). Out of the 36 superintendents who reported a decrease in economic disadvantage population percentage and an increase in teacher turnover, 20 had at least one mentor program rated “effective” or higher. For this group, 43 of 140 (14 x 10) possible pairwise comparisons matched the

predicted ordinal pattern ($PCC = 30.71$). Additionally, these results are plausible due to chance (c -value = 0 .95).

Ten out of 44 surveyed superintendents reported a decrease in economic disadvantage population percentage, and 10 rated their Grow Your Own programs “effective.” Results show that 81 out of the 115 possible comparisons (23×5) matched the predicted pattern ($PCC = 70.43$). This pattern is not plausible due to the chance (c -value = .09). This indicated this could be effective in decreasing teacher turnover in rural school districts compared to other retention strategies. Out of the 36 superintendents who reported an increase in teacher turnover and a decrease in economic disadvantage population percentage, 13 had at least one Grow Your Own program rated “effective” or higher. For this group, 38 of 85 (17×5) possible pairwise comparisons matched the predicted ordinal pattern ($PCC = 44.71$). Additionally, these results are somewhat plausible due to chance (c -value = 0.63).

The study then analyzed how rural school districts that implemented one or more retention strategies rated "effective" and had a decrease in English second language learner percentage affected teacher retention. There were 37 surveyed superintendents who reported a decrease in economic disadvantage population percentage, 13 of which had rated their financial incentive “effective.” Results show that 123 out of the 161 possible comparisons (23×7) matched the predicted pattern ($PCC = 76.40$). This pattern is not plausible due to the chance (c -value = 0.01). This indicated this could be effective in decreasing teacher turnover in rural school districts compared to other retention strategies. Out of the 37 superintendents who reported an increase in teacher turnover and a decrease in English second language learner percentage, 8 had at least one financial

incentive rated “effective” or higher. For this group, 41 of 90 (15 x 6) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 45.56). Additionally, these results are somewhat plausible due to chance (c -value = 0.64).

There were 37 surveyed superintendents who reported a decrease in English second language learner percentage, 22 of which had rated their mentor programs “effective.” Results show that 189 out of the 286 possible comparisons (22 x 13) matched the predicted pattern (PCC = 66.08). This pattern is not plausible due to the chance (c -value = 0.07). Out of the 37 superintendents who reported an increase in teacher turnover over and a decrease in English second language learner percentage, 20 had at least one mentor program rated “effective” or higher. For this group, 31 of 126 (14 x 9) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 24.60). Additionally, these results are plausible due to chance (c -value = 0.98).

There were 37 surveyed superintendents who reported a decrease in English second language learner percentage, 11 of which had rated their Grow Your Own programs “effective.” Results show that 106 out of the 1161 possible comparisons (23 x 7) matched the predicted pattern (PCC = 65.84). This pattern is not plausible due to the chance (c -value = 0.12). Out of the 37 superintendents who reported an increase in teacher turnover and a decrease in English second language learner percentage, 12 had at least one Grow Your Own program rated “effective” or higher. For this group, 21 of 68 (17 x 4) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 30.88). Additionally, these results are plausible due to chance (c -value = 0.90).

The study also analyzed how rural school districts that implemented one or more retention strategies rated "effective" and had an increase in average teacher salary

affected teacher retention. There were 80 surveyed superintendents who reported an increase in average teacher salary, 21 of which had rated their financial incentive “effective” and an increase in average teacher salary. Results show that 161 out of the 230 possible comparisons (23 x 10) matched the predicted pattern (PCC = 70.0) when there was a decrease in teacher turnover. This pattern is not plausible due to the chance (c -value = 0.05). This indicated this could be effective in decreasing teacher turnover in rural school districts compared to other retention strategies. For districts that reported an increase in teacher turnover and an increase in average teacher salary, and had at least one financial incentive rated “effective” or higher, 80 of 165 (15 x 11) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 48.48). Additionally, these results are somewhat plausible due to chance (c -value = 0.54).

There were 80 surveyed superintendents who reported an increase in average teacher salary, 42 of which had rated their mentor programs “effective” and an increase in average teacher salary. Results show that 186 out of the 484 possible comparisons (22 x 22) matched the predicted pattern (PCC = 59.09). This pattern is not plausible due to the chance (c -value = 0.15). For districts that reported an increase in teacher turnover, an increase in average teacher salary, and had at least one mentor program rated “effective” or higher, 84 of 280 (14 x 20) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 30.00). Additionally, these results are plausible due to chance (c -value = 0.97).

There were 80 surveyed superintendents who reported an increase in average teacher salary, 20 of which had rated their Grow Your Own programs “effective” and an increase in average teacher salary. Results show that 189 out of the 322 possible

comparisons (23 x 14) matched the predicted pattern (PCC = 58.70). This pattern is not plausible due to the chance (*c*-value = 0.16). For superintendents who reported an increase in teacher turnover and an increase in average teacher salary, 79 of 153 (17 x 9) possible pairwise comparisons matched the predicted ordinal pattern (PCC = 51.63). Additionally, these results are plausibly due to chance (*c*-value = 0.45).

Table 4

Teacher turnover trends by initiative, effectiveness, and special population and teacher salary

Condition: 1 or more initiative rated "effective" or "highly effective" and a decrease in economic disadvantage population percentage	Greater decrease in teacher retention than districts not meeting condition		Lesser increase in teacher retention than districts not meeting condition	
	PCC	<i>c</i> -value	PCC	<i>c</i> -value
Financial incentive	60.14	0.25	53.33	0.40
Mentor program	57.95	0.23	30.71	0.95
Grow Your Own	70.43	0.09	44.71	0.63

Condition: 1 or more initiative rated "effective" or "highly effective" and a decrease in English language learner percentage	Greater decrease in teacher retention than districts not meeting condition		Lesser increase in teacher retention than districts not meeting condition	
	PCC	<i>c</i> -value	PCC	<i>c</i> -value
Financial incentive	76.4	0.01	45.56	0.64
Mentor program	66.08	0.07	24.6	0.98
Grow Your Own	65.84	0.12	30.88	0.90

Condition: 1 or more initiative rated "effective" or "highly effective" and a increase in average teacher salary	Greater decrease in teacher retention than districts not meeting condition		Lesser increase in teacher retention than districts not meeting condition	
	PCC	<i>c</i> -value	PCC	<i>c</i> -value
Financial incentive	70.00	0.05	48.48	0.54
Mentor program	59.09	0.15	30.00	0.97

Grow Your Own	58.7	0.16	51.63	0.45
Condition: 2 or more initiative rated "effective" or "highly effective"				
Decrease economic disadvantage percentage	56.14	0.28	56.25	0.40
Decrease English second language percentage	41.11	0.74	73.33	0.15
Increase average teacher salary	46.62	0.66	50.34	0.43

Ordinal Pattern Analysis (Crossed Orderings) test.

Discussion

Superintendents in rural school districts struggle to retain teachers in their school districts. Superintendents have to determine teacher retention strategies their district can effectively implement to decrease teacher turnover. The aim of this study was to explore if financial incentives, mentor programs, and Grow Your Own programs would decrease teacher turnover in rural school districts.

Summary

While the participants for this study were a small portion of the 434 rural school districts, participants districts were located throughout the state of Texas. Although the study focused on rural school districts, the researcher has to take into account the study was not compared to the effectiveness of retention strategies in urban school districts. Comparing urban and rural school district would provide a well-rounded view of retention strategies being used in school district in Texas. Using urban school districts in the study would give rural school district a look at effective retention strategies for urban school districts. While there was a decrease in teacher turnover among participating

districts, if rural and urban district would have been studied it might have been clearer on what rural school district can use to effectively retain teachers.

Financial incentives were the least used teacher retention strategies among survey respondents. However this study found financial incentives were the best strategies for decreasing teacher turnover. The findings from this study contradicted the literature above. While financial incentives can attract and help retain teachers, realistically rural school districts struggle to meet the financial demands financial incentives put on the school districts. Rural school districts struggle with competitive pay because of the 250 poorest counties in the United States, 244 are rural (Monk, 2007). Cash bonuses were the most used financial incentives among participants, but they are only effective in the short term (Tyler, 2008). Financial incentives can be a flashy way to draw teachers to a district, but in the long run rural school district cannot compete with the financial incentives provided by urban school districts.

Financial incentives were effective in decreasing teacher turnover when there was a decrease in ELL population percentage, as well as the implementation of one or more financial incentives. With a decrease in ELL population, teachers face less of a struggle to communicate with students and have an easier time teaching. When there is a language barrier, teachers feel more pressure to get the material taught in a meaningful way. With less ELL student in the school districts population there is less strain on the teacher and a likelihood they will be retained to the district. Financial incentives were also effective in decreasing teacher turnover when one or more strategy was implemented and there was an increase in teacher salary. Any increase in teacher salary as well as added financial incentives will increase teacher desire to stay with the district. Rural school district who

are increasing teacher pay and adding financial incentives are more appealing and competitive with other school districts.

Mentor programs were the most used teacher retention strategy among rural superintendents who responded to the survey. Novice teachers who feel supported in their positions, the likelihood of the teacher leaving the district decreases (Ingersoll & Smith, 2011). Although Brill & McCartney (2008) found mentor programs to be the most successful way to retain teachers, this research found mentor programs are not an effective strategy to decrease or lessen the increase in teacher turnover. Mentor programs might not be as successful because the criteria for a good mentor program cannot be met due to rural school district having a limited amount of teachers. Mentor teachers were the most used mentor programs retention strategy, but were not found to be an effective way to reduce teacher turnover. An effective mentor needs to be someone who can answer questions, provide guidance, and provide help with strategies and techniques (Hudson & Hudson, 2016). If mentor teachers are not in the same subject, grade level, or campus, mentees cannot get the support that they need. In a rural school district, this is a possibility because of the limited staff.

In this study mentor programs were only somewhat effective in decreasing teacher turnover when there was a decrease in ELL population percentage and one or more of the mentor program strategies were implemented. This follows the trend discussed above about financial incentives. If teachers are not having to worry about communicating effectively with their students, there is less stress on them as teachers. Less stress with the support of a mentor program can lead to a decrease in teacher turnover.

Grow Your Own programs are newer trend in school district in Texas. There is not a lot of evidence showing the success they can have or the impact they will make on the teacher shortage. Grow Your Own programs are a strategy that keeps local community members in the local school district. When local community members already have a connection to the community they are less likely to leave the school district. Helping support staff and local community members become certified teachers leads to teachers who already have ties to the community and school. The literature does not give a clear cut answer to whether Grow Your Own programs are successful at decreasing teacher turnover. This study found that they were not effective at decreasing teacher turnover. If school district have one or more Grow Your Own program strategy implemented and there was a decrease in ED population percentage, there is a good probability that teacher turnover will decrease in their school district. Teacher turnover is lower than 13% in school districts with a small population of students categorized as low socioeconomic (Rooks, 2018).

Financial incentives in this study were the only true measurable component of the three retention strategies. There was no question of what was implemented from district to district. Each financial incentive was clear cut in what it was implemented. On the other hand, mentor programs and Grow Your Own programs were not as easy to determine what was implemented. This study did not ask school districts how they determined how they implemented their mentor programs or Grow Your Own program strategies. The definition of mentor programs and Grow Your Own programs strategies could look different from district to district.

Conclusion

There was no clear guidance from the literature to determine if specific retention strategies were effective for decreasing teacher turnover. This research, at a minimum, can contribute to leaders' understanding of how much of a factor unique district retention strategies should be emphasized when strategizing to decrease teacher turnover. Teacher retention needs begin with superintendents determining the needs of the school district and implementing strategies for those needs. Each school district will have their own set of strategies that can successfully decrease teacher retention. Although this will come with trial and error to determine what works for each rural school district.

Financial incentives would seem like an effective strategy to draw teachers to rural school districts and keep them there. Although many small rural districts can not compete with larger urban school districts and their financial incentives and average teacher salary. Based on this study, financial incentives would be an effective strategy. Mentor program strategies were not successful at decreasing teacher turnover rates but were at lessening the increase in teacher turnover. Mentor programs can be a valuable support for novice teachers in rural school districts. Grow Your Own programs are new strategies that have recently started in the State of Texas. Even though this study found Grow Your Own strategies were not successful in decreasing teacher turnover rates, they lessened the increase in teacher turnover. Retaining quality teachers increases the success of the school district and will help strengthen the school community. Strengthening the school community will help to recruit future teachers to the school district.

Limitations

This study may have been limited by the superintendents' knowledge of what the retention strategies were, fidelity of implementation, intensity of implementation and also

detailed knowledge of a strategy's effectiveness. Superintendents may have also been overly optimistic in reporting effectiveness. The survey did not ask when retention strategies were implemented or discontinued in each school district. There were few respondents in one geographical area, say what it was. The strategies chosen for this study were strategies with the most literature available on rural school retention strategies. The responses from superintendents may not accurately reflect the practices of the school districts, and variations in what those initiatives look like in practice may significantly affect how much they influence teacher turnover. Since superintendents were responding to questions about specific strategies used in their school districts, they may have inflated. This study assumed the superintendents had been in the district at least a year or had knowledge of the district prior to taking the job as superintendent. The study assumed that there was no reason for superintendents not to be dishonest as all responses were confidential and school districts would not be identified in the paper. It is also acknowledged that COVID-19 could have affected data for one year of the study. No distinction was made between teachers leaving the district because of COVID-19 and other causes of turnover.

Implications

The implications for this study are that no single strategy or combination of strategies works reliably well, but financial incentives appear to be the most effective. However we can't draw conclusions about the other initiatives without better data regarding the fidelity and intensity of the initiative. The results indicate that if rural school districts are looking to decrease teacher turnover, no other factors, they need to implement financial incentives in their school districts. If rural school districts have a decrease in ED population percentage, the district needs to implement Grow Your Own

program strategies to decrease teacher turnover. Rural school district who have a decrease in ELL population percentage should implement financial incentives to decrease their teacher turnover. If a rural school district is increasing their teacher salary, financial incentives can help to decrease teacher turnover.

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