SHRINKING THE COUNTRY MILE: IMPLEMENTATION OF VIRTUAL PLCS IN RURAL SCHOOLS

by

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A Scholarly Delivery Submitted in Partial Fulfillment

of the Requirements for the Degree

DOCTOR OF EDUCATION

Educational Leadership

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Canyon, Texas

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Approved:

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Dr. Janet Hindman, Head Department of Education	Date
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Dr. Angela Spaulding, Dean Graduate School	Date

Scholarly Delivery Framework

The research focus of the scholarly delivery focuses on a rural school partnership in creating an inter-district virtual professional learning community (PLC). The first scholarly deliverable is a case study article used for teaching doctoral or master's candidates in educational leadership. The title of this article is "Creating a Virtual Inter-District Professional Learning Community: Rural Schools-University Partnership." The case represents a collaborative effort of a local school district and a regional university system to provide a virtual PLC to improve math scores for fifth and sixth-grade students in rural districts. The final scholarly deliverable is an empirical article titled "Shrinking the Country Mile: Implementation of Virtual PLCs in Rural Schools." This empirical article focuses on implementing a virtual PLC in rural schools to promote teacher academic growth and enhance the academic achievement of rural students.

Academic Research
Environmental Health and Safety
WEST TEXAS A&M UNIVERSITY.

INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECTS
Letter of Approval

April 15, 2021

Dr. Harper:

The West Texas A & M University Institutional Review Board is pleased to inform you that upon review, proposal **#2021.04.009** for your study titled, **"A Case Study of Rural Schools Virtual Professional Learning Communities (VPLCs) Implementation,"** meets the requirements of the WTAMU Standard Operating Procedure (SOP) No. 15.99.05.W1.01AR Institutional Review Board (Human Subject Research). Approval is granted for one calendar year. This approval expires on **April 14, 2022**.

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

I want to express my appreciation to my committee chair, Dr. Irma Harper. She was a constant source of support, knowledge, and encouragement throughout my doctoral journey. In addition, I acknowledge my committee members, Dr. Ray Barbosa and Dr. Gary Bigham, for their guidance, friendship, and words of wisdom.

I want to thank all the superintendents who participated in this study to extend the literature on leadership. The time and information given were invaluable and will be beneficial to current and aspiring administrators.

An acknowledgment to my cohort is warranted for the countless hours that we spent going back and forth on the process of earning our doctorate.

A loving thanks to my daughter, Devan, and my sons, Mason and Duncan, who inspired me to never give up on chasing my dream. They are my joy, my hope, my world.

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Table of Contents

Creating a Virtual Inter-District Professional Learning Community: Rural Schools-University Partnership

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Abstract

The challenges and obstacles that a small rural school district in west Texas experiences in the planning and implementing a professional learning communities (PLC) appear overwhelming due to the lack of resources. Realizing that other area rural school districts were experiencing the same challenges, the creation of a virtual inter-district PLC was developed to help alleviate the challenges and overcome the obstacles. This PLC included five rural school districts and a partnership with the local university. The initiation of the virtual inter-district PLC was feasible through virtual collaboration efforts between the school districts and all stakeholders involved.

Keywords: virtual professional learning community, rural schools, student achievement, school/university partnership

Creating a Virtual Inter-District Professional Learning Community: Rural Schools-University Partnership

Urban, suburban, and rural schools alike have the common goal of student academic success; however, these schools have their own unique challenges, especially rural schools. Because rural schools have smaller student populations and less funding than their urban and suburban counterparts, rural principals are often responsible for the overseeing of a multitude of grade levels and often serve as the sole leader of their campuses (Parson et al., 2016; Wieczorek & Manard, 2018). Because of the geographical location of rural schools, rural principals also face the challenges of limited access to immediate professional support and professional communities (Hansen, 2018; Stewart & Matthews, 2015). The further a rural school is located from urban and suburban schools, the more likely principals are to be and feel isolated from traditional networking systems of principals and professional support for themselves and their teaching staff (Parsons et al., 2016; Stewart & Matthews, 2015). The role of the rural principal is challenging.

The principal's role has grown over the last 20 years more than any other time in the previous 100 years of public education. The principal is now the academic leader of his campus in a manner that has never been the case (Alvoid & Black, 2014). So, they have to work with the district and the teachers to ensure all stake-holders' success. As Masumoto and Brown-Welty (2009) stated that there are universal characteristics of effective leaders: (a) sense of vision, (b) ability to set goals and plan, (c) personal charisma, (d) strong communication skills, (e) strong sense of self and personal convictions, (f) relationship and empathy skills, (g) the ability to motivate and influence others. They suggest that the final characteristic, the ability to motivate and influence

others defines leadership itself. These characteristics are essential for rural principals during times of transition and initiative implementation.

The implementation of professional learning communities (PLC) is a path to increasing student achievement. When PLCs are executed appropriately, they can fine-tune teaching practices and impact student learning (Darling-Hammond & Richardson, 2009). DuFour et al. (2005) developed three concepts that work as a roadmap to the success of PLCs: (a) the focus should be on high levels of learning for all students versus what is taught; (b) teachers should not work in silos, that is, PLC work must be collaborative with shared responsibility for learning; and (c) teachers must implement and follow through by continuously gathering data using multiple methods to find evidence of student learning and instructional practice effectiveness. Nelson (2009) stressed that PLCs are the most appropriate way to get teachers to create in a format that is collaborative and not in the private practice of work.

PLCs have increased the effectiveness of traditional professional development. Linder (2011) examined how effective professional development impacts teachers' thoughts and how it allows them to grow in their pedagogy to improve student learning. The key to successful professional development is the focus on collaboration. The implementation of PLCs helps teachers to reflect on their best practices through collaboration, sharing ideas, lesson planning, and other instructional strategies (Bausmith & Barry, 2011). Sheppard and Brown (2009) stressed that districts have a variety of teachers, and each teacher has their strengths and weaknesses, and one way to ensure that all teachers are professionally supported with the district vision is through a well-run PLC.

Implementing a PLC in a rural school presents several challenges. It is critical that all stake-holders are invested in the process. It is clear that transforming a school organization into a learning community can be done only with the sanction of the leaders and the active nurturing of the entire staff's development as a community (Ho et al., 2019). The influence of the campus principal and the superintendent will determine if this culture change in the school will be effective. The literature suggests, PLC requires leadership, specifically instructional leadership, which impacts student learning, to be distributed, particularly by enabling and developing teacher leaders (Chen et al., 2016; Hairon et al., 2014; Wang, 2016). This shared leadership is the key to a successful PLC.

Leadership in PLCs is critical; however, leaders must have the trust of their stake-holders. Sheppard and Brown (2009) did a five-year case study of the school district's CEO's and their success on the development of a shared vision. They discovered that without a high level of trust, the district and the CEO were not as thriving. Building trust with the school community does not happen by chance. School leaders must be intentional, authentic, and genuine while building trust (Scheniger & Murray, 2017). According to Scheniger and Murray, building trust requires school leaders to.

- make child-centered decisions daily,
- be present and display competence,
- invest in people,
- create transparency,
- be reliable and follow-through,
- walk the talk, and
- lead with integrity. (p. 227-229)

There must be trust for authentic growth to occur. Altering the norms and practices that occur in the classroom is a cultural change that will only take place if trust is established. It is the responsibility of the superintendent to gain this trust and share the vision at all levels throughout the district.

Case Narrative

This case study is centered around a partnership between rural school districts and a local university in the west Texas area. This unique partnership was created with a desire to overcome the obstacles that rural school districts experience in their quest for high student academic achievement. The intent is to create a virtual inter-district professional learning community with other surrounding rural school districts with the support of the local university. This collaborative would allow all the participants to pool their resources and talents to create a virtual inter-district PLC that reached beyond the walls of one school district.

Setting

Metal Independent School District (MISD) is a school district in the west Texas area. As of the 2018-2019 school year, it had 577 students. It is a rural school that consists of three campuses and covers 923 square miles. Due to this vastness, some students travel 40 to 50 miles to and from school daily. It has a superintendent and three principals. Fifty percent of the students are considered at risk of dropping out of school. Twenty percent of students were enrolled in bilingual and English language learning programs. Metal ISD is currently ranked a “B” in the state's A-F accountability rating. The district has a focus on reading, writing, and math to produce an engaging, enriching, and empowering education for their students.

Panhandle University (PU) is a public institution that serves the west Texas and the panhandle area. It has a total enrollment of 10,060. Its setting is suburban, and the campus size covers 135 acres. It is the only bachelor's and master's degree-granting state university within a 100-mile radius. PUs primary service region extends beyond the Texas borders into the neighboring states of Colorado, Kansas, New Mexico, and Oklahoma. PU has started a new doctoral program in educational leadership that focusses on rural school districts. The university understands the unique challenges that rural schools encounter, and they are dedicated to the research and the development of these schools.

Main Characters

Mike Hernandez is the superintendent at MISD. He is in his fifth year as a superintendent. He has experience as a deputy superintendent, principal, and classroom teacher. This experience has helped him effectively initiate new programs within this district. Superintendent Hernandez is also enrolled in the educational leadership doctoral program at PU. He has a focus on instructional leadership, and his priority at MISD is to provide a viable and vetted curriculum. He is interested in implementing PLCs to ensure dynamic lesson presentations and formative and summative assessments to verify the learning process.

Gary May is a graduate professor at PU. He has worked for the university for 15 years. He teaches doctoral-level courses in the Educational Leadership program. Dr. May's passion is creating and mentoring strong leaders. He teaches all of the superintendent certification at courses and works with his doctoral candidates in conducting research on educational leadership. Prior to his arrival at PU, Dr. May served

20 years of practical field experience in Texas public schools, including nine years of teaching, six years as a principal, and five years as a superintendent.

Creating School-University Partnerships

Superintendent Hernandez is in his second year in the PU Educational Leadership doctoral degree. One of the research areas that resonated with him is the implementation of PLC. The collaboration and the "community" that is generated by a PLC intrigued him. While researching PLCs for one of his assignments, he mentioned his desire to initiate a PLC in his school district to his professor, Dr. May. Dr. May immediately noticed the potential for applied research that not only focused in the rural setting but had the potential needed to make significant changes. He decided to do some research on opportunities to help Superintendent Hernandez and MISD.

Superintendent Hernandez knew that he needed to introduce the possible implementation of PLCs in a careful manner. He knew he would have to have "buy-in" from his district stake-holders. He decided he would first start with his campus administrators. He needed to know what they already knew about PLCs and their perception of PLCs and the feasibility of implementing them in their rural district. He called a meeting with the three campus administrators. After giving them a brief explanation of the purpose of PLCs, they discussed the advantages and disadvantages of implementation. Through research, they knew that if implemented correctly, that student achievement would increase as well as teachers and principals, all working toward a shared vision of excellence.

Initially, there was excitement until the challenges of implementing a PLC in a small rural district were discussed. The middle school principal felt that implementing a

PLC in a small district was impossible. He mentioned that he had one math teacher for grades 5-6 and one math teacher for 7-8. How could such a small staff participate in a PLC and benefit from its collaboration with lesson design and curriculum when they have been basically teaching in isolation? This indeed was an issue.

All campus administrators understood the issues of a rural school. They all wore "many hats" with their job. The elementary principal was also the district Assistant Superintendent for Curriculum and Instruction. The high school principal was also the baseball and track coach. The middle school principal drove the school bus every morning and afternoon. Each administrator was required to attend all sporting events. How could they possibly find time to implement such a major initiative like PLCs?

Superintendent Hernandez understood their concerns but knew that in order to meet the district goals of increased student achievement that changes needed to be made. He met with Dr. May, and together, they discussed solutions to the dilemma. How could they overcome these rural school obstacles? They were determined to make this work. They realized that the big issue was the size of the school and the limited resources. They were positive that other schools were experiencing this same challenge.

Dr. May decided to hold a meeting with five of the area rural school superintendents to discuss the dilemma of decreased student achievement and the implementation of PLCs. Within the first few minutes of this meeting, it was evident that all superintendents were on the same page. They understood the need for improvement but they were also hindered by the unique challenges that rural schools face. Superintendent Hernandez listened intently and made the comment, "We are stronger, when we work together." He got everyone's attention. He then said, "What if we

combined our resources and created an inter-district PLC?" The team of superintendents and Dr. May started to "brainstorm" ideas that would help them create an inter-district PLC.

The Plan

The plan began to unfold. The superintendents decided to create an inter-district PLC. All five rural schools would participate. The first job for each superintendent was to get their schools informed and get their feedback. Like Superintendent Hernandez, they also recognized the need to gain their stake-holders' buy-in. Dr. May reminded the superintendents that initiating a PLC would involve a "culture-shift". Teaching and planning in isolation would be a thing of the past. Their biggest obstacle they would encounter would be a culture-shift that would involve the whole concept of "change". Change means stress not only for teachers and staff but also for administrators. With change comes hesitation and an innate desire to "push-back". It was the campus administrators' responsibility to guide the teachers and staff and anticipate this push-back. They would need to be proactive about this transition and learn as much as could about the implementation of PLCs.

Another major concern was how could these five rural schools collaborate. How would they communicate? How would they share joint professional developments? What would this support look like? All these questions were legitimate concerns. The west Texas area is a vast area that covers many miles. It was not feasible to think that the schools could physically meet to initiate and implement their PLC. Dr. May suggested creating a "virtual inter-district PLC". The planning process and the implementation

process could all be conducted via a virtual platform. The university could act as a facilitator in the process.

Due to the recent COVID-19 pandemic, the schools and the universities were familiar and comfortable with virtual communication and knew that if it was done correctly that their goals could be accomplished. This setting would allow the administrators from the five rural schools to meet regularly. It also allowed the teachers to communicate with teachers who were teaching the same grade level and content areas and to collaborate with someone who was teaching the same areas as they were. This setting excited the administrators as well as the teachers. They could collaborate, plan, and design lessons, attend professional developments, and all share the common goal of increased student achievement and still be able to physically stay at their home campuses.

As the plans for a virtual PLC between the five rural schools and PU continued, a question of funding the initiative was discussed. Expenses regarding possible PLC consultants, planning, designing curriculums, and professional developments would be costly for the PLC. Along with financial issues, Dr. May reminded the superintendents about the need for pre and post-assessments. These assessments were essential to gauge the effectiveness of the PLCs and to determine if they were meeting their goals.

Dr. May discovered an opportunity that could help alleviate some of the pressures of financial and assessment needs. He explained to the superintendent about a federal grant that was available for rural school districts for innovative practices in increasing student achievement. Everyone agreed that applying for the grant was a great opportunity, and it could indeed reduce the financial and assessment pressures.

Teaching Notes & Activities

Rural Schools

According to the Texas Education Agency (2020), there are 466 rural school districts in Texas. A district is classified as rural if it has either: (a) an enrollment of between 300 and the median district enrollment for the state and an enrollment growth rate over the past five years of less than 20%; or (b) an enrollment of less than 300 students (TEA, 2020). The principals from MISD were concerned that implementing a PLC was impossible with their lack of resources.

- What are some challenges that rural school encounter?
- What are some advantages that rural schools offer?

Rural Schools and PLCs

Implementing PLCs is a research-based method that contributes to collective campus growth, teacher development, and increased student achievement (DuFour et al., 2010). However, many teachers in rural schools are the only ones in their grade level or subject area. This can make collaboration through a PLC extremely difficult.

- How can this issue be resolved?

Looking at the way the rural schools in the case study approached their implementation of a PLC:

- Do you think they did it correctly?
- Do you think this co-op will be successful?

Virtual PLC Implementation

The National Education Association reported, "Virtual PLCs allow educators to connect with their counterparts everywhere, creating a critical mass of thoughtful

educators who learn, reflect and capitalize on the wisdom of the crowd" (Long, 2015, para.1). The rural west Texas schools decided that a virtual approach to planning and implementing their PLC among the five districts and the university was a viable path solution. This path allowed them to have collaboration and shared visions among the participating schools.

- What challenges do you think they will encounter in this "virtual approach"?

Assessments

It is a common perception in the literature that PLCs are effective and normally achieve their goals (Stoll & Louis, 2007; Wood, 2007), thorough evaluation studies of PLCs are limited in number and scope. The evidence regarding their effectiveness is mixed (Lomos et al., 2011; Vescio et al., 2008).

- What type of assessments should be conducted on PLCs?
- What artifacts/anecdotal records should be used in the evaluation process?

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Shrinking the Country Mile: Implementation of Virtual PLCs in Rural Schools

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Abstract

Purpose: When professional learning communities are executed appropriately, they can fine-tune teaching practices and impact student learning. They provide opportunities featuring collaboration, job-embedded contexts, reflection and feedback on practice, and sustained duration of learning. Considering these advantages, rural schools face a dilemma when implementing a professional learning community due to their size and location. How do rural school leaders create a culture of collaboration when most teachers are a professional learning community of one? This study explored the perception of rural superintendents regarding the implementation of a virtual inter-district professional learning community. **Research Method:** This study used a multiple case study design. Interviews were conducted with five rural superintendents in the Panhandle area of Texas. **Findings:** The overarching research question for the study was, "What are rural superintendents' attitudes, beliefs, and perceptions about implementing a virtual inter-district professional learning community?" The themes that were discovered in the study were efficiency, collaboration, quality leadership oversight, and increased quality instruction. The superintendents in the study unanimously agreed that implementing a virtual inter-district professional learning community was needed and desired; however, this type of community would only be successful is if there was strong leadership in place that supervised the initiation and implementation. **Conclusions:** Small rural schools are often isolated and lack resources. A virtual professional learning community could remedy this issue by bringing rural schools together to capitalize on their unique needs and compiled resources.

Keywords: professional learning communities, virtual professional learning communities, rural schools, transformational leadership, shared leadership.

Shrinking the Country Mile: Implementation of Virtual PLCs in Rural Schools

The art of education and the resulting learning is not, and never has been, a perfect process. Every student is different, and every teacher has a unique set of strengths and weaknesses. In addition, every administrator is a unique individual with their perspective. The picture of education is complicated further when elements such as location and economics are incorporated. For example, Roscigno et al. (2006) explained that geographic location affects student scores. Rural, suburban, and urban schools face different circumstances due to available resources (Roscigno et al., 2006). This lack of resources is especially an issue with rural schools. Rural schools are often isolated and much smaller than urban and suburban schools (Institute of Education Sciences, 2012).

Identification of Research Problem

Creating a positive learning environment is a challenge, especially in a rural school. Rural school districts have smaller student populations than their urban and suburban counterparts. Rural school leaders often have been responsible for overseeing a multitude of grade levels and usually serve as the sole leader of their campuses (Parson et al., 2016; Wiezorek & Manard, 2018). In addition, because of rural schools' geographical location, school leaders face the challenges of limited access to immediate professional support and professional communities (Hansen, 2018; Stewart & Matthews, 2015).

To create a positive culture of learning, rural schools should consider all stakeholders and the importance of their roles in achieving the end goal of learning. Professional learning communities (PLC) have been thriving in producing such a culture. A dedicated PLC has the potential to bring together teachers, administrators, and other critical stakeholders around student success's common goal (DuFour, 2004). The

implementation of PLCs has been a path for increasing student achievement. When PLCs are executed appropriately, they can fine-tune teaching practices and impact student learning (Darling-Hammond & Richardson, 2009).

The overarching research question for this study was "What are rural superintendents' attitudes, beliefs, and perceptions about implementing a virtual inter-district PLC?" In addition, the study explored the following sub-research questions:

- What are rural superintendents' attitudes, beliefs, and perceptions about the benefits of the implementing a virtual inter-district professional learning community?
- What are rural superintendents' attitudes, beliefs, and perceptions about the obstacles of the implementing a virtual inter-district professional learning community?

Purpose of the Study

Many educational communities use the term PLC, but that means vastly different things within each community, district, campus, and teacher (DuFour et al., 2005; Wang, 2016). PLCs are a strategy for effective professional development because it provides opportunities featuring collaboration, job-embedded contexts, reflection and feedback on practice, and sustained duration of learning (Kwon et al., 2018). Considering the importance of PLCs, rural schools face a dilemma. How do rural school leaders create a culture of collaboration when most teachers are a PLC of one? Multiple barriers certainly exist, but so do great possibilities. "There are temporal and geographic barriers to designing and implementing a virtual PLC, such as finding shared meeting time and connecting educators across the different school/district buildings" (Kwon et al., 2018, p.

22). For this study, the concept of a virtual inter-district PLC involves multiple rural schools working together virtually to benefit their instructional practices, which improves student achievement. This study explored the perception of rural superintendents regarding the implementing a virtual inter-district PLC. The study provides information regarding implementing a rural schools and professional learning communities. It ends with a unique approach to virtual inter-district PLC implementation.

Theoretical Framework

Grant and Osanloo (2014) suggested that a theoretical framework is the blueprint of an investigation that informs the readers. The theoretical framework for this study is based on transformational leadership and shared leadership. Leadership is an integral part of developing effective PLCs. School leadership is crucial in developing and maintaining effective PLCs (Wahlstrom & Louis, 2008).

Transformational Leadership

Transformational leadership is a theory that leaders should seek to empower their subordinates rather than manage them in a transactional manner (Bass, 2007; Hoover et al., 1991). The transformational leadership theory has been researched since Burns introduced it in 1978 (Bass, 2007; Northouse, 2019). As the name "transformational" suggests, there is an expected change in the visionary leaders' system. First, the leader strived to improve followers or inspire followers to change to improve themselves (Bass, 2007; Kendrick, 2011; Northouse, 2019). Second, the followers are empowered to become leaders in the future with the leader's proper support and development. Third, transformational leaders use idealized influence, inspirational motivation, intellectual

stimulation, and individual consideration to empower their followers' self-actualization (Bass, 2007; Kendrick, 2011).

The transformational leadership approach often exhibits the leader's transformation and followers' growth (Shatzer et al., 2014). The approach views the leader and the leader's traits and can often determine the transformational leader's prior learned skills (Tarker, 2019). The leader applies the traits needed to transform his organization. Transformational leadership with instructional leadership moves the educational institution forward. In the academic setting that demands student success, students are the focal point of all actions to ensure student success. The transformational leadership style can move the school setting's culture and relationships to have positive rewards over time (Griffith, 2004).

The transformational leadership theory has been thoroughly studied and shown to effectively lead district change (Anderson, 2017; Kendrick, 2011; Sachs et al., 2011). Thus, the present research has been designed within the theoretical framework of transformational leadership. Transformational leadership encourages and supports change in the mid-level, who encourages and supports change at the teacher's level (Anderson, 2017; Kendrick, 2011). In combination with PLC implementation, transformational leadership empowers teachers to change their solitary work habits to collaborative practices.

Shared Leadership Theory

Shared leadership is the process of sharing responsibility and control with several people within an educational setting or an organization. The shared leadership approach was not limited to the person hired to be the leader but can be part of the organization

(Fitzsimons et al., 2011). Shared leadership focuses on the unit as a whole and the unit's success (Cook et al., 2020). Shared leadership is successful because leaders work together to ensure their efforts are shared, and others have input in leading and following. The sharing of responsibilities between leader and employee gives the leader the required buy-in from their colleagues and followers.

Shared leadership allows the leader to build solid relationships to prosper in the moment and in times to come. This style of leadership enables the follower to make decisions in the decision-making process. Shared leadership streamlines the decision-making process to allow a higher quality product. The shared leadership approach, when allowed to flourish, can improve and develop leaders. Programs and future leaders can rely on the shared leadership approach to enhance success in an educational setting. Implementing a PLC is a "team effort". This leadership style creates a vision for the team and allows the team to share the responsibility of successfully implementing and maintaining PLCs.

Rural Education

Rural schools serve the areas described as “rural” by the U.S. Census Bureau. The most apparent characteristic of rural schools is their small size and service to large geographical regions (Echazarra & Radinger, 2019; Ghazal et al., 2017; Glover et al., 2016). In addition, many rural districts serve financially disadvantaged student populations (Echazarra & Radinger, 2019). As a result, rural schools face similar issues that urban schools face without access to the same resources (Echazarra & Radinger, 2019; Logan & Burdick-Will, 2017; Wieczorek & Manard, 2018). In this environment, teachers must teach multiple subjects, multiple grade levels, and sometimes out of their

content area (Echazarra & Radinger, 2019; Ghazal et al., 2017; Logan & Burdick-Will, 2017; Preston & Barnes, 2017). As a result, many teachers are unprepared for rural teaching struggles, which leads to high teacher turnover (Echazarra & Radinger, 2019). School leaders, such as the superintendent and the principal, also serve multiple roles (Wieczorek & Manard, 2018). For example, they fill the role of human resources, special education coordinator, curriculum director, or sometimes guidance counselor or teacher (Wieczorek & Manard, 2018).

Rural schools also enjoy benefits from the small population. Rural schools serve as the center of community activity (Echazarra & Radinger, 2019; Preston & Barnes, 2017). The small population promotes good community relations and communication between teachers, administrators, and community members (Echazarra & Radinger, 2019; Preston & Barnes, 2017). Faculty, administrators, and community stakeholders know the students (Echazarra & Radinger, 2019). Thus, they know their students' needs and work together to meet those needs (Echazarra & Radinger, 2019).

Rural School Challenges

Urban, suburban, and rural schools have the common goal of student academic success; however, these schools have unique challenges, especially in rural schools. Because rural schools have smaller student populations and less funding than their urban and suburban counterparts, rural superintendents and principals are often responsible for overseeing a multitude of grade levels and often serve as the sole leader of their campuses (Parson et al., 2016; Wieczorek & Maynard, 2018).

The geographical location of rural schools presents challenges. Such as limited access to immediate professional support and professional communities (Echazarra &

Radinger, 2019; Hansen, 2018; Stewart & Matthews, 2015). The farther away a rural school is from urban and suburban schools; the more likely school leaders are to be physically isolated and also feel isolated from traditional networking systems of principals and professional support for themselves and their teaching staff (Parson et al., 2016; Stewart & Matthews, 2015).

Several rural school districts also face challenges providing high-quality education and multiple options because of limited funding (Parsley & Barton, 2015). For example, rural schools tend to have smaller budgets for equipment, which leaves science departments less equipped for labs (Echazarra & Radinger, 2019). Echazarra and Radinger indicated that rural schools must spend more per capita due to a lack of scale economies. As described previously, rural teachers have a more increased workload due to multiple subjects and grade levels (Echazarra & Radinger, 2019; Ghazal et al., 2017; Logan & Burdick-Will, 2017; Preston & Barnes, 2017). These factors, along with the geographic isolation and lack of resources, are significant barriers to faculty recruitment and retention (Echazarra & Radinger, 2019; Glover et al., 2016; Logan & Burdick-Will, 2017; Wieczorek & Manard, 2018). The result is that many rural faculty members are new, cannot find other employment, and are otherwise unprepared (Echazarra & Radinger, 2019; Logan & Burdick-Will, 2017). The small faculty and limited financial resources prevent schools from offering as many programs as larger schools in suburban and urban areas (Echazarra & Radinger, 2019; Logan & Burdick-Will, 2017). There is simply not enough faculty to offer more than a minimum amount of curricular and extracurricular options (Echazarra & Radinger, 2019; Logan & Burdick-Will, 2017).

Rural School Leaders

Rural schools present a challenging role for their leaders. Because rural districts have smaller student populations and less funding than their urban and suburban counterparts, rural leaders are often responsible for overseeing a multitude of grade levels and often serve as the sole leader of their campuses (Parson et al., 2016; Wieczorek & Maynard, 2018). Rural superintendents and principals serve in a variety of roles and hold various responsibilities that may include disciplinarian, manager, instructional leader, human resource department, the school-to-community liaison, custodian or bus driver, or other position (Hansen, 2018; Parson et al., 2016; Wieczorek & Maynard, 2018).

Rural school districts have barriers to implementing PLCs. These barriers stem from various factors, such as joint planning time, the number of teachers per grade level or subject area, and lack of professional development opportunities. The professional resources available to school districts that support PLC implementation in each school system are uneven (DuFour, 2014). The multiple hats staff members must wear and the district's rural size also affect implementing a traditional PLC model (Hord & Hirsh, 2009).

Professional Learning Communities

Nelson (2009) stressed that PLCs are the most appropriate way to get teachers to create in a collaborative format and not in the private practice of work. Professional development in professional learning communities is based on the design of engaging lessons that are not designed and implemented in isolation. Collaboration was the focus in developing, implementing, and evaluating student engagement and assessment. Unfortunately, schools not involved in PLCs typically develop the classroom and lessons

in isolation. PLCs help alleviates this issue by promoting collaboration and providing the time for this collaboration.

Student Achievement in PLCs

The implementation of PLCs has been a path to increasing student achievement. When PLCs are executed appropriately, they can fine-tune teaching practices and impact student learning (Darling-Hammond & Richardson, 2009). DuFour et al. (2005) developed three concepts that work as a roadmap to the success of PLCs: (a) the focus should be on high levels of learning for all students versus what is taught; (b) teachers should not work in silos, that is, PLC work must be collaborative with shared responsibility for learning, and; (c) teachers must implement and follow through by continuously gathering data using multiple methods to find evidence of student learning and instructional practice effectiveness. Nelson (2009) stressed that PLCs are the most appropriate way to get teachers to create in a collaborative format and not in the private practice of work.

Professional Development

Professional learning communities have enhanced traditional professional development (Ronfeldt et al., 2015). Linder (2011) examined how significant professional development impacted teachers' thoughts and how it allowed them to grow in their pedagogy to improve student learning. The key to successful professional development is the focus on collaboration. The implementation of PLCs helped teachers reflect on their best practices through collaboration, sharing ideas, lesson planning, and other instructional strategies (Bausmith & Barry, 2011). Sheppard and Brown (2009) stressed that districts have various teachers, and each teacher has their strengths and

weaknesses; one way to ensure that all teachers are professionally supported with the district vision was through a well-run PLC.

PLC Leadership

Transforming a school organization into a learning community can be done only with the leaders' sanction and the active nurturing of the entire staff's development as a community (Ho et al., 2019). These are actions specific to transformational leadership. The campus principal and the superintendent's influence determined if this school's culture change was significant. The literature suggested that PLC required leadership, specifically instructional leadership, which impacts student learning and distribution, particularly by enabling and developing teacher leaders (Chen et al., 2016; Hairon et al., 2014; Wang, 2016). This shared leadership has been the key to a successful PLC.

Leadership in PLCs is critical. Louis and Kruse (1995) cite supportive leadership of administrators as necessary for the effective organizational restructuring of staff into professional learning communities. Leaders must have the trust of their stakeholders. Sheppard and Brown (2009) did a five-year case study of the school district's CEOs and their success in developing a shared vision. They discovered that the district and the CEO did not thrive without a high level of trust. Building trust with the school community did not happen by chance. School leaders must be intentional, authentic, and genuine while building trust (Scheninger & Murray, 2017). According to Scheninger and Murray, building trust required school leaders to:

- make child-centered decisions daily, be present and display competence,
- invest in people,
- create transparency,

- be reliable and follow-through,
- walk the talk, and
- lead with integrity. (p. 227-229)

Campus Leadership in PLCs

There are several obstacles to the implementation of PLCs in rural school districts. Rural campus leaders expressed to researchers that teacher buy-in and trust between teachers and principals were essential for success in implementing PLCs (McBrayer et al., 2018; Willis & Templeton, 2017). Teachers need to see the potential benefits (McBrayer et al., 2018; Willis & Templeton, 2017). Trust is needed for a PLC to be successful. Altering the norms and practices that arise in the classroom is a cultural change that will only take place if trust is established.

Bouchamma et al. (2019) examined the leadership practices of principals who implemented successful PLCs. These principals could access various resources, set goals, and successfully share leadership (Bouchamma et al., 2019). They began implementation by allotting their own time and the teachers' time for collaboration. Due to the small school size, many teachers were responsible for multiple grade levels. The many roles teachers had, left little time for collaboration (Willis & Templeton, 2017). Time out of class was needed for successful collaboration (McBrayer et al., 2018). Teachers trusted their leaders and invested in the collaboration by providing time for meeting and trusting teachers to share leadership in the PLC (Bouchamma et al., 2019).

Bursuck et al. (2010) presented this shared leadership as unfavorable, indicating that principals had to rely on department heads for successful implementation. However, teachers took ownership of PLC implementation when they were trusted to participate

(Bouchamma et al., 2019; Parson et al., 2016; Salazar et al., 2010). The literature indicated that PLC implementation in rural districts is most successful when principals exhibit shared leadership (Bouchamma et al., 2019; Masumoto & Brown-Welty, 2009; Moore, 2018; Salazar et al., 2010).

Shared Values and Vision

Linder (2011) examined how significant professional development impacted teachers' thoughts and how it allowed them to grow in their pedagogy to improve student learning. Not just from a teacher in-service but that the quality had to be there to support collaboration. Mentoring and coaching and a high level of dialogue ensured all teachers moved forward with a shared value and vision for the campus and the district. A strategy like this was the only way the teaching practices and procedures learned in PLCs improved student performance. The district vision has to stem from the CEO regarding the development and implementation of a shared vision at all levels throughout the district.

Rural School PLCs: A Virtual Approach

Rural schools have limited numbers of faculty members teaching the same subjects, so finding a team of teachers with common needs and interests could be difficult. This causes a barrier in implementing PLCs. When implementing a PLC, teachers must work with teachers who teach the same subjects and the same grade levels. When PLCs include teachers, who do not share a common goal, the groups are likely to be less effective in bringing about changes in teacher practice (Smith et al., 2009). Because face-to-face meetings are often impractical in rural settings, technology offers small, rural schools an opportunity to engage in meaningful collaboration (McConnell et

al., 2013; Moore, 2018; Salazar et al., 2010).

Creating online learning communities to facilitate professional development is a matter of carefully and deliberately designing dynamic learning environments that foster a learning culture (Lock, 2006). Online learning communities are comprised of a group of autonomous, independent individuals who are drawn together by shared values, goals, and interests and committed to knowledge construction through intensive dialogues, interaction, and collaboration (Harmon & Jones, 2001; Rovai, 2001). The use of an online delivery system offers a convenient way to provide professional development experiences (Lock, 2006)

Virtual PLCs can be defined as PLCs that use technology to support collaborative learning in PLCs among participants (teachers & students) separated by geographic or temporal barriers (McConnell et al., 2013). Virtual activities include bulletin board discussion groups, course management software, asynchronous text-based collaborations like wikis and blogs, videoconferencing (Trinkle, 2009). Virtual PLCs provide flexibility unavailable in face-to-face collaboration (Blitz, 2013). For example, McConnell et al. (2013) showed that teachers preferred meeting face-to-face, which was more natural. However, a virtual meeting provided the same professional benefit as face-to-face meetings (McConnell et al., 2013). For example, teachers could discuss problems and develop solutions, share articles, and develop professional friendships (McConnell et al., 2013).

McConnell et al. (2013) explained that technical problems could be a hindrance to successful meetings. However, solutions to those problems often use different collaborative platforms (McConnell et al., 2013; Moore, 2018; Salazar et al., 2010).

Moore (2018) analyzed the usability of five internet collaboration platforms: text-based chat, Skype with and without video, Wimba, Google+ Hangouts, and Zoom. She showed that the platforms facilitated collaboration and made virtual PLCs possible (Moore, 2018). In addition, those platforms effectively conducted PLC meetings and provided different options when technological problems arose (Moore, 2018).

Method

Through a qualitative approach, this research addressed the high plains of Texas rural district superintendents' perspectives on implementing virtual inter-district PLCs. A multiple case study model was used to examine the superintendents' perceived experiences, practices, and understandings of conflict management related to their role in PLC implementation. This study also explored barriers and benefits of PLC implementation from the superintendents' points of view. The participants' experiences were crucial in this study due to their unique rural situations and the associated difficulties of PLC implementation. The researcher strived to preserve the participants' voices, acknowledging that each participant brings something different to the research (Leavy, 2017; Stake, 1995).

The case study approach was chosen due to each participant's unique local contexts. The various aspects of context (external and internal) were necessary because the literature has indicated that rural contextual situations present unique challenges for leaders, including the community's constant access to the administration (Hansen, 2018; Parsons et al., 2016), geographic isolation (Hansen, 2018), and magnitude of responsibilities of rural administrators (du Plessis, 2017). Adding more contextual aspects are the difficulties in PLC implementation that arise due to these challenges. Considering

the bounded nature of the case study, the boundaries defining the cases will be: (a) the physical location of the school (rural Texas districts), (b) size of the student population of the school (ex., 1A, and 2A), and (c) time of the study (Fall of 2021). Because the focus is on rural superintendents, a struggle exists between being a superintendent, being a superintendent in a rural district, and being a superintendent in a rural district implementing PLCs, which coincides with Yin's (2018) requirements for using case study designs.

Participants

The superintendents that participated in the study have a wealth of academic knowledge, but all have different backgrounds, and their districts are vastly different. Superintendent #1 has 30 plus years in education and has been a superintendent for a few years. He is a superintendent of the year in a “C-rated district” near a major city. Superintendent #2 has 30 plus years of educational experience. He is a long-time superintendent in an “A-rated district” and has a goal to have the best scoring district. Superintendent #3 has 20 plus years of experience, a first-time superintendent with a few years of experience. He has a coaching background and leads an "A-rated district". Superintendent #4 has 30 plus years in education, nine as a superintendent of multiple communities, an "A-rated district," and an agriculture teacher background. Superintendent #5 has been a superintendent for over 20 years, and he has served multiple districts in that capacity. He serves at a "C-rated district" and has had "improvement required" campuses and needs to make significant academic changes for the district to succeed. He has an agricultural teacher background.

These rural superintendents were selected from the Education Service Center (ESC), Region 16 ECS area. The ESC 16 is located in the Texas Panhandle, serving 44 rural schools in this area and 62 total schools. Superintendents were similar in that they were all from smaller, rural schools located within a specific geographical location. However, each participant represented unique experiences related to their school districts.

Data Collection

Before the data collection process began, a field study test was conducted to validate the interview guide. Participants for the field study test was administered to rural superintendents that are not participating in the study. After all the participants were selected and agreed to participate in the study, an informational email was sent to them explaining how and where the interviews would be conducted. In addition, a link was issued with a selection of possible meeting times and a description of the virtual meeting platform being utilized. The interviews were individually scheduled based on the preference of the participants.

Interviews were conducted to answer the study's research questions. The interviews were semi-structured, which allowed the participants to elaborate on their responses. Due to the COVID-19 pandemic at the time of data collection, all interviews were conducted virtually. The interviews consisted of eight open-ended questions that delved into the advantages and disadvantages of a virtual inter-district PLC. The interviews were recorded and lasted approximately 45 minutes.

Data Analysis

The Framework Method (Gale et al., 2013) was used to analyze the data. The Framework Method consists of seven analysis stages:

Stage 1 - Transcription: The transcripts were accumulated using GoToMeeting. This secured accuracy and allowed the researcher to be immersed in the data.

Stage 2 - Familiarization with the Interview: Familiarization involved techniques such as relistening to the audio from the interviews and making necessary notations.

Stage 3 - Coding: The data were coded after the familiarity process. The purpose of this stage was to classify all the data so that it could be compared to the other data collected in the interviews.

Stage 4 - Developing a Working Analytical framework: At this stage, the researcher gathered the codes and created categories.

Stage 5 - Applying the Analytical Framework: Once the framework was created, the interview questions were entered and also the interviewee's pseudonyms.

Stage 6 - Charting the Data into the Framework Matrix: This stage involved charting the data into a framework matrix by summarizing the data by categories.

Stage 7 - Interpreting the data: The purpose of this final stage was interpreting the data to find the themes and patterns in the data. This process helped find rich data regarding rural PLC implementation. (p.4-7)

Findings

The overarching research question for the study was, "What are rural superintendents' attitudes, beliefs, and perceptions about implementing a virtual inter-district PLC?" In addition, two sub-research questions addressed the superintendents' perception of the benefits and obstacles of implementing a virtual inter-district PLC. The themes that were discovered in the study were efficiency, collaboration, quality

leadership oversight, and increase quality instruction. The superintendents interviewed were veteran educators that were the leaders of rural school districts in the Texas Panhandle. These superintendents were leaders of districts with many challenges with shrinking communities, funding, teaching shortages, and navigating a global pandemic.

What are rural superintendents' attitudes, beliefs, and perceptions about the benefits of implementing a virtual inter-district PLC?

The superintendents listed some benefits to the implementation of virtual inter-district PLCs. The participants mentioned that implementing a virtual PLC would save time and money. Teachers would not have to travel to meet with other teachers at different schools. This lack of travel would also help the school's budget. Superintendent #5 stated that "meeting virtually would allow teachers to maximize their time in their classroom and not have to leave the classroom to attend 'face-to-face' meetings."

When interviewing the superintendents, collaboration was mentioned several times regarding the implementation of a virtual inter-district PLC. Superintendent #1 stated that "groups will be able to collaborate with peers who share common issues, planning, implementing, and evaluation lessons, as well as student learning " Superintendent #2 stated, "I think if you introduce your PLC with an emphasis on teacher collaboration and not structured like a mini personal development opportunity, it would be successful." He also stated, "A virtual PLC would be a good place to collaborate, share ideas, and it could be a valuable support system for the teachers." Collaboration is needed and imperative to the growth of the teacher over time. Superintendent #2 also stated, "I think it could also help schools with their programs. For example, with their RTI

(Response to Intervention) programs; Teachers could talk to each other about the different things that they are doing. I think it could be mighty powerful."

Another benefit mentioned was quality oversight; the superintendents mentioned that a virtual inter-district PLC would be successful with quality leadership oversight. Superintendent #3 stated:

> You have to frame it correctly and be sure that you're prepared when you initiate the PLC meetings, and you must have oversight, making sure you're prepared. You need to make sure that the meetings are organized and informative. This will help get the buy-in from the teachers.

Superintendent #4 commented, "Well, anytime you have a professional learning community, and it is active, and it does what it is supposed to do, it has goals and objectives, and it is managed correctly. He also stated, "It is all about the management of the PLC, the agenda, the facilitation of it, and the follow-through."

The increase of quality instruction was a significant benefit. Superintendent #1 felt that a virtual PLC would benefit his district, "Without a doubt, teachers being able to learn from each other and further develop their craft would ultimately benefit student learning and achievement in schools." Superintendent #2 stated, "Well, absolutely. I think PLCs allow teachers to analyze the data and discuss why it looks like it does, and how it will affect their instruction." Superintendent #5 also mentioned data. He felt that the data collected from the PLC would support student growth and also benefit the teacher's instruction."

Superintendent #3 strongly felt that PLCs would promote teacher and student growth. He stated, "The whole reason we are in this profession is to help students. So

consequently, if the teachers are learning best practice, pedagogy, et cetera, they are going to pass that down to students; that is what we are in the business to do." When asked if the virtual PLC would benefit his teachers and students, he said, "Yes, absolutely."

What are rural superintendents' attitudes, beliefs, and perceptions about the obstacles of implementing a virtual inter-district PLC?

The data analysis produced some obstacles according to the participants' perspectives. One obstacle was effective communication between schools, teachers, and administrators. Superintendent #4 stated, "The greatest obstacle [regarding a virtual community] would be communication. During a virtual meeting, you might not get a clear picture of body language if you are dealing with an issue. Virtual communication is a little one-dimensional. It eliminates the second or third dimension of body language, proximity, and those kinds of things."

The challenge of scheduling a convenient time for the PLC participants to meet was a perceived obstacle. Superintendent #1 mentioned, "The only issue is finding a common time for several teachers to meet together online." He also stated, "One obstacle could be scheduling; it may be difficult to find a common time for teachers from different districts to get together."

Quality oversight is a vital requirement for implementing PLCs, just as poor leadership can be a detriment. Superintendent #2 stated, "You have to frame it correctly, and be sure that you are prepared when you do the PLC meetings because if you are not, the teachers feel like it is extra work." Superintendent #2 stated, "I think our faculty would be open to it; again, you know timing is everything. However, everything has to be

really focused and well planned out, but I feel like our staff would be open to that." Superintendent #3 mentioned that possible obstacles could be worked out if approached by campus leaders appropriately, "You have to get buy-in from the teachers, because, if it is something that they are just made to do, they will not be eager to participate, once again, it is up to the PLC leaders to approach the initiation correctly."

Discussion

The research question in this study was, "What are rural superintendents' attitudes, beliefs, and perceptions about implementing a virtual inter-district PLC?" PLCs have proven to be successful strategies in increasing student achievement (Dufour, 2004). However, due to their geographical location and size, rural schools struggle with implementing PLCs and effective professional development (Echazarra & Radinger, 2019; Hansen, 2018; Stewart & Matthews, 2015). Therefore, this study explored the perspective of rural superintendents and the feasibility of implementing a virtual inter-district PLC with the ultimate goal of achieving student success.

Summary

The purpose of the study was to explore the perception of rural superintendents regarding the implementation of a virtual inter-district PLC. Rural superintendents in the Texas Panhandle have many challenges with shrinking communities, funding, teaching shortages (Echazarra & Radinger, 2019; Glover et al., 2016; Logan & Burdick-Will, 2017; Parsley & Barton, 2015; Wieczorek & Manard, 2018). In addition, superintendents are contending with the urgent question of how to secure student achievement. Thus, the implementation of virtual inter-district PLCs could be a plausible strategy for them.

Through the data analysis of the superintendent responses, the study produced four main themes: (a) efficiency, (b) collaboration, (c) quality leadership oversight, and

(d) increase in quality instruction. The first theme of efficiency has a virtual inter-district PLC without traveling to other districts to perform professional learning with the desired districts. It also can occur at any time of the day, and with the Texas Panhandle being so large of an area, ease means convenience in performing the professional learning communities.

The second theme of collaboration is that a group will be able to collaborate with peers who share common issues, planning, implementing, and evaluating lessons and student learning. Virtual PLCs allow teachers to share ideas with their peers from their school district and other districts to communicate the most efficient way to achieve better instruction and student success. The third theme was quality leadership oversight. This oversight involves the management of the PLC in securing that the program's vision is intact and sustainable. This oversight also involves the constant analysis of the data to ensure that student achievement is at the forefront. The fourth theme is quality instruction. The superintendents felt that a virtual PLC setting would increase the level of instruction which would, in turn, have positive effects on student achievement.

The literature supports the findings from the interviews. For example, Linder (2011) examined how significant professional development impacted teachers' thoughts and how it allowed them to grow in their pedagogy to improve student learning. Not just from a teacher in-service but that the quality had to be there in the in-service to support collaboration. PLCs provide mentoring and coaching and a high level of dialogue, ensuring all teachers move forward with a shared value and vision for the campus and the district. A strategy like this was the only way the teaching practices and procedures learned in PLCs improved student performance.

The literature also supports quality oversight from the school leadership in implementing a PLC. Louis and Kruse (1995) cite supportive leadership of administrators as necessary for the effective organizational restructuring of staff into professional learning communities. Teachers are critical to successful PLCs, and they need a strong administration supporting them. Shared leadership is the key. Teachers trusted their leaders and invested in the collaboration by providing time for meetings and trusting teachers to share leadership in the PLC (Bouchamma et al., 2019).

The literature supported the participants' perspectives in initiating a virtual PLC. A study conducted by Willis and Templeton (2017) discovered that the lack of communication combined with technology was an obstacle to successful PLC implementation in rural schools. McConnell et al. (2013) explained that technical problems could be a hindrance to successful meetings. Research by DuFour (2014) reinforced that PLCs must have strong leadership, but that could be a challenge in rural communities. The professional resources available to rural school districts that support PLC implementation in each school system are uneven compared to their urban counterparts. Gaining buy-in from teachers could also present obstacles for leaders. The literature supports the need for teacher buy-in with a PLC. This buy-in is generated from trust between teachers and principals. Teachers need to see the potential benefits before actively participating in PLCs (McBrayer et al., 2018; Willis & Templeton, 2017).

Conclusions

The geographical location of rural schools' present challenges such as limited access to immediate professional support and professional communities to teach students (Echazarra & Radinger, 2019; Hansen, 2018; Stewart & Matthews, 2015). In addition,

the farther away a rural school is from urban and suburban schools,the more likely principals are to be and feel isolated from traditional networking systems of principals and professional support for themselves and their teaching staff (Parson et al., 2016; Stewart & Matthews, 2015). Several rural school districts also face challenges providing high-quality education and multiple options because of limited funding (Parsley & Barton, 2015).

Sheppard and Brown (2009) stressed that schools have such a variety of teachers, and each teacher has their strengths and weaknesses. One way to ensure that all teachers are professionally supported with the district vision was through a well-run PLC. Rural schools have limited numbers of faculty members teaching the same subjects, so finding a team of teachers with everyday needs and interests could be difficult. This causes a barrier in implementing PLCs. When implementing a PLC, teachers must be able to work with teachers who teach the same subjects and the same grade levels. To eliminate this barrier, virtual PLCs could be implemented.

Virtual PLCs are defined as PLCs that use technology to support collaborative learning in PLCs among participants (teachers & students) separated by geographic or temporal barriers (McConnell et al., 2013). Virtual activities include bulletin board discussion groups, course management software, asynchronous text-based collaborations like wikis and blogs, videoconferencing (Trinkle, 2009). Virtual PLCs provide flexibility unavailable in face-to-face collaboration (Blitz, 2013). For example, McConnell et al. (2013) reported that teachers preferred meeting face-to-face, which was more natural. However, a virtual meeting could provide the same professional benefit as face-to-face meetings (McConnell et al., 2013). For example, teachers could discuss problems and

develop solutions, share articles, and develop professional friendships (McConnell et al., 2013).

Strengths and Limitations

One of the strengths in the study was the qualitative design. Through the use of semi-structured interviews, I was able to provide detailed information and explain complex issues. The main strength of the study was the information gleaned from the exploration of an intervention for low student achievement in a rural school.

There were also limitations to this study. The first was that the superintendents were trying to complete the school year with unprecedented consequences: COVID-19. They were completing a year like no other due to the demands and constraints of the pandemic. As COVID surged across the Texas Panhandle, the participants were coping with the demands from their communities, the Texas Educational Agency, the governor, and the Center for Disease Control and Prevention. This stress may have caused the participants not to answer as thoroughly or honestly as they would have without the presence of these demands. Coping with the consequences of COVID-19 may have also affected the response rate of those agreeing to participate in the study. Perhaps with more participants, more depth could have been achieved for the findings.

Implications

Small rural schools are plentiful in the United States and could benefit from this research. However, these schools are often isolated, and PLCs may not be successfully created without building-level and district-level leadership support. Due to the lack of resources, small rural schools need teachers' participation in other districts to form functional PLCs. This will take the active involvement of district leadership to provide the time, tools, and inspiration for teachers to build virtual, inter-district PLCs. A

successful model for implementing virtual, inter-district PLCs should define transformative roles for executive leaders, campus leaders, teacher-leaders, and classroom teachers.

The research will provide an informed vision for the transformational superintendent. The superintendent could use the research to anticipate troubles or shortfalls in the process and plan strategies for dealing with these. They could use the research in a prescriptive manner to cast a transformative vision and support their subordinates in implementing the PLC. Furthermore, the superintendent will direct other district-level staff and resources, such as IT infrastructure and support, to facilitate the PLC implementation's success.

Campus leaders, such as principals, could use the research to understand their role as an intermediary in supporting the implementation of the district-level vision. The principal is in the unique situation of directly managing the teacher's class schedule and direct allocation of resources and support. Campus leaders have a pivotal role as transformational leaders under the superintendent are essential to collaborative virtual PLCs' success. It is their leadership, support, and encouragement that affect the teachers the most. Campus-level administration might benefit the most from understanding and following the present research in a prescriptive manner.

Teacher leaders are generally department heads or instructional coaches. However, in small rural districts, these official positions likely do not exist. So instead, teacher leaders will be the teachers that are early adopters of the PLCs plan and vision. These early-adopting teachers will benefit from the research by seeing how the inter-district PLC will work and leverage the new inter-district PLC to benefit their students.

Lastly, other stakeholders in the community will benefit from the research. As school board members and community stakeholders see teachers reach out to other districts, the research will help them understand the motivation and effectiveness behind the new way of working.

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