WHAT DID COVID CHANGE? A MULTIPLE CASE STUDY OF RURAL SCHOOL PRINCIPAL COMMUNICATION

by

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A Scholarly Delivery Submitted in Partial Fulfillment

of the Requirements for the Degree

DOCTOR OF EDUCATION

West Texas A&M University

Canyon, Texas

December, 2021

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ABSTRACT

Background: The rural school principal was faced with an unprecedented situation with the shutdown of schools due to the COVID-19 pandemic. The recent literature on schools and COVID-19 mainly focus on instructional practices. This article examines the communication practices in the rural setting for the campus leader. **Purpose:** The purpose of this research was to explore the difference that COVID-19 precautionary measures made on the communication practices of the rural school principal during the 2020-2021 academic school and beyond. It focused on the changes to the communication practices due to the response to COVID-19, and the rural school principal's perceived changes on future communication practices. **Research Design:** The methodology was qualitative, specifically analyzing each principal as one of three case studies. The practices explored involved the interactions between the principal and the teachers, students, and parents. **Findings:** Three themes emerged from the virtual interviews. The use of technology for communication, targeted communication and increased teacher support were the themes developed through analysis of the interview transcripts. These rural principals continually adapted to the increased workload, communicating with a more intentional, effective skillset. **Conclusion:** Principals were already utilizing good communication practices pre-COVID-19. With the school shutdowns and precautionary measures placed on school districts, rural school principals continued the use of emails, group texts, phone calls and social media platforms to get information out and check on those they serve.

Keywords: COVID-19, communication, leadership, rural school principal

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

INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECTS
Letter of Approval

June 15, 2021

Ms. Clifton:

The West Texas A & M University Institutional Review Board is pleased to inform you that upon review, proposal **#2021.06.002** for your study titled, **"COVID-19 Communication Process Multiple Case Study,"** 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 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. Angela Spaulding
Vice President of Research and Compliance

ACKNOWLEGDEMENTS

Through this journey of belonging to the first cohort to complete the requirements for the Doctorate in Educational Leadership at West Texas A&M University, I was surrounded by compassionate experts. I am deeply grateful to the entire Ed. D. faculty who experienced many firsts with our group. Thank you to my supervisors, Dean Eddie Henderson, Associate Dean Judy Williams, Assistant Dean Danny Rasco, Dr. Janet Hindman, and Dr. Elizabeth Garcia for your time, openness, empathy, and expertise that helped make my third WTAMU degree possible.

I was blessed with an amazing committee. Thank you to my chair, Dr. Gary Bigham, who was there to keep me on track for graduation. Your motivation, leadership, and support were instrumental in my success. To Dr. Irma Harper, it is with the sincerest gratitude I recognize the countless zoom meetings you scheduled for me. You always had time for any question. And to Dr. Mark Garrison, I appreciate your willingness to push me in becoming a better researcher. Your insightful comments and suggestions helped guide me to narrow my research focus and look for precision in my explanations. This journey has brought so many new friends and colleagues into my life that I am especially grateful.

A special thank you goes to my husband, Landy, and daughters, Josey and Karley, for their love, understanding, patience, and support over the last three years. I hope my daughters see that all things are possible with the right mindset. Lastly to my parents, I thank you for showing me how to work hard. Your example for this first-generation college student served me well and gave me the grit needed to persevere in accomplishing this dream.

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Introduction

This final composite scholarly delivery explores leadership in rural public schools for communication and collaboration under unique situations. The first scholarly deliverable is an empirical study of the communication practices rural school principals utilized before the COVID-19 lockdown of 2020 and their perceptions of future communications. Using a multiple case study approach, the implications of this research revealed an increase in technology for communication, targeted communication practices, and increased teacher support. The second scholarly deliverable, a case study, can be used for teaching doctoral or master's candidates in the field of educational leadership. The case presents a university research project designed to develop an inter-district professional learning community through the process of technological change diffusion. The goal is to create a collaboration for rural school districts using technology that spans across the entire state of Texas. It looks at the challenges leaders face when individual instructional planning is the only option without access to another teacher on campus.

Scholarly Delivery One

Amy Renee Clifton

What Did COVID Change? A Multiple Case Study of Rural School Principal

Communication

West Texas A&M University

Doctor of Education in Educational Leadership

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Abstract

Background: The rural school principal was faced with an unprecedented situation with the shutdown of schools due to the COVID-19 pandemic. The recent literature on schools and COVID-19 mainly focus on instructional practices. This article examines the communication practices in the rural setting for the campus leader. **Purpose:** The purpose of this research was to explore the difference that COVID-19 precautionary measures made on the communication practices of the rural school principal during the 2020-2021 academic school and beyond. It focused on the changes to the communication practices due to the response to COVID-19, and the rural school principal's perceived changes on future communication practices. **Research Design:** The methodology was qualitative, specifically analyzing each principal as one of three case studies. The practices explored involved the interactions between the principal and the teachers, students, and parents. **Findings:** Three themes emerged from the virtual interviews. The use of technology for communication, targeted communication and teacher-oriented communication were the themes developed through data analysis of the interview transcripts. These rural principals continually adapted to the increase workload and with resiliency are communicating with a more intentional, effective skillset. **Conclusion:** Principals were already utilizing good communication practices pre-COVID-19. With the school shutdowns and precautionary measures placed on school districts, rural school principals continued the use of emails, group texts, phone calls and social media platforms to get information out and check on those they serve.

Keywords: COVID-19, communication, leadership, rural school principal

What Did COVID Change? A Multiple Case Study of Rural School Principal Communication

With the onset of the Coronavirus Disease (COVID-19) in the spring of 2020, school buildings across America were closed pursuant to federal and state mandates, and principals and teachers scrambled to find new ways to teach students. Globally, 214 million students from pre-primary to upper secondary education in 23 countries missed at least three-quarters of onsite classroom instructional time from March to June 2020 (UNICEF, 2020).

The COVID-19 pandemic affected every aspect of the education process. St. George et al. (2021) stated, "It was not just the move from classrooms to computer screens. It tested basic ideas about instruction, attendance, testing, funding, the role of technology, and the human connections that hold it all together" (para.1). School leaders worked diligently with their state agencies to determine "what the next steps" would be. With decisions that affected students, teachers, parents, and the community, it was vital for school administrators to effectively communicate with all stakeholders.

Research Problem

As the pandemic evolved, the need to provide clear, honest, and valid information to the public was critical (Finset et al., 2020). To reduce the spread of COVID-19, social norms were disrupted by implementing comprehensive methods behavioral change at the individual and community levels (Finset et al., 2020). Communication with all stakeholders was essential to convey operational and behavioral changes designed to protect people from the virus. As the primary educational leaders of their schools, many principals assumed responsibility for leading communities through the crisis (Henderson,

2021). In rural schools, effective communication was important for administrators, teachers, students, parents, and community members. Due to their typical small size, rural schools serve many functions in the community beyond education. They often act as the center of social, recreational, and cultural life in their communities (Showalter et al., 2019).

The pandemic forced principals to change their normal work and communication patterns. The removal of routine face-to-face interaction challenged how principals communicated with teachers, students, and parents on matters of class redesign, schoolwork, and addressing questions. Despite its barriers, electronic communication was quickly adapted as the preferred venue. Communicating with stakeholders in an online environment required more thought and planning than communicating in the traditional environment (Alawamleh et al., 2020).

Research Questions

The overarching research question for the study was, "How did COVID-19 precautionary measures change the communication practices in the school setting, according to the perspective of rural school principals, during and after the 2020-2021 school year?" There were three sub-research questions as follow:

- How did COVID-19 precautionary measures change the administrator-teacher communication practices of rural school principals, during and after the 2020-2021 school year?
- How did COVID-19 precautionary measures change the administrator-student communication practices of rural school principals, during and after the 2020-2021 school year?

- How did COVID-19 precautionary measures change the administrator-parent communication practices of rural school principals, during and after the 2020-2021 school year?

Purpose of the Study

The purpose of this research was to explore the difference that COVID-19 precautionary measures made on the communication practices of the rural school principal during the 2020-2021 academic school year and beyond. It focused on the changes to the communication practices due to the response to COVID-19, and the rural school principal's perceived changes on future communication practices. The practices explored involved the interactions between the principal and the teacher, students, and parents. The research first established the original communication practices prior to March 2020 when COVID-19 was declared a pandemic. The next step was to determine the communication changes caused by the response to COVID-19. The final step was determining the change that the pandemic may possibly have on the future communication practices based on the principal's perspective.

Definition of Terms

The following terms were established for this study:

Communication Practices

Communication practices were defined as the reason, method, and mode used by rural school principals to inform teachers, students, and parents.

Rural Schools

"A rural school district is one that has an enrollment of fewer than 300 students, or that has an enrollment between 300" (Texas Rural Schools Task Force, 2017).

Virtual Team

Anderson et al. (2007) stated, “The term virtual team is used to cover a wide range of activities and forms of technology-supported working” (as cited in Ale Ebrahim et al., 2009, p. 2654).

Conceptual Framework

The COVID outbreak caused many schools to communicate with their stakeholders virtually. Rural school principal’s communication practices were the focus of this study. The conceptual framework of this study was based on communication as a team, specifically, the communication process and virtual teams. This framework was influenced by the works of Ale Ebrahim et al., (2009), Gonzalez-Roma and Hernandez (2014), Ilgen et al. (2005), Marlow et al. (2017) and Marzano et al., (2005). Guiding this study are the concepts of a communication model evolution, and effective virtual team communication and how it applies to leadership communication.

Team Performance and Communication

Ilgen et al. (2005) explained how team empirical research focused on outcomes until 1996, when a shift occurred. This shift in research brought more attention to practical issues of team communication with emphasis on inputs like reward allocations, compositions, or structures (Ilgen et al., 2005). “Classic works of Steiner (1972), McGrath (1984) and Hackman (1987) expressed the nature of team performance in classic system models in which input leads to processes that in turn lead to outcomes, the input-process-output model” (IPO; as cited in Ilgen et al., 2005, p. 519). This framework influenced research through the IPO model; however, this model did not capture the complexities and adaptive nature of teams (Ilgen et al., 2005). The IPO framework was

limited, suggesting a linear pathway with only one cycle. Ilgen et al. (2005) created an alternative model termed IMOI (input-mediator-output-input). Colquitt et al. (2002) stated, "The IMOI model extends the IPO model by accounting for interactions among inputs and processes or other aspects of the model as such relationships have been extensively documented in salient research" (as cited in Marlow et al., 2017). This new IMOI model substitutes the "P" with "M" to push the boundary past a simple input and process to include a variety of options representing the mediational influences (Ilgen et al., 2005). The addition of the final "I" transforms the framework into a cyclical model and explicitly invokes feedback (Ilgen et al., 2005). This model reflects effective team communication, inclusive of input and feedback. The inclusion of two-way collaboration before the output is determined increases the effectiveness of the communication process.

Virtual Team Communication

Ale Ebrahim et al. (2009) researched trends, origins, definitions, types, and technology tools to develop an efficiency model which included technology, process, and people. The review focused on the features of virtual teams and the commonalities of the participants which included separate geographical locations, common purpose or mission, and collaboration across boundaries. Ale Ebrahim et al. (2009) emphasized that "virtual teams enable organizations to pool the talents and expertise of employees and non-employees by eliminating time and space barriers" (p. 1). They endorsed the work of Shachaf and Hara (2005) regarding the four dimensions of effective virtual team leadership:

1) Communication (the leader provides continuous feedback, engages in regular and prompt communication, and clarifies tasks);

2) Understanding (the leader is sensitive to schedules of members, appreciates their and suggestions, cares about member's problems, gets to know them, and expresses an interest in them);
3) Role clarity (the leader clearly defines responsibilities of all members, exercises authority, and mentors virtual team members); and
4) Leadership attitude (the leader is assertive yet not too "bossy," caring, relates to members at their own levels, and maintains a consistent attitude over the life of the project). (Ale Ebrahim et al., 2009, p. 2660)

Marlow et al. (2017), reviewed virtual teams' literature, including the most compelling aspects of communication. This research used the IMOI framework (Ilgen et al., 2005) conceptualizing team communication. Impacts were identified in familiarity. Additional aspects of communication included frequency, content, and quality for achieving desired outcomes (Marlow et al., 2017).

Gonzalez-Roma and Hernandez (2014) defined communication quality as "the extent to which communication among team members is clear, effective, complete, fluent, and on time," (p. 1046). Effective leadership communication could be the glue holding all the leader's responsibilities together (Marzano et al., 2005). Not being fully invested or showing a divided attention between activities and tasks could impact the performance of highly virtual teams (Marlow et al., 2017). Marlow et al. (2017) created a communication process for virtual teams, including inputs, team, and task characteristics. These characteristics included communication, emergent states, and outputs. Marks et al. (2001) stated, "Emergent states signify critical phenomena within a virtual team; emergent states are dynamic functions engendered by team contents, inputs, processes,

and outputs" (as cited in Marlow et al., 2017, p. 581). The inclusion of the two emergent states of trust and cognition was a result of virtual team interaction inputs, processes, and outputs (Marlow et al., 2017). This was an example of researching a primary concept like IPO. Expanding this original process model to IMOI for improved communication. Finally, the researcher found gaps that needed additional research with regards to emergent states affecting the communication process.

Literature Review

COVID-19

To gain deeper understanding of the rural school principal's pandemic lockdown context, an operational definition and a statistical snapshot of the COVID-19 pandemic is needed. The Centers for Disease Control and Prevention (CDC) defined COVID-19 as follows:

> COVID-19 is a dangerous disease caused by a new coronavirus first identified in Wuhan, China, in December 2019. Because it is a new virus, scientists are learning more each day. Although most people who have COVID-19 have mild symptoms, COVID-19 can also cause severe illness and even death. Some groups, including older adults and people who have certain underlying medical conditions, are at increased risk of severe illness. (CDC, 2020, para.1)

On May 31, 2021, the World Health Organization (WHO) cited 169,597,415 confirmed cases of COVID-19 worldwide (Need WHO citation). During this same time, the CDC reported 32,267,958 COVID-19 cases, 247,769,049 vaccines administered, and 574,679 COVID-19-related deaths in the U.S. (CDC, 2021). This was just one year and one month

from the WHO declaration of the COVID-19 pandemic by reasons of spread and severity of the coronavirus disease of 2019. This crisis forced leaders into action, responding with economic, social, and wellness capacity measures for the communities they served (Cheng et al., 2020; Dirani et al., 2020; Howard et al., 2021). The decisions and policies on mask mandates, lockdowns, quarantine enforcement, travel restrictions, and the stress on the global supply chain escalated quickly, leaving not only a health crisis but a financial crisis and commodity collapse of unprecedented proportions (Cheng et al., 2020; Chorus et al., 2020; Dirani et al., 2020; Gopinath, 2020; Howard et al., 2021; Qin et al., 2021; Zhang, 2021).

Gopinath (2020) coined COVID-19 "The Great Lockdown," reporting that the world's economy experienced the worst recession since the Great Depression. However, broadband, computerized manufacture, and distribution arrangements increased during this time of quarantine as machines were not susceptible to the virus, and the protection they offered resulted in the world abruptly shifting to a virtual environment for conducting business (Qin et al., 2021; Zhang, 2021).

COVID-19 and Schools

The lockdown began in March 2020 when many school districts were on spring break and leaders had to leap into action to salvage as much morale as possible. A shift from instructional priority to health and safety occurred when schools were shut down with the rest of the world due to COVID-19. Locked down at home, students received instruction, assignments, reading materials, and even emergency feeding services resulting in some difficulties as classrooms were moved online in a matter of weeks to help ensure safety for all students (Abrams et al., 2021; Gore et al., 2021; Jaeger &

Blaabaek, 2020; Khan & Mikuska, 2021; Patten et al., 2021). Gore et al. (2021) examined potential "learning loss" at New South Wales primary schools, finding that these campuses did not have negative effects on learning from COVID-19 disruptions, attributing the dedicated work of teachers to this success. However, the concern of the learning gap was valid as schools tried to find the right mix of assessment and daily exercise with student populations lacking parental support at home due to socioeconomic status, sociocultural barriers, learning difficulties or access to the digital children's books from the local library resulting in evidence of learning inequalities (Gore et al., 2021; Jaeger & Blaabaek, 2020; Poletti, 2020). This added pressure on school leaders in managing anxiety, frustration, loss, and anger of others while still trying care for their own health and mental wellbeing (Harris & Jones, 2020).

Rural Schools and COVID-19

Rural schools experienced some unique challenges during COVID 19 pandemic. One common struggle with rural schools was equity when remote learning was the only option for instruction (Falk et al., 2021; Hash, 2021; Kaden, 2020). Most rural areas did not have access to equivalent qualities of internet access as supplied to their urban and suburban counterparts. Although this was also problematic in some urban areas, it was not as pronounced as in rural communities (Anderson, 2020). This created a digital divide for rural students (Hash, 2021; Kaden, 2020; Tieken & Montgomery, 2021).

It is important to note that when schools shifted to remote learning, students' access to school-provided meals was abruptly halted. Before the lockdown, many students relied on breakfast and lunch provided by schools, thus educators had to find a

way to continue distributing those meals. As cited in McConville (2020), Mara Tieken, an expert in rural education, stated:

> It's a little easier for urban and suburban school districts to set up convenient meal pickups at places around a city. It's harder for rural schools, which might serve families across a vast geographic area and whose families still might not have transportation. (para. 8)

Leadership

COVID-19 had a large impact on leadership. To determine this impact, it is important to understand quality leadership. Dirani et al. (2020) asserted that organizations prosper under a leader who "a) provides strong roles and purpose; b) shares leadership; c) communicates; d) ensures employee's access to technology; e) prioritizes employee's emotional stability; f) maintains organizational financial health; and g) promotes organizational resilience" (p. 391). Northouse (2019) collected a leadership evolution of scholarly studies and practitioner results dating from 1900 to the 21st century describing the phenomenon of leadership. This phenomenon was defined as an influential individual's ability to engage in the process of group common goal achievement (Northouse, 2019). Whether a position symbolizes leadership or the influence an individual has within the community existed, leadership facets are present in both situations (Northouse, 2019). The responsibility associated with the task of leading is great, and the leadership decisions have powerful short- and long-term impacts (Northouse, 2019).

Educational Leaders

Student learning and achievement is one of the most important aspects of educational leadership but does not exclude other duties within a leader's responsibilities. The campus and district leaders are challenged to grow teachers into classroom learning facilitators. A community of learners solely focused on academics is not enough. According to Starratt (2007), "Real learning is exploring social and cultural values needed to become productive citizens cultivated by ethical educational leaders" (p.181). Educational leaders are also expected to be experts in distributed leadership. It is evident that distributed and collective leadership are strong theories that expedite collaboration for innovation to diffuse into the culture of a school (Giles & Hargreaves, 2006; Ho & Ng, 2017; Ni et al., 2017; Sterrett & Richardson, 2017; Wang, 2018).

Rural School Leadership

Rural school principals also have their own unique challenges. Rural 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, etc. (Hansen, 2018; Parson et al., 2016; Wieczorek & Manard, 2018). Hayes et al. (2021) described two unique themes that emerged about rural school principals; these principals have a people-centered focus and are also change agents. Rural principals also bear a heavy burden on the social-emotional wellbeing of teachers, students, and their families during the COVID crisis (Hayes et al., 2021).

Although 20% of America's school-aged children are educated in rural schools (Lavalley, 2018), the leadership experiences, barriers, and administrative opportunities of

rural school principals have been overlooked as compared to their urban and suburban counterparts (Parson et al., 2016). A qualitative study by Hayes et al. (2021) discovered an overarching theme regarding rural principals; rural school principals exhibit the practices of caretaker leadership. They exhibited this by,

1) focusing on the social-emotional well-being of teachers;
2) providing social emotional support for students and families;
3) remaining a constant and calming presence within the community; and
4) showing remarkable self-reliance and resiliency. (para. 24)

Hayes et al. went on to state, "As caretakers of their schools, principals responded to the pandemic by assessing the situation and the needs of stakeholders and serving as advocates to meet those needs" (para. 24).

Communication in Schools during the Pandemic

The importance of communication during a pandemic, spans multiple categories. These categories include the sharing of health information, safety guidelines, modes of communication, and duration (Abrams et al., 2021; Dirani et al., 2020; Finset et al., 2020; Khan & Mikuska, 2021; Patten et al., 2021; UNICEF, 2020). When communicating health information during a pandemic, clarity, honesty, and valid information is essential, but also openly declaring the known and unknown while consistent and specific information is shared (Finset et al., 2020). Communicating to teach parents and students about perceived health risks through candid and frequent messages, repeating and confirming key information up to three points or less, was helpful (Abrams et al., 2021; Dirani et al., 2020). The inclusion of all stakeholders; parents, community members and even students, as well as regular updates, honesty, and transparency from leaders, helped

to build reassurance, settling some anxiety (Abrams et al., 2021; Dirani et al., 2020; Patten et al., 2021; UNICEF, 2020). Communication modes included technologies, personal emails, work emails, private cell phones, and work phone numbers to help with students who were having difficulty engaging (Khan & Mikuska, 2021; UNICEF, 2020). The social medias, Facebook and Twitter, and other virtual conferencing platforms, Zoom, Microsoft Team Meetings, Skype, and Google Hangout, were utilized to ensure engagement and accessibility were maintained during remote schooling (Khan & Mikuska, 2021; NASSP, 2020; UNICEF, 2020).

The COVID-19 pandemic and public-school lockdown of March 2020 was an unprecedented time. The literature examined leadership, educational leaders and narrowed the focus to rural school leadership. Those attributes of good leadership included effective communication, but a gap was found in the perceptions of rural school principal of their communication practices during the global pandemic. Additionally, the review of literature focused on communication practices that were utilized during the COVID-19 pandemic.

Method

Research Design

A multiple case study design was used to explore the perceptions of rural principals with respect to how the COVID-19 precautionary measures affected the communication practices during and after the 2020-2021 school year. Yin (2018) explained that a multiple case study design produces more reliable findings than a single case study due to the depth of the inquiry and the analysis of differences and similarities. In addition, when using the multiple case study design, the depth of research required for

each case strengthens the research findings (Stake, 2006; Yin, 2018). Specifically, the focus was on the principals' communication interactions with teachers, students, and parents. A multiple case study design was appropriate because the study investigated two different high school campuses and one kindergarten through grade 12 campus all located within the Texas Panhandle. These three campuses were chosen to allow for an in-depth analysis of different principals' perceptions. This approach also allowed for exploration of the contextual difference in their responses due to their demographics, location, and leadership experiences.

Within the public-school administrative hierarchy, the principal serves as a critical communication link between the teachers, students, and parents. By exploring the internal and external communications of principals before and after COVID-19 lockdown, similarities and differences among communication practices could be determined. The instrumentation, data collection, and analytic strategies focused on principals and how their campuses' communication practices functioned before and after the lockdown in March 2020. The principals' perceptions of pre- and post-COVID-19 lockdown changes in communication, and on continued strategies for future situations were explored.

Participants

Purposeful sampling was employed for participant selection. Purposeful sampling is a qualitative research technique designed to collect information-rich data from limited sources (Patton, 2002). Willing participants were chosen because of their knowledge, experience, and their availability to participate within the timeline of this study (Bernard, 2002; Cresswell & Plano Clark, 2011). Thirty-nine principals of Texas public school

campuses, whose districts (a) met the Texas Education Agency (TEA) rural school district definition, (b) contained no more than three campuses, and (c) were geographically located within the Region 16 Education Service Center (ESC) service area, received an email invitation to be interviewed for this study. Three principals who met the inclusion criteria agreed to participate. Each was given a pseudonym for confidentiality. All three participants supervised high school grade levels. Table 1 presents descriptive information about each participant and the school they led.

Table 1

Demographic Profile of Participating Principals and School District Demographics

Rural Principal	Years Reported as a Principal	Campus Level	Total District Student Enrollment	African American Students	Hispanic Students	White Students	Economically Disadvantaged Students
X	0-5	K-12	191	1.6%	45.5%	51.3%	58.6%
Y	16-20	HS	309	10.7%	19.4%	62.1%	77%
Z	11-15	HS	577	0.7%	65.3%	31.7%	64%

Note. Student data were retrieved from school district-level snapshot reports accessible to the general public on the TEA website (TEA, 2019).

Data Collection

The three participants received an email describing the study and were presented with the research consent form via a Qualtrics survey to digitally sign. Once informed consent was obtained, participants were asked to complete an intake form including demographic questions before the interview. The intake form gathered demographic data and inquiries specific to how campus communication changed during the 2020-2021 school year due to COVID-19. Interviews were scheduled through email correspondence. The interviews were semi-structured and lasted between 30 and 45 minutes using a pre-

established protocol. Each interview was conducted virtually using a commercial video/audio communication platform.

Data Analysis

For this study, rural school principal was the unit of analysis. This analysis focused on the individual principals' reported communication with students, teachers, and parents before and during the COVID-19 pandemic lockdown. Themes were generated through the data analysis to help answer the research questions (Baxter & Jack, 2008; George, 2016; Patten & Newhart, 2017; Yin, 2018).

The Framework Method (Gale et al., 2013) was adopted to guide data analysis. "The Framework Method sets within a broad family of analysis methods often termed thematic analysis or qualitative content analysis" (Gale et al., 2013, p. 2). The Framework Method enables qualitative researchers to locate similarities and differences in the experiences of participants for critical analysis to ascertain underlying themes in the data.

The Framework Method includes seven stages. The first stage is transcription. This stage consisted of obtaining quality audiovisual recordings of the interviews and transcripts of the content. All interviews were recorded, and transcripts were generated using a commercial audio/video conferencing tool. Once the transcripts were generated, I listened the interviews again to make sure the transcripts were accurate.

The second stage is familiarization with the interviews. I read and re-read the interview transcripts, and while doing this, I made notes in the columns of the transcripts. These notes included summarizing main ideas and identifying key words or phrases. In the transcripts, extra lines were deleted, identifiable factors were also removed or changed to represent the pseudonym given to that participant. Also, fillers such as "oh"

and “uhm” picked up in the audio transcription were removed to clean up each interview. The audio/video recording was used to ensure the accuracy of each written transcript and used to correctly reflect the responses. Each interview was copied into a table with each sub-research question listed in column one and all three interview participants listed across row one. Through this stage, notes taken were used to summarize main ideas and capture key words like technology, face to face, virtual, and change.

The third stage was coding. The purpose of coding is to label or apply words and phrases to the data as a basis for comparison of the interviews. During this stage, I used different colored highlighters to help distinguish the codes. Specific highlighted colors represented codes common across all interviews.

The purpose of coding is to label or apply words and paraphrase the data for comparison between all the interview data collected. During this stage I used different colored highlighters to help distinguish the codes. The specific highlighted colors represented the commonalities in the codes. Some of the specific codes that were discovered were technology, zoom meetings, texts, Facebook, and emails. Teacher-oriented codes were discovered, such as venues for communications they initiated. These codes helped determine the themes in the study.

In the fourth stage was creating a working analytical framework. Common codes were grouped to create this framework. Common highlighted colors were grouped together. I noticed that some of these common words and phrases fit in other groups. For example, video conferencing, virtual instruction, zooms, and email were all found in different color highlights but can be grouped together under technology.

Stage five was creating the analytical framework. All three of the research sub questions were organized in a table in column one. Each participant was given his own column to copy interview responses according to answers given during the semi-structured interview.

Charting the data into the framework matrix was stage six of data analysis. Time was spent charting interview responses into the table by participant and relevance to each research question. This matrix included quotations from the participants to provide evidence of the coding process.

Stage seven was interpretation of the data. During this stage, data interpretation based on findings identified in the matrix occurred. Once the categories were developed from the coding process, I was able to determine the themes generated from the interviewing process to answer the research questions.

Findings

The primary research question in this study asked, "How did COVID-19 precautionary measures change the communication practices in the school setting, according to the perspective of rural school principals, during and after the 2020-2021 school year?" Three sub-research questions focused on the communication between administrator-teacher, administrator-student, and administrator-parent. The themes that emerged throughout the interviews were technology, targeted communication, and increased teacher support.

Theme #1: Technology

Technology was the most prominent theme revealed in the data analysis. Technology had a strong presence before the pandemic, but due to the confines of

COVID, the main venue for communication was through technology. The technologies used to communicate with students were virtual platforms like Zoom, Blackboard Connect, Class Dojo, and Google Classrooms. Principals also took advantage of Facebook for communicating. Cellular phones and emails were also used. Principal X said, “We’re avid with Facebook; that's our primary source for communicating with our community and our parents.” Even though cell phone and email usage were not new to the principal’s communication process, the increased use and the reliability of that usage were new. All these tools were used to communicate with teachers, students, and parents.

All three principals used phone calls and emails to communicate with their teachers and families. According to Principals Y and Z, personal calls replaced previously used automated calls to maintain relationships with parents. They also used personal calls to check on teachers during school closures. The increase in the use of emails was prevalent. Principals were emailing teachers and parents. It is important to note that the principals relied on the teachers to communicate with the students and most of this communication was through emails.

During the lockdown, the use of technology accelerated, especially the use of video conferencing. The principals stated that the teachers used this form of technology to enhance online class instruction. This was difficult for some teachers as Principal Z stated,

> There were definitely some teachers who were anti-technology. We had to teach them how to use it. This wasn’t an easy task, but once campuses were reopened, the teachers continued to use video conferences. They

were more comfortable with the process and felt it enhanced their teaching.

Principal Y also expressed the need to educate his teachers on the use of technology as a communication means. He arranged for his teachers to attend professional development on how to create videos for instruction. Teachers also learned to use virtual platforms like Zoom, Blackboard Connect, Class Dojo, and Google Classrooms to help communicate the class assignments with the students.

The principals indicated that once the lockdown period was over, the use of technology changed. They all felt a great need for more personal, face-to-face communication. Principal Y stated, "We really tried to increase our face-to-face, and we're proud to be more visible this year." Even though a more "personal" approach for communication was desired, these newly developed technology skills remained available after the lockdown, which helped diversify communication pathways and teacher instruction. Principals were now able to use technology to communicate over distances, and teachers were able to use the technology to differentiate instruction delivery.

Theme #2: Targeted Communication

The second theme was "targeted communication." Targeted communication means "finding an appropriate audience and ensuring that your messaging reaches them" (Beauchamp, 2014). COVID increased the need for targeted communication to send urgent and specific information to all teachers, students, and parents regarding the present status of the school. All stakeholders needed to know about school closures and the canceling of events. Instead of making personal calls and meeting personally with people, automated calls (robocalls) were initiated. Principal Z stated that robocalls were used for

several reasons. He stated, an announcement such as “Hey, grades are coming out, or don’t forget this, or coming to the game tonight, or in our school’s emergency closure, or early release kind of thing, they’re [-s] great for that.” These calls helped reduce the time a principal and their leadership team were spending on communicating. The communication practices became targeted and intentional due to the need for immediate information to all stakeholders.

Targeted communication was also used in specific situations. Principal Y helped teachers with their parent correspondences by extending his workday to “put out the fires for the teachers.” He explained that he and his leadership team would sometimes make calls until 7:30 at night. Principal Z explained how a personal phone call to a parent instead of a robocall was time-consuming, but worth it given the situation. He said that because there was “a lot of coordinating, a lot of phone calls, and a lot of answering questions for our teachers, it took away from their instruction and the things that we needed them to be doing.” The administrative team was “kind of in the thick of it. It took a lot of time. We were there until 9:00 at night.”

Facebook was also used for targeted communication. Principal X created a weekly memo that “detailed weekly things going on during the week, and it gave a two-week snapshot of what’s coming up.” He was also able to utilize the live feed feature on Facebook and incorporated it on their school district’s website for updates. He stated that posts to Facebook four or five times a day were initiated with his new position and that it had been instrumental during the lockdown and is still currently utilized.

When communicating with parents, Principal X shared this encounter about when parents would bring issues to his attention. He stated, “I found myself oftentimes at the

gas pump or in the Dollar General having a quick conversation with somebody, so that hasn't changed much for rural America." Principal Z also shared his perception about the reality school leaders faced, given the pandemic. He stated:

> It's not something we got into education for, to call people and tell them their kid can't come to school or their teacher tested positive [for COVID-19] or, they must get a COVID test before they can come back. I think that's something that should be done by public health agencies, health departments, doctors, and nurses. So, if something could be learned from all this, educators are really put, especially as school leaders, we're put in an unfair position because I don't recall ever asking a nurse or a doctor to plan an assembly or organize state testing or teach a kid math.

The communication responsibilities of a principal are continually modified as the next phases of this pandemic are still unknown.

Theme #3: Increased Teacher Support

A theme that was represented by all the principals was the need and desire to increase the support of their teachers. They realized that communicating with students during this time was difficult. They wanted to make sure their teachers were equipped when it came to communication. Principal Y and Principal Z both stated the teacher-student communication practice through emails, and virtual instruction was increased. "I think the students have become a little bit more comfortable with email communication, which was kinda here and there, but it is a little more common now," Principal Z explained. Principal Y mentioned just how much he relied on the teachers to communicate with their students regarding COVID-adjusted activities/events as well as

communicating with their students on their assignments. He said, “We were dependent on communicating with staff on the day-to-day [business] with students.”

Due to the lack of technological skills by many of their teachers, it was necessary to support the teachers with professional developments. This was difficult not only during the lockdown time but also afterward. Professional development communication practices were adjusted. Principals cited large Zoom meetings for training and sometimes spreading out all over the school cafeteria to ensure compliance with social distancing requirements. Principal Y was the most vocal about professional development to start the 2020-2021 school year. He explained the issues that teachers were having learning how to deliver hybrid instruction. They depended on online professional developments and communicating distantly with teachers who were more well-versed in the area. The principals provided small group training to ensure all teachers understood how to use virtual meeting technology for instruction.

Communicating instruction with the students after the lockdown was a challenge for the teachers. They had to simultaneously teach students face-to-face and students who were attending class virtually. One principal praised his teachers, “I think teachers’ flexibility to adjust [their instruction], adapt themselves to stay in front of the camera within microphone range,” all while still having students in the classroom. He also stated, “We started all of our August in service last year working in small groups to get good at that [hybrid instruction]. We did this so we could communicate well on the instruction page.” Principal Z reflected on how some teachers had never used Google Classroom before, but now they like it and have become “gurus.”

Communication during the lockdown suffered. The principals felt that since they could not physically be with their teachers, that they could not support them in the way they would like. Visibility was important to these principals before and after the school lockdown. Principal X talked about being in the classrooms regularly and having discussions with teachers in the hallways, while Principal Y stated, “After the lockdown, I really tried to increase our face-to-face, and we’re proud to be more visible this year.” Once the lockdown ended, the principals seem to value their visibility more with the teachers.

A visible presence was important to these principals before the school closures. Principal X talked about being in the classrooms regularly and having discussions with teachers in the hallways, while Principal Y stated, “I really tried to increase our face-to-face, and we’re proud to be more visible this year.” During the school closures, Principal Y noticed that his emails were not efficient. He found himself taking more time, even stepping away from the computer once or twice before sending the correspondence. This new practice has helped create a more complete and clear understanding of the information being sent. He stated:

> I would start an email in the morning, check back on it later because I wanted to reread it. I double checked it, so I didn’t have to send out another email. Now, I am trying to be more to the point and make sure I don’t miss key issues or details.

The principals called teachers to check on their social-emotional wellbeing. These conversations used to be during the school day as the principal walked the campus hallways, but during the lockdown, phone calls were made outside of the regular working

hours. The face-to-face orientation of staff meetings and professional development were different during the shutdowns due to the social distancing logistics and hybrid instruction. To ensure clear communication of campus expectations, instruction delivery and safety protocols, principals adjusted under the mandated gathering restrictions. Compliance continued with the reopening of campuses, and those new intentional communication practices gave principals an understanding teacher-centered approach.

Differences in Cases

In using multiple case studies, it is critical to analyze the differences as well as the similarities. One noticeable difference was Principal X. He showed an example of a memo practice he started as the principal of his school district before the pandemic. He stated, "that's something I started when I came here, because it seemed like communication was not well done here." He was also from the smallest school district, led grades K-12, and had the lowest economically disadvantaged student population among those interviewed. He talked about his personal connection with the community, visible presence at school events, on the playground, and around campus. He also discussed his open-door policy that sometimes led to conversations at small local businesses or the gas pumps in town. Principal X's perception of his communication practices due to the lockdown and COVID-19 did not have evidence of much change compared to the other principals' perceptions.

Principal Y seemed to have more obstacles with communication during this COVID-19 period. He said:

> We had kids that didn't have access to that (internet for Zoom). We actually mailed a pencil and paperwork to students because they didn't

have anything. Even if we would have sent students their Chromebook, they did not have the infrastructure at home to use it.

It is important to note that his school was the highest economically disadvantaged population at 77%. This principal had the greatest years of experience as the principal but found himself adjusting his practices for more efficiency when emailing staff. He adjusted and had to adapt his actions to ensure communication was scheduled and carefully worded.

Principal Z was more focused on the extra duties that he had to perform that he considered weren't "a part of his job". Referring to telling parents their student could not come to school due to COVID-19 exposure Principal Z said, "I feel like we're in a position of doing something that really isn't something we went to school for. There were times where I was asking, why am I having to do this?" It is important to note this was his first year at his current school district with 11-15 years of experience as a principal and led the largest student enrollment of 577.

Discussion

Summary

With the complete shutdown and quarantine of society in the spring of 2020, public school leadership had to make decisions they never anticipated having to make, in particular, closing the campus doors. It was presumed that these mandates for public health and safety left some small rural schools in a panic with little means to go all online for instruction. Internet access in these rural locations was often unreliable, leaving the ability to get accurate, timely information to teachers, students, and parents difficult. Social media platforms, the schools' websites, and email communication were measures

that surfaced in the data collection. Principals once used a daily announcement for lunch menus, reminders of upcoming activities, and to showcase staff or students. With this switch in the communication content, principals were even more focused on the well-being of teachers, students, and parents.

Rural school principals' communication practices before COVID-19 were similar and different because of the precautionary measures implemented during the school closures of Spring 2020. Those previously established email and group text message technologies were continued during the lockdown and into the academic year of 2020-2021. Communication practices utilizing social media, including Facebook and the school district website, were also in use before the pandemic and continued after the lockdown. The greatest adjustment this study's participating principals made involved increasing the video conferencing platforms such as Zoom to meet with teachers, increase in phone calls to teachers and parents, and more carefully created emails. Principals made individual phone calls to teachers checking on their wellbeing and relaying positive COVID-19 cases. Individual phone calls instead of automated robocalls were also made to parents to relay positive COVID-19 test results or exposure. The use of instructional technologies like Class Dojo and Google Classroom was drastically increased by teachers who the principals relied on for most of their student communication. However, even with the improved "tech-savviness" principals witnessed, the need for authentic, purposeful interpersonal connection was perceived by principals with the return to campuses.

All participating principals were male administrators who led campuses with high school grades (Bladek, 2019; Romano, 1996; Statham, 1987; Voelck, 2004). Each

participant differed in years of experience as a principal, led student populations with varied economic stabilities, and total student enrollments ranged from 191 to 577.

Conclusions

All emergent themes helped answer the research questions of change in communication practices of rural school principals in response to the COVID-19 precautionary measures of March 2020. These principals changed their daily routine when communicating with teachers and parents. The increased use of technologies among principals was a change in the distribution of information to teachers and parents. Reliance on the teacher to communicate with the students was also a change from pre-pandemic practices. The principal's increased focus on the well-being of teachers and personal attention to parents about their student's health was also a change. All these practices were in place before COVID-19, but when this crisis hit, the principal adapted to this new situation. The principal's understanding of his community was what held the rural school together as teachers, students and parents looked to this leader for comfort (Cheng et al., 2020; Dirani et al., 2020; Hayes et al., 2021; Henderson, 2021; Howard et al., 2021; Marzano et al., 2005; Showalter et al., 2019). The willingness to use communication to relieve anxiety, give support and maintain the learning environment without a classroom was evident in this study.

The communication practices established before the COVID-19 pandemic were still being utilized after the return to campus following the lockdown. The processes of communication also aligned more closely with the IPO model given the situation of a pandemic. The lines of communication represented a linear pattern of outgoing information from the principal. When the administrator personally checked on teachers,

no mediation occurred. The principal was the support system sending out the details needed at each specific point in time. Extra time was taken when principals communicated with teachers and parents, giving care and support to ensure the well-being of all they served. Other practices like video conferencing became accepted to help the rural school principal attend meetings without the travel time and money needed to arrive at a distant location. The adaptability and resilience of principals who experienced these events have gained new insight into efficient communication practices. Principals had to change the delivery of communication with teachers and parents but relied heavily on teachers to communicate with students.

Just as the IMOI model extended the IPO model, so did rural school principals extend their current communication practices (Colquitt et al., 2002; Ilgen et al., 2005). Communication technology can be classified as interpersonal, interactive, and mass media (Rogers, 1986). Interpersonal communication is represented by face-to-face conversations where participants are in proximity. Examples of interpersonal communication by principals include conversations held in staff meetings, hallways, and classrooms. Interactive or machine-assisted interpersonal communication is a combination of interpersonal and mass media communication with the support of electronic devices. Interactive communication was transacted by principals via video conferencing (Zoom, GoToMeeting), video housing platforms (YouTube, District Server), social media platforms (Facebook, Instagram), group text applications (Group Me, Remind), email, and phone calls.

Mass media is defined as the transmission of the identical message to everyone at the same time by a media organization with limited knowledge of the school district

(Rogers, 1986, p. 21). Principals did not necessarily use mass media to communicate with teachers, students, and parents, but the school district website was used to send asynchronous messages for anyone to view at their convenience. Rural schools have similar and different challenges in communication. The communication practices created by the principal before the COVID-19 pandemic were continued and improved because of the mandates placed on the district by the state and federal government. Principals did their best given their current skillset, and with adaptiveness, flexibility, and resilience are continuing to communicate effectively with teachers, students, and parents. These communication practices did not change but were enhanced in those areas each principal identified as critical given the time and situation.

Strengths and Limitations

One of the major strengths of this study was the qualitative approach. By using a multiple case study design, I was able to explore the perceptions of how rural school principals perceived the changes in communication due to COVID. Using a multiple case study approach, I was able to explore the commonalities and differences of each participant. Due to the lockdown altering regular events across the entire world, the qualitative method gave these rural school principals a platform to voice their experiences, perceptions, and viewpoints about COVID-19 and communication. The ability of the researcher to guide each participant through a pre-pandemic world of communication to the school shutdown communication stage and finally a pandemic emergence back to campus, allowed for the principals to reflect and give their perceptions. The question design in the interview protocol allowed the principals to tell their stories through personal accounts of their experiences with communication. This

continual timeline also allowed each principal to predict the efficacy of communication practices created by the precautionary measures implemented during the COVID-19 pandemic.

One limitation of this study was limiting the participants to only virtual interviews. The design of the study explained the interview would take place via a video conferencing platform. Another limitation was the timing of the study. This study was conducted during August which was an extremely busy time for principals in preparation for a new school year. Not only were principals planning and conducting staff development training, but a pandemic was in progress which added to that preparation. This made scheduling interviews difficult.

Implications

The implication of the study is that school administrators are more advanced in their knowledge, understanding, and proficiency of the use of electronic communications technologies than any other time in history – all due to a major disruption and associated need for diffusion of technological change. Communication venues in schools have grown in number, expanding opportunities for more timely delivery of messages, opening abilities to collaborate with other campuses, districts, colleges, etc., attend meetings and conferences in other places (locally, regionally, statewide, nationally, internationally) that were previously far more limited, and the list continues. The study has called attention to the fact that despite our attention to emergency planning, our Emergency Operation Planning was woefully inadequate in pandemic preparedness. The study has made a tremendous case for the value and use of situational leadership. It has shown that leaders rise in times of need even in the absence of a plan for every given situation. It has

demonstrated the value of communication to effective leadership. The study also revealed how disruption serves as a catalyst for change – that could be a useful tool for innovative for use by progressive leaders.

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Scholarly Delivery Two

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Structural Conditions Leading to Technological Change Diffusion for Rural, Inter-District Learning Communities

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Doctor of Education in Educational Leadership

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Abstract

The focus of this case study is rural school technology leadership and technological change diffusion, including innovation, strategy, and leadership employed to create inter-district professional learning communities using video conferencing as a platform for collaboration. The literature speaks to each of these areas as important critical components for successful collaboration when the need to reach beyond the individual campus walls of rural schools arises. This case study examines each component separately and reflects how evolutions in instructional improvement are through innovation, strategy, and leadership as a process of technological change diffusion.

Keywords: leadership, technological change diffusion, professional learning communities, innovation

Structural Conditions Leading to Technological Change Diffusion for Rural, Inter-District Learning Communities

Among the many attributes of effective organizational leadership is that of leading change. Change leadership is foundationally grounded in the theory of change diffusion. Where diffusion is defined as a process of accepting and adopting an innovation, the theory of change diffusion declares that those leading and implementing in the change must understand why it is important and how the process will be learned (Hall & Hord, 2020; Surry & Farquhar, 1997). Change will not simply occur from a single moment on; it is a process, a whole system approach that relies on the individuals to implement the change for organizational change to become the new way of getting the job done (Hall & Hord, 2020; Hall et al., 1973).

The acceptance and adoption process are comprised of four major factors, inclusive of the innovation's features, communication of the innovation, time, and the social system where the innovation will be introduced (Hall & Hord, 2020; Surry & Farguhar, 1997). Surry and Farguhar (1997) used the theory of perceived attributes as a foundation for innovation diffusion, citing five factors for adoption:

1) Can be tried on a limited basis before adaption;

2) Offers observable results;

3) Has an advantage relative to other innovations (or the status quo);

4) Is not overly complex; and

5) Is compatible with existing practices and values. (para. 13)

In additional studies, technological diffusion further refines these attributes for adoption to be more relevant for the educational leader in the order of relative advantage, compatibility, complexity, trialability, and observability (Ekdale et al., 2015; Rogers,

2003). Even though Ekdale et al. (2015), Rogers (2003), and Surry and Farguhar's (1997) research was executed differently, the results for change from these three studies parallel one another in content, even if not necessarily by order. Communication between the leader and followers has shown an increased positive leader-member exchange through electronic communication empowerment that fostered an improved leader-follower relationship (Hill et al., 2014).

The process of facilitating technological change should follow the same structure as any other type of change. Looking to change technologically was the focus of an online questionnaire on "technological change" leading to the implementation of a "digital-first" policy (Ekdale et al., 2015). The learning enjoyment respondents felt in addition to new technologies included a need to update the company's website (Ekdale et al., 2015). Technological change can affect the instructional environment of higher education professors by creating a situation of large class size, pushing professors to integrate technology for class management (Johnson, 2012). The power administration holds to increase workload forcing technological change may accomplish the goal, but at what cost (Johnson, 2012)? Even though a sense of urgency is needed for change to occur, it is still a learning process (Hall & Hord, 2020; Kotter, 2008). These factors could prevent long term adoption of technological diffusion in an educational system. Facilitating the change of technological diffusion cannot be a "we versus them" dance as seen in eight high schools over 35 years (Louis, 2006). There are critical components upon which to reflect before any type of change resulting in diffusion can occur. For a collaborative culture to be developed between different districts, each district must have collaboration as an existing core value and attributes of the transformational leadership

theory (Bass, 1990; Bennis & Nanus, 1985, 2007; Burns, 1978; House, 1976; Kouzes & Posher, 2002, 2017).

The transformational approach to leadership may have a larger effect on organizations than originally thought, as seen by Kendrick (2011) with idealized influence, inspirational motivation, intellectual stimulation, and individual consideration; by these concepts working together previous norms are far exceeding the expectations. By creating a climate of knowledge sharing, a work unit can collaboratively improve the innovative performance of the organization to yield great benefits (Sheehan et al., 2020). With cooperation and collaboration being strong attributes organizations require, the transformational leader's ability to establish cooperative norms within organizational teams to enhance innovation for team autonomy is a positive impact (Jiang & Chen, 2016). In the educational leadership setting, the transformational leadership style of the principal does impact student achievement through progress measures, positive outcomes, teacher relationships, and improved school environments (Shatzer et al., 2014). A positive work environment and results can be created under a transformational leader with quality interventions to help reduce resistance and continuous communication (Hall & Hord, 2020).

Teaching Case Narrative

For this case study, rural school districts are defined as located in: "a) an area that is not designated as an urbanized area or an urban cluster by the United States Census Bureau; and b) a school district with fewer than 5,000 enrolled students" (Texas Education Agency, 2019, para. 4). Texas was divided horizontally and vertically into four sections to include north, south, east and west regions. Current superintendents of 500

rural school districts were sent an invitation survey to determine demographics and interest in participating in the "Planning Outside the Structural Lines" research project. This project's mission is to establish a professional learning community (PLC) digital communication platform across rural public school district lines. These miles spanning across Texas need not be barriers to improved classroom instruction and supportive professional development. The surveys were analyzed, resulting in the selection of four rural schools, one from each region: Crystal River Middle School representing the northern region; Patriot Junior High was selected from the Southern region; Ravenwood Junior High from the east region, and Little Valley Academy from the west region. Each school educates at least one grade level within the six to eight grade range to identify the teacher or teachers who teach eighth grade U.S. History up to 1855. Upon district and school selection, more specific student demographics of these campuses were requested, as reported in Table 1. Table 2 represents the staff data collected from these campuses.

Table 1

Campus student demographics compared to Texas

Region	Campus	Grades Taught	Student Enrollment n	Student Populations %	Economically Disadvantaged %
North	Crystal River Middle School	5,6,7,8	183	Hispanic 68 White 27	58
South	Patriot Junior High	8 only	64	Hispanic 59 White 38	100
East	Ravenwood High School	7-12	257	Hispanic 93 White 7	63
West	Little Valley Academy	6,7,8	158	White 85 Hispanic 14	27
Statewide Data	921 Total	2018 Snapshot K-12	182,718 Total	White 57 Hispanic 35	58

Note. This table give the demographic breakdown for each campus as it is compared to the 2018 Snapshot (TEA, 2019).

Table 2

Campus staff demographics and contact for study

Region	Campus	Accountability Rating	Teaching Staff	Technology Leader
North	Crystal River Middle School	"B"	25	Donna Stratt, Principal
South	Patriot Junior High	"A"	11	Robert Del Gato, Principal
East	Ravenwood High School	"C"	29	Ben Blanco, Superintendent
West	Little Valley Academy	"B"	30	Adrian Robinson, District Technology Director
Statewide Data	921 Total	N/A	16,281 Teachers	Frank Jennings, TEA Technology Administrator

Note. This data represents information collected by through initial research project surveys.

These surveys were completed in May 2017, which allowed for the project to begin with staff development in August and continue throughout the 2017-2018 academic school year. The method to determine effectiveness will be common assessments and ultimately the state academic assessment to measure the essential skills of the eighth-grade history students. Teachers and technology leaders will also complete a digital exit interview in Google.

Given the distance between each school district, the first meeting occurred with all the campus technology leaders listed in Table 1 and the current teacher of grade eight U.S. history to 1855. This first meeting in Google Hangouts was sent as a link to all participants, and the firewall at Little Valley Academy blocked the connection at first, but within 10 minutes, Mr. Robinson had them connected. The first meeting followed the basics of establishing norms, getting to know each other, and setting a schedule for collaboration to be once a week, from 4 p.m. to 5 p.m. Tuesday afternoons. All teachers

will bring calendars and resources for the next meeting with the technology leaders for the district and Dr. Josey Clifford, research professor and project manager at the regional university for Planning Outside the Structural Lines.

At the second video meeting, all teachers brought teaching materials which included "Teachers Pay Teachers" lessons, Pinterest ideas, the current textbook adoption, and a notebook that was passed down for years to the current history teacher. Most of the technology leaders were in attendance but not for the entire 60 minutes of discussion. Superintendent Ben Blanco was called away on a district situation 15 minutes into the video conference. There was some hesitancy to begin collaborating, and even principal Robert Del Gato at Patriot Junior High seemed frustrated by the time allotted to meet. He commented, 'I am not sure why we are in this collaborative; we are clearly doing things right. We have an 'A' rating. It was just sent to me yesterday by my superintendent that we were selected." Mr. Del Gato was out on the first video meeting and was not good at reading his emails. As this video meeting came to an end, the excitement was lessened by the negative comments, but the group decided to reconvene next Tuesday at the scheduled agreed time. Donna Stratt, principal at Crystal River Middle School, offered to create an agenda for the next meeting with goals to accomplish during the time together and away from the video conference.

On Monday before the third meeting, Marcy Davis, the teacher at Ravenwood High School, sent an email to only the teachers inviting them to join her that afternoon for a pre-conference meeting, and all accepted. The topic of discussion centered on asking each teacher if they felt like their technology leaders were holding the process back. All but Little Valley Academy teacher, Ben Thar, agreed that maybe the

administrators do not need to be involved and that the teachers could make the time more beneficial on their own. Ben did not feel comfortable with this agreement and spoke with his district technology administrator, Adrian Robinson, about this change. Immediately, Adrian contacted Dr. Clifford with news of withdrawal from the program. Dr. Clifford scheduled a meeting with all current participants to discuss the structure of the program, get feedback, and develop a system to ensure the collaboration will continue to support student learning.

Teaching Notes

Technology Leaders

For the parameters of this case, a technology leader can be at any level within a K-12 educational school system. Since some rural school districts do not have a technology leadership position, other leaders, including the superintendent, an assistant superintendent, a principal, an assistant principal or even a lead teacher with strong technology skills, could assume responsibility for these duties. A model tested by Anderson and Dexter (2005) surveyed 898 private, public, and parochial nationwide schools with 655 participants. Results helped to develop a technology leadership measure depicting a technology leadership box that aligned with all sections of the National Educational Technology Standards for Administrators standards, including "leadership and vision; learning and teaching; productivity and professional practice; support, management, and operations; assessment and evaluation; and social, legal, and ethical issues" (p. 50). A campus principal, as the technology leader implementing technology innovation must allow teachers to give input and have the necessary training for implementation and sustainability success (Hall & Hord, 2020; Louis, 2006). Frustrations

arose when an additional task was placed on teachers with limited time to plan lessons and the monitoring of technology-enriched lessons (Anthony & Patravanich, 2014). Even though the focus of this technological innovation project is on the collaboration and planning process, the technology leader must effectively communicate with all stakeholders and prepare adequate training for the adoption of the innovation. The technology leader must be an agent of positive change to improve the structural conditions for collective professional learning and the application of the technology platform.

Innovation

Innovation will be the creation of a technology platform to support inter-district PLCs for collaboration purposes. To create this innovation, a safe, collaborative culture must be in place, or steps will need to be taken to build one. Sterrett and Richardson (2017), creating a collaborative meeting for district leaders was the first step in cultivating a new collaborative structure that must be present. This system should allow for the gathering of ideas, airing frustrations, and sharing of current collaboration methods. Communication and resource allocation is the innovation focus with early communication, input from participants, and meaningful professional development for adoption and sustainability to existing (Anderson & Dexter, 2005; Anthony & Patravanich, 2014; Sterrett & Richardson, 2017). For a PLC to work, professional discussions, collaborative work, and strong values of learning and teaching should be present, but what if a school has single subject teachers (Giles & Hargreaves, 2006)? What would be the innovation to bring common subject teachers together to collaborate, plan lessons, and data disaggregation that will improve academics for all students?

Strategy

Woodland and Mazur (2019) wrote about a three-year rural-distant" study of the Four Pines District located in New England encompassing five rural communities. "Cross-pollinations" to create a district-wide PLC initiative was launched with a District Instructional Leadership Team comprised of the superintendent, curriculum coordinator, special education director, and principals of four schools (Woodland & Mazur, 2019). University-level researchers were also connected with the superintendent of the Four Pines School District and developed a blueprint called the Teacher Collaboration Improvement Framework (Woodland & Mazur, 2019). Successful implementation was due to these six useful steps for "effective collaboration: a) raise collaboration literacy, b) identify and inventory communities of practice, c) reconfigure teacher teams, d) assess the quality of collaboration within teams, e) make corrections, and f) recognize accomplishments" (Woodland & Mazur, 2019, p. 819). A chain of command for communication, PLC teams, and isolates were established. These inception strategies were research-based and served this rural district well in creating a successful collaborative culture.

When looking at a network analysis framework, strategies to prevent failure or a complex system from operating in an unintended manner included a signal recognition of breakdown, the ability to assess if interventions are needed, communication with others about the situation, and the acts of taking strategic, informed action (Mehalik & Gorman, 2006). Development of these real-time skills may take coaching, but advances are possible with these sociotechnical networks' adaptive capabilities. Dutch primary and secondary schools with a common goal of improving student achievement and teacher

instruction, “teacher collaboration, whatever it is aimed at, requires a perceived need to collaborate that is based on a shared orientation or educational content, besides school-leader support” (Honingh & Hooge, 2014, p. 92). Strategic planning of the collaboration system can achieve success, but time must be allotted during innovation integration.

Leadership

The most important factors when implementing change centralize around leadership decisions, and the effects leadership has on innovation (Hall & Hord, 2020). The roles of leading a campus or district have many attributes. Student learning and achievement is one of the most important aspects of educational leadership but does not exclude other duties within a leader’s responsibilities. This shift in leadership expectations has moved from managerial leadership to instructional leadership (Barnes et al., 2010; Myran & Sutherland, 2019). Wang (2018) identified twenty top educational leadership theories she called framing concepts. The number two-framed concept seen in 1,328 articles that Wang researched was instructional leadership. The science of learning concerning the administration and educational leadership was examined, resulting in “learning is dependent on the active and deliberate agency of the learner” and “this agency is situated within complex and dynamic social contexts” (Myran & Sutherland, 2019, p. 658). As an instructional leader, these opportunities can be enhanced by the cultivation of PLCs to create environments conducive to learning. The campus and district leaders are challenged to grow teachers into classroom learning facilitators. A community of learners solely focused on academics is not enough, according to Starratt (2007), as he contended that real learning is exploring social and cultural values needed to become productive citizens cultivated by ethical educational leaders. Educational

leaders are also expected to be experts in distributed leadership (Wang, 2018). It is evident that distributed, and collective leadership are strong theories that expedite collaboration for innovation to diffuse into the culture of a school (Giles & Hargreaves, 2006; Ho & Ng, 2017; Ni et al., 2017; Sterrett & Richardson, 2017; Wang, 2018).

Decision Making

Ultimately this change should be centered in the vision of improving instruction so that learning can ensue. The timing of decisions, decision-makers, and the influence of other stakeholders can determine whether innovation will be successful. Individual beliefs and biases will also play a role when decisions are being made. In most studies discussed in this literature review, a team is collaborating on decisions, but sometimes it comes down to one person. Does the principal have the most influence on campus decisions? One study on collective leadership shows this to be true, but next to principals, teachers have the most influence on campus decisions; however, more research is needed to determine "underlying reasons for principals' positive or negative perceptions of other stakeholders' influence in certain decision areas and how the relative influence from all stakeholders collectively affects principal practices, organizational conditions, and student performance" (Ni et al., 2018, p. 244). One process for policy decision making is described as "phases: a) choosing issues that require attention, b) setting goals, c) finding or designing suitable courses of action, d) evaluating, and e) choosing among alternative actions" (Myeong & Choi, 2010, p. 443). The theory of innovation decision process explained the process of learning about innovation is crucial to determine if adoption will be successful (Surry & Farquhar, 1997). Therefore, teacher education on the

technological change of video conferencing and initial planning with leadership implementing the inter-district PLC must exist for sustainability.

Classroom Activities and Discussion Questions

This case is designed for administrators at the campus and district levels. The purpose is to work collaboratively with a team to create systems and modify plans as the need to ensure teachers have instructional support, research-proven teaching strategies, data-driven decision-making guidance, and resources to accomplish a common goal of student success. Candidates will be divided into teams of three to problem-solve these issues within the case narrative. The following questions will be required in the final submission with justification for decisions made through the collaborative process.

1) Create a structural plan for implementation of the intra-district PLC, including all stakeholders, their roles, and actions to create a positive educational impact for learning.
2) As the leader of one of these campuses, what would you have done differently? What leadership decisions had your approval? Justify your responses.
3) What are the potential beliefs and biases that could derail this project before it even starts?
4) How will executive leadership personnel ensure procedures are established and followed throughout the entire school year?
5) In what ways can buy-in for this collaboration project affect instructional outcomes?

6) How can different rural school districts come to the census on resources needed for assessment and instruction?
7) Given this situation, what are the steps that could have been taken in August to increase successful academic results?
8) Is Google the right digital collaboration platform for this type of PLC? If not, what are some alternatives?

Conclusion

The innovation of using a technological platform to span across miles to different rural school districts for the goal of growing teaching capacity and academic performance will not be an easy task. For this technological change diffusion to reach adoption and sustainability, many decisions will have to be made before districts are even contacted. An informational gathering process will need to be conducted representing all levels of leadership both in and out of a classroom. Strategies for buy-in, culture evaluation, technology infer structure, and system integration for a PLC to be successful through the establishment to maturity begins with the planning decisions established by district leaders. The willingness to break down walls and openly discuss instruction and assessment practices will lead to student growth.

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