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Principal Perceptions on the Digital Divide, Equity, and Learning Barriers During the COVID-19 Pandemic

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Walden University

College of Education and Human Sciences

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Kristina Ana Chittick

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Walden University

2024

Abstract

Principal Perceptions on the Digital Divide, Equity, and Learning Barriers During the

COVID-19 Pandemic

by

Kristina Ana Chittick

M. Psych., Capella University, 2017

M.S.Ed., St. Joseph's University, 2016

BS, Northern Arizona University, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education Policy, Leadership, and Management

Walden University

February 2024

Abstract

The digital divide exacerbated educational inequities, creating learning barriers for students during the COVID-19 pandemic. Although previous research had explored the digital divide in education during the COVID-19 pandemic, there was a gap in understanding how principals' leadership responses and actions contributed to addressing this issue and promoting equity in learning. The purpose of this basic qualitative study was to explore principals' perceptions of leadership responses and actions that facilitated districts in overcoming the digital divide, enhancing equity, and reducing barriers to learning during the COVID-19 pandemic. The study was grounded in Hitt and Tucker's unified framework, emphasizing principal instructional leadership and student achievement. The semistructured interview process included interviews with eight K–12 principals. Interview responses were recorded, transcribed, and coded using thematic analysis procedures to identify the following themes: (a) leadership styles and approaches, (b) communication and collaboration, (c) community and family engagement, (d) maintaining normalcy and consistency, and (e) teacher support and well-being. These findings may contribute to actionable insights to aid leaders, policymakers, and researchers in fostering practices that promote student achievement and positively impact societal change.

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Dedication

I dedicate this work to my family, the cornerstone of my strength, the source of my hope, and the embodiment of all the love one heart can contain. To my husband, who has consistently urged me to dream bigger, work harder, and embrace the twists and turns of life. Our journey together has been marked by resilience, and I wouldn't change a single moment, grateful to share it with you—my best friend, my home, my always. To Stirling, your unwavering support each day has been invaluable. Your authenticity inspired me to be true to myself and write. I am thankful for you, and I love you. To Brodie, your inquisitive spirit and shared laughter bring boundless joy to my life. Witnessing your growth into a remarkable young man fills me with pride. I love you. To Braddock, my inquisitive son with a beautiful mind, your presence encourages me to play more and simply be myself. I love you, my Braddock. To Declan, my baby Christmas, my love for you knows no bounds. I eagerly anticipate engaging in countless discussions with you. To Darby, your smiles light up our lives, and your reminder to infuse more fashion and shoes into our days is a delightful gift. I love you.

In memory of my late mother, I know you would have been immensely proud. Your encouragement to live life fully and love deeply resonates in every endeavor. To my father, thank you for instilling in me the courage to swing for the fences. To my extended family, your check-ins and the gift of your time have been truly appreciated. To my friends, thank you for ensuring that this journey was accompanied by shared moments, support, and laughter. I am blessed; thank you for being a part of this incredible journey with me. I am excited for the future and making a positive impact!

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I want to express my deepest gratitude to my husband for his unwavering dedication and service in the Marine Corps, first as an enlisted Marine and later as an officer. His commitment to our country, navigating college, and successfully completing flight school, all while supporting our active family of five kids, is truly commendable. I would also like to extend my heartfelt thanks to all U.S. military families for their service and the invaluable support they provide.

A special acknowledgment goes to my esteemed committee. Dr. Kathleen Kingston, your unwavering support and encouragement were my pillars throughout this challenging journey. You were not only my committee member but also a true cheerleader, pushing me forward every step of the way. Thank you for everything. Dr. Adu, Dr. Voelkel, and Dr. Jones your guidance and thoughtfulness were instrumental in keeping me on track. All your support during this intricate process is deeply appreciated.

Embarking on this academic journey has been a profound and challenging experience. The journey was marked by resilience, perseverance, and countless hours of hard work. It was a process that tested my limits, but it was also a journey of self-discovery and growth. Each step was a triumph, and the culmination of this effort is a testament to the dedication and determination invested in the pursuit of knowledge and personal development. I am immensely grateful for the lessons learned and the invaluable support that made this journey possible.

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Chapter 1: Introduction to the Study

This study explored principals' perceptions of leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic. Findings may provide principals with insight concerning leadership choices that may help them improve equity and reduce barriers to student learning. This study's findings may also provide principals with practical insights and may help guide future research on effective practices that principals can implement. The major sections of this chapter include the background, problem statement, purpose, research question, conceptual framework, nature of the study, definitions, assumptions, scope and delimitations, limitations, and significance of the study.

Background Literature

The world had to overcome a significant obstacle in recent years, and there was little left untouched by the global disruption known as the COVID-19 pandemic. In education, the pandemic caused ripple effects that will leave it forever changed and will be studied for years to come. These changes in education came quickly as schools struggled to wrestle with closures, mandates, and challenges that changed how teachers teach using online tools (Hall et al., 2020; Kaden, 2020; Lai & Widmar, 2021; Williams et al., 2021). Principals had to make unprecedented decisions within unparalleled expectations (Pollock, 2020). Their leadership role had to change. They had to discern and act on medical information, pivot to new policies, and convert schools to online education while continuing to do everything they usually do to support learners, teachers, and their community (Burwell, 2021; Fournier et al., 2020; Williams et al., 2021). The

pandemic exacerbated inequity in education for students who are marginalized or underserved (Catalano et al., 2021; Kormos, 2018; National Center for Learning Disabilities, 2020; Williams et al., 2021).

It was essential to explore school leadership's perceptions about the actions or responses that contributed to students' equity and opportunity during the COVID-19 pandemic. School leaders were expected to manage the changes and challenges of educating students during a pandemic with little time to lead and support learning (Catalano et al., 2021; Coker, 2020; Peterson et al., 2020; Pollock, 2020). Leadership had to pivot quickly and be nimble and proactive during this time to ensure the delivery of high-quality education to students regardless of their access to online learning platforms. The Equal Educational Opportunities Act of 1974 required schools to overcome obstacles and provide an equitable education to all students (Graves et al., 2021). However, the disparity in students' access to education was evident, widening preexisting disparities (Catalano et al., 2021; Kormos, 2018; Lai & Widmar, 2021). The Cares Act (National Center for Learning Disabilities, 2020) removed limits on school funds spent on technology but did not consider home equipment for students or internet connectivity (Burkett & Reynolds, 2020; Graves et al., 2021).

Student outcomes and achievement are expectations placed on principals. The National Center for Education Statistics (NCES, 2021, as cited in Mann et al., 2021) showed the need to develop mitigation strategies for all levels of learning to decrease the gap between students and work to close the digital divide. A COVID-19 study of parental opinions concerning educational and social inequalities provided insight to schools on

which steps to take to correct these inequalities (Scarpellini et al., 2021). The NCES (2021) and the Northwest Evaluation Association (2020, as cited in Kuhfeld et al., 2020) pointed to the fact that differential access to technology and remote instruction for those of low socioeconomic status (SES) widened achievement gaps. Students' access to technological devices and broadband in their homes, school districts' responses during the pandemic, and the attention or inattention to social inequalities provided further insight into the digital divide and digital inequities (Hall et al., 2020). There have been three barriers associated with the digital divide regarding equity and access: inequitable practices, inequities in access, and curriculum alignment (De Los Santos & Rosser, 2021). Education investment may differ from district to district and school to school: therefore, one school's education may not equal another's. Inequalities in access align with traditional school funding, where investment may be less for those most needing to overcome barriers and have positive educational outcomes. Studies have found inequities in digital access, digital efficacy, and access to technology, including broadband (Williams et al., 2021).

For student achievement and success, students need a school community (teacher, administrators, peers, counselors) and a personal community (parents, siblings, friends) as well as access to technology (technological literacy), including technological devices and internet access such as hot spots (Borup et al., 2020). Leaders' effective responses and actions may have helped make a difference in students' education and were positive influences despite barriers (Hall et al., 2020; Mann et al., 2021). Findings from data collected from the current study may yield purposeful, actionable data that may inform

principals' future practices. Results may also promote positive social change by creating a deeper understanding of actions to overcome inequity and help students learn. Applying this information may be insightful in assisting students to bridge the digital divide and learn. Students' positive academic achievement could lead to positive contributions to their future.

Problem Statement

A digital divide affected equity and created barriers to learning for students during the COVID-19 pandemic (Baber, 2020; Graves et al., 2021; Hall et al., 2020; Kuhfeld et al., 2020; Lai & Widmar, 2021; Mann et al., 2021; Williams et al., 2021). Although previous research explored the digital divide in education during the COVID-19 pandemic, there was a gap in understanding how principals' leadership responses and actions contributed to addressing this issue and promoting equity in learning. The current study provided information through an investigation of how principals' leadership responses and actions helped to overcome the digital divide, provide equity, and reduce barriers to learning during the COVID-19 pandemic.

Technology and broadband access were barriers to learning, and the lack of these digital resources expanded the digital divide, negatively impacting education outcomes (Graves et al., 2021; Yu et al., 2018). Learning required devices and internet access at home, which lower SES schools and households lacked (Burkett & Reynolds, 2020; Yu et al., 2018). These differences were evident when some schools could provide devices one-to-one while others had to provide one for every two students (Burkett & Reynolds, 2020; Pollack et al., 2021). Principals found they needed to lead during this pandemic

through extensive digital leadership (Pollock, 2020). Principals' concerns over inequities exacerbated during the pandemic were tied to learning technology and access to technology via Wi-Fi (Pollock, 2020). In a study of more than 300 teachers, participants reported that students needed technology and internet access; participants also felt a strong need for leadership to provide digital skills training (Catalano et al., 2021).

Purpose of the Study

The purpose of this basic qualitative study was to explore principals' perceptions of the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic.

Research Question

I aimed to investigate the following research question: What leadership responses and actions helped principals address the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic?

Conceptual Framework for the Study

The theories that grounded this study included Hitt and Tucker's (2016) unified framework model of effective leadership that incorporates principal instructional leadership and student achievement. The fundamental concepts of this framework served as key concepts when exploring and understanding principals' perceptions about the actions they took to help students learn and achieve. The logical connection between the framework presented and the nature of the current study was the work of Hitt and Tucker, who developed the unified framework. Hitt and Tucker analyzed three major frameworks to develop the unified framework. The unified framework includes the following

common domains found in the significant research of Leithwood's (2012) Ontario leadership framework, Murphy et al.'s (2006) learning-centered leadership framework, and Sebring et al.'s (2006) essential supports framework (as cited in Hitt & Tucker, 2016). The framework is composed of five broad domains of effective leadership practices: (a) establishing and conveying the vision, (b) facilitating a high-quality learning experience for students, (c) building professional capacity, (d) creating a supportive organization for learning, and (e) connecting with external partners (Hitt & Tucker, 2016). In Chapter 2, further details on effective leadership practices are discussed. The use of the framework has been shown to positively influence student achievement when implemented with fidelity (Hitt & Tucker, 2016). The unified framework's key concepts include principal instructional leadership and student achievement, which serve as a critical concept for understanding principals' perceptions and how their responses and actions helped overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic.

Nature of the Study

I adopted a basic qualitative design to answer the research question. Qualitative research is based on social constructivism, interpreting participants' perceptions and experiences (Merriam & Tisdell, 2015). Qualitative research is the systemic method of investigating subjects' responses, meanings, and opinions and applying this information to problems, making qualitative methodology amenable to scientific studies (Merriam & Tisdell, 2015). Semistructured interviews were used to collect data and help understand the current study's central concepts (see Merriam & Tisdell, 2015). It is essential to select

a design that complements and aligns with the research question (Merriam & Tisdell, 2015). I explored principals' perceptions about leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic. The conceptual framework aided in creating appropriate interview protocols to support the study's results. A basic qualitative design aided in uncovering principals' perceptions and experiences by providing textual information (see Merriam & Tisdell, 2015). The meanings that K–12 principals attributed to their shared experiences during the COVID-19 pandemic were analyzed in this current study. The research question for this study required textual data from principals' answers to open-ended interview questions to gather their perceptions about the phenomenon under investigation in this study. The answers were transcribed and coded by uploading them to a digital recording and transcription platform. The transcripts were reviewed and reread to identify similar phrases, which were categorized and grouped to identify themes.

Definitions

Cares Act: The coronavirus aid, relief, and economic security act, known as the Cares Act, is a stimulus bill providing funds for COVID-19 response measures, afterschool and summer learning programs, nutrition, mental health, and technology (Goldberg, 2021).

COVID-19 pandemic: The coronavirus disease, otherwise known as COVID-19, is an infectious respiratory disease transferred through small particles via a person's

mouth and nose. COVID-19 has been known as a pandemic since 2020, and the outbreak of this disease affected the whole world (World Health Organization, 2022).

Digital divide: The gap between students who have knowledge of and access to technology and suitable devices and those who do not. The digital divide creates more significant disparities and barriers for low SES and other underserved groups (Stingl, 2021; Van Dijk, 2017).

Equal Educational Opportunities Act of 1974: A federal law of the United States that prohibits discrimination against faculty, staff, and students and requires schools to take action to overcome barriers to students' equal participation (Graves et al., 2021).

Equity: "The consistent and fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans, and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality" (Department of Education/Office for Civil Rights, 2021, pp.-ii).

Pandemic: The global outbreak of a new disease that is actively spreading stressing health care infrastructure (World Health Organization, 2022).

Assumptions

I assumed my study participants would be truthful, honest, and objective when responding to interview questions. I also assumed my participants would speak freely

about their perceptions of the actions and responses to reduce barriers to learning during the COVID-19 pandemic. Participants needed to have served as principals during the pandemic. The results of this study are to provide insights into principals' perceptions when deciding how to improve equity and reduce barriers. Participants were assured of the confidentiality of their responses to interview questions.

These assumptions were necessary within the context of this study because they underlie the validity and reliability of the data. By assuming that participants were truthful, honest, and objective in their responses, I was relying on the assumption that they would provide accurate and reliable information. The assumption that participants would speak freely about their perceptions was also essential to ensure that the data collected would be comprehensive and reflect a range of views. Additionally, the assumption that participants had served as principals during the pandemic was necessary to ensure they had relevant experience and insights into the actions and responses that reduced barriers to learning. Finally, the assurance of confidentiality was essential to ensure that participants felt comfortable sharing their perspectives without fear of retribution.

Scope and Delimitations

The scope of this study was delimited to the study's purpose, sample population, purpose, and research questions. Data collected during this study were delimited to K–12 school principals during the COVID-19 pandemic and their responses to the research question. The study focused on K–12 school principals who served during the COVID-19 pandemic. Only principals actively serving in this role during the pandemic were

included in the study. Other educational professionals, such as teachers, were excluded from the study. Additionally, principals who did not have experience addressing the digital divide or reducing barriers during the pandemic were excluded. This study examined principals' perceptions regarding their actions and responses to mitigate barriers and address the digital divide in education during the COVID-19 pandemic. Gaining the perceptions of these principals is significant because it provided valuable information in an area where research is limited.

The study was grounded in the theoretical framework of educational leadership, focusing on Hitt and Tucker's (2016) unified framework as it related to the actions and responses of principals in addressing the digital divide during the COVID-19 pandemic. However, other related theories and frameworks, such as those related to distance learning or educational technology, were not investigated in this study. The use of Hitt and Tucker's unified framework was limited to the context of this study and should not be generalized to other settings without further research. Additionally, the scope of this study was limited to K–12 school principals during the COVID-19 pandemic. Therefore, the application of Hitt and Tucker's unified framework to other educational contexts may require further exploration.

Limitations

Potential data collection barriers included participant access and difficulty recruiting principals to interview. With IRB approval, I contacted multiple principals to gain sufficient participation. The participants were drawn from the organization where I work and may have been from anywhere nationwide. Therefore, in-person interviews

were not feasible. To address this limitation, virtual interviews were conducted using a digital recording and transcription platform. Time constraints and data collection were some of the other limitations of this study. Digital recording and transcription also helped address these limitations. A potential limitation of this study was its transferability to other educational contexts beyond the specific organization, which the study participants were drawn from. Although the study participants were drawn from principals nationwide, the organizational context in which they operate may differ from other educational institutions, which could affect the transferability of the study's findings. To address this limitation, I sought to identify common themes and patterns in the data that may have implications for other educational contexts. Another potential limitation was dependability because I relied on the accuracy and honesty of the participants' responses. To address this, I followed established qualitative research protocols, such as member checking and triangulation, to increase the dependability of the study's findings.

As an employee in the organization where I conducted my research, I ensured that my roles at the institution and as a researcher were separate. Because this could have introduced bias into my research, I was keenly aware of this during my study. To mitigate bias, I remained neutral while conducting interviews and carefully worded interview questions. Carefully designing research questions for this study aided in decreasing leading questions or confirmation bias. I was also reflective throughout the process to continuously be aware of bias. Overall, although the study's limitations may have affected its generalizability and dependability, efforts were made to minimize bias and increase the validity of the findings.

Significance

This study may be significant because it filled a gap in the literature by providing insights on actions and responses principals took to overcome the digital divide and barriers to learning during the COVID-19 pandemic. The results may aid school districts by providing information that may help them overcome the digital divide, inequity, and barriers to learning. The pandemic spotlighted the deepened disparities in educational opportunity and achievement (United Nations Educational, Scientific and Cultural Organization, 2021). The hard work now starts with building back schools to provide high-quality education to all students in the United States (Berger et al., 2022). The Office of Civil Rights believes in and protects students' rights in America and provides consistent, fair, just, and impartial treatment of all the nation's students (Berger et al., 2022). By understanding these issues, I hoped to address the inequities students experienced during the COVID-19 pandemic and hoped to contribute to positive social change by addressing social inequality with actionable responses.

Summary

In this chapter, I introduced the study by explaining the background, including the problem and purpose of this study. The focus of this research was principals' perceptions of their actions and responses that improved outcomes and achievement by reducing barriers to learning and overcoming the digital divide among students during the COVID-19 pandemic. This chapter also included definitions, assumptions, scope and delimitations, limitations, barriers, and the significance of this study. Further evidence of

this study's importance is provided in Chapter 2, with a discussion of the literature associated with this study and its conceptual framework.

Chapter 2: Literature Review

The literature review for this study includes a history of the digital divide and the barriers schools had to overcome to continue to provide education to students. The literature review also includes a summary of the impact the COVID-19 pandemic had on learning and how technological equity and access impacted education and principals' roles as instructional and technological leaders. Despite the existing research on the digital divide in education during the COVID-19 pandemic, there was a gap in knowledge regarding the responses and actions of principals that addressed this issue and promoted equity in learning. This basic qualitative research study was conducted to explore the perceptions of K–12 school principals regarding the responses and actions implemented to address the digital divide and reduce barriers to learning during the COVID-19 pandemic.

The COVID-19 pandemic began in 2020, permanently altering the structure of the United States education system (Aguilar et al., 2022; Amundson & Ko, 2021; Baber, 2020; Bansak & Starr, 2021; Berger et al., 2022; Borup et al., 2020; Burkett & Reynolds, 2020; Carl & Ravitch, 2021; Cruz, 2021; Dorn et al., 2020; Francom et al., 2021; Friedman et al., 2021; Gandolfi et al., 2021; Hall et al., 2020; Harmey & Moss, 2023; Hodges et al., 2020; Huck & Zhang, 2021; Kuhfeld et al., 2022; National Assessment of Educational Progress [NAEP], 2022; Parolin & Lee, 2021; Porter et al., 2021; Rigaud et al., 2022; Wortham & Forgety Grimm, 2022). Districts and schools nationwide tried to reinstate routines that existed before the pandemic, but the COVID-19 pandemic impacted many areas of the educational experience.

Today, students are struggling with learning loss and having to recoup learning and skills. In early 2020, the pandemic caused schools to close and transition to distance learning. However, a lack of preparedness left many low-income, special education, and rural students without the tools to participate effectively in distance learning (Catalano et al., 2021; Gandolfi et al., 2021; Gross & Opalka, 2020; Leichty, 2021). At the center of the movement toward digital learning was a dependence on families to assume the roles of guides, even teachers, and help their children navigate a virtual learning environment from Pre-K to Grade 12 (Catalano et al., 2021). Schools faced many barriers in trying to overcome inequity and provide technological tools and Wi-Fi to students (Francom, 2020; Friedman et al., 2021). The lack of broadband and technological tools widened the digital divide for many students. The pandemic highlighted broadband inequities and digital poverty, contributing to a social class-based learning disparity (Ayre, 2020; Friedman et al., 2021; Graves et al., 2021; Walters, 2020). Technology can be a strength and may be used to contribute to students' positive outcomes and academic achievement (Hitt & Tucker, 2016; Kormos, 2018). However, the U.S. education system needed to prepare for this monumental movement to digital learning.

Literature Search Strategy

The literature presented within this review supports instructional leadership practices toward the use of technology, supporting teachers and, therefore, student achievement. This review includes synthesized research objectives, methodology, findings, and conclusions from previous studies related to the current study on principals and instructional leadership. This review includes major sections on the conceptual

framework, equal educational opportunities and COVID-19, digital divide in education, digital equity and access, remote learning and COVID-19, principals' instructional roles, and a summary and conclusion.

For the search strategy, I identified key concepts supporting the research question. A collection of relevant articles was assembled by searching for and using many different keywords and phrases to locate relevant studies, papers, journals, articles, and other sources for this literature review. These keywords and phrases included *leadership, digital divide, equity, barriers to learning, COVID-19, pandemic, perceptions, qualitative, Wi-Fi/broadband, technology, education (K-12), virtual learning, distance learning, online learning, e-inclusion, principals and technology, principal/leadership and COVID-19, technology integration, technology and best practices, and unified framework*. An exhaustive literature search was conducted. Peer-reviewed documents were gathered using the research databases Educational Resources Information Center (ERIC), Sage Journals, EBSCOHost, Computers, Applied Sciences Complete, Google Scholar, and Walden University Dissertations and Theses. Sources of information were published within the last 5 years and published in English.

Conceptual Framework

The conceptual framework for this study was Hitt and Tucker's (2016) unified framework, which helps with practices critical for integrating technology. A basic premise of the unified framework is that principals indirectly and, at times, directly influence achievement outcomes by the actions and responses they choose to take or not take; therefore, the direct or indirect flow of leadership actions and responses from the

leadership to teachers and from teachers to learners leads to achievement. A unified framework consolidates the findings by analyzing and synthesizing effective leadership practices clarifying principals' roles by closely examining its five domains (see Figure 1) that influence student achievement outcomes (Hitt & Tucker, 2016). The relationship of Hitt and Tucker's model to the current study was that this framework could document how principals' perceptions of their actions and responses did or did not help leadership overcome barriers to learning and bridge the digital divide. This model helped me examine the participants' responses and actions as K–12 leaders. Figure 1 presents a unified framework consisting of five domains encompassing the key focus areas for K–12 school principals in addressing the digital divide and promoting equity in learning during the COVID-19 pandemic.

Figure 1*Unified Framework Domains and Subcategories*

Domain 1: Establishing and Conveying the Vision

- This domain focuses on principals' actions in establishing a shared mission and vision, setting goals, modeling ethics, using data for improvement, and navigating external accountability.

Domain 2: Facilitating a High-Quality Learning Experience for Students

- In this domain, principals prioritize a safe and orderly environment, personalize learning to reflect student backgrounds, develop and monitor the curriculum, and oversee instructional programs.

Domain 3: Building Professional Capacity

- Principals focus on staff selection, individualized consideration, building trust, providing learning opportunities, supporting, and recognizing staff, fostering responsibility for learning, and creating communities of practice.

Domain 4: Creating a Supportive Organization for Learning

- This domain highlights strategic resource acquisition and allocation, considering contextual factors, fostering collaborative decision making, sharing leadership, and embracing diversity while maintaining high expectations and standards.

Domain 5: Connecting with External Partners

- Principals establish productive relationships with families and community partners, involving them in collaborative processes to enhance student learning and anchor schools within the community.
-

Conveying a vision and setting goals through collaborative efforts have been shown to influence leadership practices that are effective through school data about school performance and student achievement (Hitt & Tucker, 2016). This framework helped me examine perceptions of participants' roles and how technological tools were integrated into homes and classrooms during the COVID-19 pandemic. Principals as leaders are integral to promoting technology in the classroom and school (Dexter et al., 2021). Principals should collectively communicate a technological vision and mission to and with staff (Oliver et al., 2019). The use of technologies in schools and their use during instruction are more effectively implemented when principals apply a framework to their leadership practices and decisions (Berkovich & Bogler, 2020). The unified framework presented in Figure 1 provides a comprehensive overview of the domains and subcategories that guide principals' responses and actions to address the digital divide and promote equity in learning during the COVID-19 pandemic. Figure 1 serves as a valuable reference for understanding the multifaceted role of principals in ensuring a high-quality educational experience for all students.

To help students with mastery of curriculum content, principals should apply leadership practices, as articulated by the unified framework, to technology for improved outcomes and achievement (Azukas, 2022; Bartlett, 2008; Boyce & Bowers, 2018). However, the extent to which principals do this is still being determined. Principals have an opportunity to take a critical role by implementing the best practices for technology and using schools' technological tools. Hitt and Tucker's (2016) unified framework provided a framework for data analysis of transcripts from principals' interviews to

determine what perceptions guided their responses and actions that helped students learn by overcoming the digital divide and barriers during the COVID-19 pandemic.

Equal Educational Opportunities and COVID-19

Education is a right afforded to all citizens in the United States. The idea of equal educational opportunities was established through the landmark case *Brown v. Board of Education* (1954), stating that segregated schools violated the Equal Protection Clause of the 14th Amendment to the United States Constitution (Figueroa, 2018). This case made equal education a right in the United States by declaring that segregation was not equal. *Brown v. Board* linked the U.S. Constitution and government to public education, asserting that preparing children to be societal leaders is one of the essential functions' governments can provide (Figueroa, 2018). With the opportunity for education for the masses, the United States has an educated workforce nationally and globally. Even though students today have educational opportunities, those opportunities may be considered unequal, depending on the student's race, class, or neighborhood (Robinson, 2020).

The Equal Educational Opportunity Act of 1974 was federal legislation that entitled public school children to equal education and opportunity and prohibited discrimination (Burkett & Reynolds, 2020; Flores, 2019). This legislation applies to all schools that receive federal funding. During the COVID-19 pandemic, however, there were disparities in providing equal educational opportunities for all students (Cruz, 2021; Friedman et al., 2021; Shami-Iyabo, 2020). For example, disparities occurred when some students needed more technological tools or broadband to access learning to the same

extent as their peers (Friedman et al., 2021; Shami-Iyabo, 2020). These technologies were and still are essential to ensure that students can access education and prevent discrimination against students due to a lack of resources. A student who cannot access online textbooks, streaming, coursework, synchronous classes, and asynchronous coursework is disadvantaged compared to a peer with such access. The COVID-19 pandemic threatened educational opportunities and equity of student learning (Aguilar, 2020; Friedman et al., 2021). Principals' perceptions of their leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic were essential to understand.

Digital Divide in Education

The digital divide is historically and currently identified as those with technology (computers, laptops, iPads, phones) and Wi-Fi or broadband and those without. These technologies are also known as information communication technologies (Kathuria & Oh, 2018). Because the types of technology available today have become more robust, the kind of technology available to students for learning is also significant. For example, a student attending class with a phone differs from a student with a laptop and Wi-Fi. Further, a device and hotspot given to a family with five children who all need to attend school on that one device differs from Wi-Fi and a device provided for each student's learning. Technological resources are necessary for students to access learning, but they must also be appropriately coupled with infrastructure to provide access (Aguilar, 2020; Shami-Iyabo, 2020).

Understanding how the digital divide is a barrier to equity in school is essential for understanding the problem and creating informed, actionable solutions (Clark & Gorski, 2002; Zhang & Storey, 2022). For example, the Federal Communication Commission's definition of broadband requires download speeds of 25 Mbps and upload speeds of 3 Mbps to be considered adequate for home learning (Chandra et al., 2020; De Los Santos & Rosser, 2021). Not all students have this level of broadband speed. Another example is that a cell phone may need the capability to stream and interact with the learning platform the school is using. Historically, libraries were at the forefront of providing technological tools and access to students (Aguilar, 2020; Ayre, 2020). The access to technology provided solely by school libraries has been well documented in minimizing "the homework gap" by providing technology for students to complete assigned homework. Therefore, even before the pandemic, some students lacked access to technology to complete homework, negatively impacting their grades (Aguilar, 2020). The pandemic exacerbated these disparities concerning access to technologies and broadband, and many of those same children were affected during the pandemic (Aguilar, 2020).

The digital divide presents a significant barrier to digital equity, and COVID-19 exacerbated this inequity (Aguilar, 2020; De Los Santos & Rosser, 2021; Van Dijk, 2017). The disparities created through exposure to distance learning have contributed to more significant inequalities, primarily where class and racial divides exist (Parolin & Lee, 2021). Race, ethnicity, income, gender, and geographic location contribute to those with or without technology (Auxier & Anderson, 2020; Catalano et al., 2021; Jones et al.,

2021; Leichty, 2021; Thomas & Finn, 2018). The students who have been most affected are those of color or low SES, English language learners, those with disabilities, and those living in poor or rural neighborhoods (Auxier & Anderson, 2020; Catalano et al., 2021; Gandolfi et al., 2021; Graves et al., 2021). The lack of technology or broadband is not the only factor that could be considered an inequity. Inequities of the digital divide can exist within an individual's ability, skills, and use of that technology (Gandolfi et al., 2021; Pollock, 2020; Van Dijk, 2017; Yu et al., 2018). Students who need to learn to navigate their devices or the programs used with proficiency can create yet another barrier. These inequalities have meant learning loss and growing achievement gaps for students. The gaps grew for students from vulnerable populations at a rate greater than for those not considered vulnerable (Catalano et al., 2021).

The Federal Communications Commission (FCC) and U.S. census information report that approximately thirty percent of all K–12 public school students need the necessary technological tools or Internet connectivity for learning (Aguilar, 2020; Chandra et al., 2020; Cruz, 2021). Households making less than \$35,000 annually comprise most students that needed appropriate technological tools or infrastructure (Chandra et al., 2020; Morgan & VanLengen, 2005). Online activities were essential for learners during the COVID-19 pandemic. Many students still needed the appropriate technologic devices in their homes for equitable learning experiences. The FCC and the National Telecommunications and Information Administration (NTIA) are to manage 42 billion dollars in funds set aside for broadband infrastructure with the hope of equitable broadband, working toward closing the digital divide (Chandra et al., 2020; Knell, 2020;

Pressgrove, 2021). This infrastructure would provide much-needed access for learners and help bridge the digital divide; however, even though some of these efforts have been initiated too late, they are better than not addressing the issues. Evidence of the gap widening is found in test scores and the percentage of learning that would have occurred over a typical year. Students learned 67% of the math and 87% of the reading they would typically learn, translating to lower test scores and showing a significant impact on students of color and low SES (Berger et al., 2022; Kuhfeld et al., 2020; Kuhfeld et al., 2022; Office of Civil Rights, 2021). These learning losses are connected to equity, as they disproportionately impact our most vulnerable populations, widening achievement gaps (Huck & Zhang, 2021). Many national testing corporations that are relied upon for accurate norm-referenced data have reduced their achievement scores because of the learning losses that took place due to COVID-19.

Digital Equity and Access

No place in the world was left untouched by the COVID-19 pandemic. There were many different approaches and opinions regarding how learning should occur, from paper packets to typical school days attended via broadband and technological devices. Principals' reasoning for their technological decisions in their districts and schools is vital to understanding the data generated concerning student learning outcomes. Little is known about how leaders' technology integration practices impact teaching practices and, by extension, student outcomes and achievement (Basal & Eryilmaz, 2021; Dexter et al., 2021; Hall et al., 2020). Historically, access might have meant only physical access, whereas access today includes a variety of factors (Van Dijk, 2017). These factors

include but are not limited to broadband or Wi-Fi, technology, type of technology, family size, device allotment, technological proficiency, and platform proficiency. Hall et al. (2020) posited that reflection based on technological experiences and digital equity allows for technological integration oriented toward student justice. The qualitative study closely examined districts' responses to COVID-19 and whether they addressed or overlooked technology-related social inequities (Hall et al., 2020). A connection has been established in previous research indicating that access to both the internet and computers for educational purposes is positively correlated (Francom et al., 2021).

With the shutdown of schools due to the pandemic, the digital divide highlighted the inability of students and families to access learning through technology. How technology was distributed may have caused unequal access to schools' chosen technologies (Van Dijk, 2017). Scarpellini et al. (2021) theorized that COVID-19 school closure impacted students' educational progress and impaired their behaviors. This research, incorporating a qualitative cross-sectional observational study, Scarpellini et al. found an increased gap between high and low SES levels producing social and educational inequalities (2021). In this study sample, 1.5% did not participate in learning because they lacked technological tools, which supports UNICEF's (United Nations Children's Fund) previous research showing that 31% of students globally could not participate because of lack of digital tools (UNICEF, 2020, as cited in Scarpellini et al., 2021).

Inequity and lack of access to broadband internet and devices highlighted issues that increased the divide (Aguilar, 2020; Burkett & Reynolds, 2020; Cruz, 2021;

Francom et al., 2021; Hall et al., 2020; Mac Domhnaill et al., 2021; Schulz & Robinson, 2022). The lack of infrastructure to access Wi-Fi or broadband was one of the factors that contributed to the digital divide. The United States Infrastructure Bill, created to address our infrastructure needs, included 65 billion dollars for broadband projects and 42 billion dollars to the FCC and the NTIA to improve broadband access (Ayre, 2020; Kathuria & Oh, 2018; Pressgrove, 2021). Access remains a problem, however, as 30% of all K–12 households need access to broadband, Wi-Fi, or an appropriate device for online learning (Chandra et al., 2020; Cruz, 2021). Demographics and SES play a part in this issue, as many African Americans and Hispanics lack broadband access or do not have a device adequate for learning (Catalano et al., 2021; Chandra et al., 2020; Cruz, 2021). More than 79.6% of participants from 39 studies indicated equity concerns for students, citing barriers for low SES students (Huck & Zhang, 2021). The CARES Act did not provide provisions for funding for students' Internet service (Burkett & Reynolds, 2020). The devices schools provided varied from one per child to one per household, which could be a marked difference depending on family size and access. (Carter et al., 2020). Identified test score gaps are concerning when compared to students of higher means and those from areas impacted by low SES development, where gaps in test scores grew by 20% in math and 15% in reading (Kuhfeld et al., 2022).

Principals may need to be more skilled in using current technologies to be champions of technological practices. The practices principals implement for technology acquisition and proficiency with chosen technologies will influence teachers' and students' practices (Aguilar, 2020; Cardullo et al., 2021; Catalano et al., 2021; Pollock,

2020). Leaders must be ready and possess sufficient data literacy to make technological decisions (Dexter et al., 2021). Once these decisions are made, there must be continuity, with an understanding of whether an instructional product will provide growth for identified needs (Dexter et al., 2021; Greenhow et al., 2021; Hall et al., 2020). Improved evidence-based reasoning and decision making with technology in mind can aid schools in addressing their needs and finding the best fit to produce the desired educational outputs and outcomes (Dexter et al., 2021; Francom et al., 2021; Huck & Zhang, 2021). Equitable technological solutions empower all learners (Hall et al., 2020).

The term Emergency Remote Teaching (ERT) has been used in studies that examine COVID-19 and programs or technological tools that were set up quickly and available for instruction and instructional support during emergencies, similar to disaster preparedness plans and their implementation when the need arises (Crecelius & Neild, 2022; Hodges et al., 2020; Huck & Zhang, 2021). Those most affected by technological challenges were from low SES backgrounds and communities of color, where COVID-19 created more significant challenges and fears (Burkett & Reynolds, 2020; Hamilton et al., 2020; Kraft et al., 2020; McKee & Bowman, 2020). For teachers to feel confident that they can meet the needs of their students, they must correspondingly feel confident that their instructional technology needs are met by their leaders (Cardullo et al., 2021; Evans-Amalu & Luke Luna, 2021; Kraft et al., 2020). Teachers and administrators should receive additional online training and preparation to meet student needs in the future (Cardullo et al., 2021; Scott-Webber, 2021).

The National Teacher and Principal Survey (NTPS) showed that fewer public school students had home Internet access compared to those who attended private schools (2020). Principals took steps to mitigate these issues by providing hotspots, working with Internet providers to obtain free or reduced fees, and offering spaces for free and safe access to Wi-Fi for students (Berger et al., 2022). These steps resulted in more students and families accessing Wi-Fi or broadband in their homes or communities. Public school principals that helped students gain access to the internet at home were 45%, those that sent home hotspots were 61%, and those that offered safe spaces with free Wi-Fi internet were 37% (Berger et al., 2022).

Remote Learning and COVID-19

COVID-19 was a fast-spreading, communicable disease declared a pandemic by the World Health Organization (WHO) on March 11, 2020 (World Health Organization, 2022). COVID-19 led to global shutdowns in all facets of life, including education. The Centers for Disease Control and Prevention (CDC) immediately promoted school closures and social distancing (Wortham & Forgety Grimm, 2022). In the United States, the pivot to online school and new technologies, coupled with inexperience in handling a pandemic, led to unmet needs. Some unmet needs were an education in person by a public school, technological tools, broadband and Wi-Fi, Free and Reduced Lunches, and specialized services (special education, English Language Learners [ELL], modifications, accommodations, aides, one-on-one support, reading groups, Social-Emotional Learning [SEL], or a person at home to help). When shutdowns occurred, the United States Department of Education (USDOE) stated that all districts must ensure students could

study and learn without discrimination (United States Department of Education, 2022). It is essential to make education accessible and to mitigate circumstances that make such access difficult during traumatic circumstances, as emotional states may impact learning (Basilaia & Kvavadze, 2020; Carter et al., 2020). The students with the most needs were adversely impacted by virtual versus in-person learning.

COVID-19 infection and the death of adult loved ones or caregivers disproportionately impacted the families of the most vulnerable students, resulting in student trauma that educators could not predict and address (Kuhfeld et al., 2020; Longhurst & Their, 2021). However, schools could intervene since funds were allotted for Social-Emotional Learning through Elementary and Secondary School Emergency Relief Fund (ESSER) legislation (United States Department of Education, 2022). Before COVID-19, Hurricane Katrina was the only educational incident for which comparative information existed and was the only lengthy catastrophic event to which the COVID-19 pandemic could be compared. Most events were shorter-lived and not as impactful as COVID-19. Hurricane Katrina resulted in learning losses, but they were not nearly as great as the reported learning losses from COVID-19 (Dorn et al., 2020; Harmeiy & Moss, 2023). Kuhfeld et al. (2020) quantitative study found that students experienced learning loss. A priority has been recovery decisions needed to help students who experienced learning loss due to COVID-19 (Kuhfeld et al., 2020). Research that employed statistical methods to investigate the effects of COVID-19 on student development revealed immense implications, as those entering preschool, kindergarten, or their next grade missed quality programs that equate to higher earnings, graduation

rates, and academic achievement over time (McCoy et al., 2021). When students are not on track developmentally, their developmental delays are commonly blamed on the pandemic. Sixty-four percent of public schools reported that the COVID-19 pandemic significantly affected students' falling behind grade-level expectations (National Assessment of Educational Progress [NAEP], 2022). The National Center for Education Statistics (NCES) reported that the National Assessment of Educational Progress (NAEP) showed a decline of five standardized points in reading and seven in math from 2020 to 2022 (2022). This was the most significant decline in reading in the United States since 1990 and the first reported decline in mathematics (NAEP, 2022; NCES, 2021). Reports of learning loss are further confirmed statistically at approximately seven months for most of the nation's students, and for marginalized groups, the loss can be as much as 9.2 to 10.3 months (Wortham & Forgety Grimm, 2022).

When schools pivoted to remote learning out of necessity because of COVID-19, there were many differences in the types of remote learning experiences students experienced. The impact of COVID-19 is apparent in students' academic achievement. Research indicates an average fall in test scores in grades 3–8 from 2019 to 2021; for math, the fall was between 0.20 and 0.27, and reading declined by 0.09–0.18 standard deviations below 2019 figures (Kuhfeld et al., 2022). To mitigate many of the declines in learning due to COVID-19, the federal government funded the CARES Act as well as the ESSER fund, with 22 billion dollars set aside to address interventions focused on learning loss, especially for underrepresented subgroups (Department of Education, 2022; Kuhfeld et al., 2022; National Center for Learning Disabilities, 2020). Challenges were apparent

in studies that showed teachers did not understand how to teach online, students did not know how to learn in an online environment, and there were no clear guidelines on how much learning should take place (Francom et al., 2021). Research that employed statistical methods posited that disadvantaged students were disproportionately affected by COVID-19's educational interruptions (Catalano et al., 2021). For these students, ESSER funds are used to mitigate learning loss by providing free tutoring and summer enrichment programs (NAEP, 2022). Proven programs include tutoring, acceleration, a double dose of content or remedial instruction, summer enrichment programs, targeted identified needs through data, mental health/trauma support, and community outreach (NAEP, 2022; Wortham & Forgety Grimm, 2022). These interventions and support should be implemented to close opportunity gaps using diagnostic tests and progress monitoring to help assess the quality of the programs (Zhang & Storey, 2022).

Principals' Instructional Leadership Roles

Principals' leadership can be evaluated by how they respond to the situations they face throughout a given year or tenure (Berkovich & Bogler, 2020). A study of K–12 principals showed that 84% of schools had no plans for a pandemic (Francom et al., 2021). Leadership decisions impact teachers directly and student achievements indirectly, collectively affecting the school climate (Boyce & Bowers, 2018). With shutdowns resulting from the pandemic, principals worked to promote safe schools and increase their roles as digital instructional leaders (Pollock, 2020). It is essential to learn from studies investigating principals' best practices and practices that increase student achievement due to the policies and processes in place (Alqahtani & Rajkhan, 2020; Lee

& Lee, 2020). Decisions by leaders concerning monetary resources, implementation of remote learning, and interventions abated opportunity gaps due to school closures (Wortham & Forgety Grimm, 2022). Implementing equity and achievement gap policies through strength-based decision making frameworks can help leaders support students and families (Carl & Ravitch, 2021; Lewis-Durham & Saastamoinen, 2022). Knowledge for school principals about instructional leadership practices related to integrating technology in the classroom has been limited. Being a supportive technological leader is one of the facets of being an effective principal today and tomorrow. Understanding the learning technologies selected and students' access to those technologies is essential. Principals' roles in schooling during the COVID-19 pandemic included the usual vital roles and decision making with the focus changing. Principals had to incorporate within their roles and decision making digital and technological usage, digital leadership skills, and support for school culture, teachers, and students to transform and adapt their leadership skills (Amundson & Ko, 2021; Gill, 2020; Karakose et al., 2021; Nadeem et al., 2022; Ramos-Pla et al., 2021).

According to Mann et al. (2021), developing a student's skill and access to online learning does not indicate that their learning will be equitable or equal to peers. The quantitative study used data from the NCES and the State Department of Education (SDE) providing the statewide online program (SOP) (Mann et al., 2021). They provided further insights into the components of the digital divide and technological tool skills, access, and use. They found that administrators need to account for the following:

- implement material improvements and physical resources

- enhance the skills of individuals
- appropriate use of a platform for learning (p. 17)

The study posited that students with diverse backgrounds, disadvantaged or exceptional, are more likely to struggle, and when making online academic decisions, these students' support should reflect this (Mann et al., 2021). For example, a student that does poorly online may have to return to brick and mortar, or a student may need a support plan for online learning that may include tutoring, remediation, social-emotional, or behavior.

Device distribution varied between public and private schools. For example, public school principals assigned more digital devices to students to take home than private schools at 45% and 20%, respectively; however, 58% of the private school's devices had Internet access, whereas public schools reported only 4% percent (Berger et al., 2022). Data from surveys also showed a lack of Internet access (90%), technological barriers for teachers (40%), and district policies imposing restrictions on necessary online tools (35%) (Huck & Zhang, 2021). Devices were provided to students inconsistently, but 99% of K–12 principals believe that effectively using these devices will contribute to student's current and future success (National Association of Secondary School Principals [NASSP], 2022; National Association of Elementary School Principals [NAESP], 2020). Principals did work with Internet providers and discover partnerships allowing students to access Wi-Fi (Berger et al., 2022).

Every Student Succeeds Act (ESSA) and No Child Left Behind (NCLB) largely shaped principals' instructional decision making, achievement, and accountability in measuring success (Lee & Lee, 2020). Lee and Lee argued that 22 years of data show

how principals shifted priorities to basic skills and academic excellence in reading and math while their performance in personal growth declined, showing a direct link between policy and priorities (2020). As ESSA, NCLB, and school report cards became more critical, principals shifted their priorities accordingly. With COVID-19 achievement regression due to learning loss, leaders' priorities and ideas of success had to change since test scores alone were no longer a reliable measurement of student achievement. Successful practices that lead to positive student outcomes can accumulate meaningful information as their use is continued. Leadership's contributions toward equity are essential practices that principals can engage in to positively influence student outcomes (Burkett & Reynolds, 2020; Leithwood et al., 2019). According to a study, certain principals dealt with challenging choices brought on by the pandemic by utilizing a structural framework, such as the Inclusive Leadership Framework, to guide their tough leadership decisions (Fournier et al., 2020).

Technology purchased in public schools was estimated to cost 26 billion dollars before COVID-19, and more funds were allotted for technology during COVID-19 (EdTech Evidence Exchange, 2022). Little is known concerning principals' actions and responses regarding their decision making processes and the data used to purchase technology (Dexter & Richardson, 2020). The decisions principals made regarding technology may provide insight into their actions to overcome the digital divide, thereby improving equity and reducing barriers to learning during COVID-19. Many schools and districts utilize data related to school needs to drive technology selection (Dexter & Richardson, 2020). Principals who use multiple data sources to implement practices in

their leadership see more significant growth (Wortham & Forgety Grimm, 2022). If principals ignored or chose not to use critical data-driven factors, they might have inadvertently widened the equity gap (Aguilar, 2020). Knowing which technological practices were effective and can be considered takeaways or progress during COVID-19 is essential (Hall et al., 2020; Zhao, 2020). Understanding leaders' effective technological decisions and practices will aid in understanding principals' perceptions in this study.

Summary and Conclusions

The current literature review involved principal leadership practices and barriers affecting principals' technological decisions. Findings from this literature review revealed that what principals choose to implement significantly affects their schools, teachers, students, and community. The following topics addressed in this chapter included: (a) the literature search strategy, (b) the conceptual framework based on Hitt and Tuckers' unified framework, (c) equal educational opportunities and COVID-19, (d) the digital divide in education, (e) digital equity and access, (f) remote learning and COVID-19, (g) principals instructional leadership roles, (h) review of different methodologies.

During COVID-19, principals had to overcome unprecedented challenges. Several themes emerged during the literature review. Principals must prepare for future catastrophic events to ensure better educational outcomes and responses (Burkett & Reynolds, 2020). Lessons learned from COVID-19 could provide classroom teachers and leadership with takeaways for educating and using education tools, especially technological ones. The pandemic could also be the starting point for addressing

disparities by looking closer at our marginalized groups through a social inequity lens, not just their achievement levels (Zhang & Storey, 2022). The issues of inequity can be seen in multiple studies and are not just individual but systemic concerns. Successful interventions are necessary, but leadership must seize the opportunity to think on a more significant long-term scale and begin with the end in mind (Burkett & Reynolds, 2020; Francom et al., 2021; Zhang & Storey, 2022). Preparing for events that may cause learning loss and having plans to deploy when they occur is vital. Principals' instructional leadership practices related to policy, processes, and technology implementation are critical. Principal leadership can aid in the resolution of technological challenges faced by schools. Hou et al. (2019) states that principal leadership practices are influential when understanding school effectiveness, reducing disparities, and improving student achievement.

Despite the existing literature on principal leadership and technological decisions, there are still several gaps in knowledge related to the topic of study. For instance, there is limited research on how principals can effectively prepare for future catastrophic events and implement successful interventions that promote equal educational opportunities and reduce disparities. Additionally, there is a lack of understanding of how principal leadership practices can aid in resolving technological challenges faced by schools to improve student achievement. Furthermore, additional research is needed to explore the long-term effects of the COVID-19 pandemic on education and how it has impacted marginalized groups. Therefore, I aim to contribute to the existing knowledge by exploring perceptions of K–12 school principals and their responses and actions

concerning the digital divide and reducing barriers to learning during COVID-19. By doing so, I hoped to provide insights into the leadership practices that can effectively address the challenges faced by schools and promote equitable learning outcomes for all students.

Chapter 2 included a literature search strategy, conceptual framework, and literature review. Chapter 3 will present the methodology chosen for this qualitative study. Included in Chapter 3 will be the research design, the role of the researcher, instrumentation, plan for data collection and analysis, plans for trustworthiness, ethical procedures, and summary.

Chapter 3: Research Method

The purpose of this basic qualitative study was to explore principals' perceptions regarding the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic. For this study's purpose, principals in this role during the pandemic were participants, and their responses to the interview questions formed the basis of the data analyzed. Principals are school leaders and, during COVID-19, served as instructional and digital leaders expected to support learning.

The chapter is organized to outline the methodology chosen and justify the rationale for the study's qualitative design. This chapter contains five main sections: research design and rationale, the role of the researcher, methodology, issues of trustworthiness, and ethical procedures. The chapter concludes with a summary.

Research Design and Rationale

The research question that guided this study was the following: What leadership responses and actions helped principals address the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic? There had been some research on how school leaders responded to this disruption, yet there was a significant gap in understanding principals' perceptions during this time. Specifically, there was a lack of research that explored how principals' perceptions, responses, and decisions helped students learn during the pandemic. A central problem addressed in this study was the need to understand the perceptions and actions of principals in relation to the digital divide, with the goal of identifying strategies that may support more equitable learning

opportunities for all students. A basic qualitative design was the best method for this study because understanding principals' perceptions was the purpose of this study. This research design complemented and aligned with the research question and could provide information in the form of descriptive data about the area of interest (see Merriam & Tisdell, 2015; Patton, 2015). In a systemic method of inquiry, the participants' responses, meanings, and opinions were gathered to obtain a comprehensive understanding of the problem (see Merriam & Tisdell, 2015).

A basic qualitative design with semistructured interviews was chosen based on the purpose of the study. This design enables researchers to collect participants' perceptions without imposing a specific framework for the inquiry (Merriam & Tisdell, 2015). The type of data sought in this investigation (principals' perceptions) lent itself to semistructured interviews to learn about the issue with primary and follow-up questions (see Rubin & Rubin, 2012). This approach was descriptive and analytic, focusing on the meanings, processes, and perceptions principals had developed from their experiences (see Ravitch & Carl, 2016). Other qualitative approaches, such as phenomenology, which seeks to understand the subjective experience of participants by exploring a particular phenomenon or experience, or a case study, which is exploratory or explanatory in nature involving multiple sources of data, were not the best fit for this study (see Patton, 2015). I sought to address a significant gap in understanding. A basic qualitative design allowed for exploration and discovery, enabling me to uncover new insights, patterns, and themes related to principals' perceptions and decision making processes.

Role of the Researcher

The role of the researcher in a qualitative study is to gather perceptions from participants through interviews and discourse (Rubin & Rubin, 2012). A qualitative researcher seeks to understand an experience by accessing participants' thoughts and feelings through the interview process (Carl & Ravitch, 2021). Participants in the current study were informed that their participation would be voluntary, that they could withdraw from the study at any time, and that their responses would be confidential.

As the researcher, I was the instrument during this qualitative inquiry, requiring reflection and reporting of any potential bias or error (see Patton, 2015). Carl and Ravitch (2021) stated that examining assumptions that may influence research is essential. A researcher must be aware of their assumptions regarding the understanding of concepts and realities of the study because these can have implications for any conclusions drawn (Carl & Ravitch, 2021). I have worked as an educator for 15 years, and within that time served as a director, early childhood educator, instructional technology specialist, assistive technology specialist, program director, K–8 teacher, special education teacher, and national coordinator. Because I had worked in education and made decisions, directly and indirectly, affecting students, a part of my role in the current study was to avoid allowing my experiences or beliefs to affect the research. Reflection can occur by acknowledging notions and documenting them in journal entries and memos (Patton, 2015). This process is called journaling. As the researcher, I developed rapport and established relationships with participants solely for this study. While building these relationships, I was available to answer any questions about the study or participants' role

in the process. As the researcher, I took time before each interview to review the interview questions that were asked. After the interview, I sent the transcript to the participant for any additions or corrections.

The interviews were conducted with principals who work for the company that I also work for as a national multi-tiered systems of support and special programs coordinator. I had been with the company building my program for the previous 3 years. The company serves over 20,000 students, providing virtual, hybrid, and in-person learning. There are locations nationwide where curricula and educational services are provided. I did not have personal relationships with potential participants, nor was I in a position of power over any participant.

Methodology

A pool of eight to 10 participants was planned for this study. Interviews were conducted with K–12 principals with a minimum of 2 years of experience who had served as principals during the COVID-19 pandemic in the United States. Participant selection in qualitative research is a critical aspect that involves carefully considering the characteristics and attributes of individuals or groups who can provide valuable insights related to the research topic (Creswell & Creswell, 2017). In the current study, principals provided insight into their perceptions about the responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers during the COVID-19 pandemic. Qualitative inquiry does not prescribe a specific sample size because the sample size depends on what the practitioner wants to know and what can be done with available time and resources (Patton, 2015; Ravitch & Carl, 2016). Sample size

can also vary based on participation. A pool of eight to 10 participants was the intended number for the current study. Purposeful sampling is achieved by identifying and selecting individuals with knowledge and experience that pertains to the focus of the study and provides information-rich descriptions to achieve data saturation (Creswell & Creswell, 2017; Patton, 2015). When new information or insights cease to emerge from the data, saturation has been reached. In the current study, sampling continued until data saturation to ensure a sufficient depth of data and a variety of perceptions had been explored on the research topic.

Participant Selection

Participants must have served as principals of K–12 schools for a minimum of 2 years in the United States during the COVID-19 pandemic. Principal participants could have been any age, gender, and occupation, and were required to have had a minimum of 2 years of experience in this role. The inclusion criteria for this study were participants who served as principals with 2 years of experience in this role from March 2020 to December 2022 to provide rich and diverse perceptions on the research topic. Purposeful sampling was used to intentionally recruit participants to target specific characteristics and provide ample information relevant to the research objectives (see Patton, 2015). Access and availability to participants was achieved by recruiting individuals from various K–12 schools that were part of a national education company. Diversity and variation in the selection process captured a range of perspectives and experiences to ensure a comprehensive understanding of the research topic. Participant selection is an iterative and thoughtful process that involves aligning the research objectives with the

characteristics and attributes of potential participants to contribute valuable insights and enhance the overall quality of the research findings.

Instrumentation

An interview protocol (see Appendix B) is an instrument for inquiry and conversation to pose questions and explore participants' experiences (Patton, 2015). Instrumentation for the current study was the interview questions, recorded interviews, and interview transcriptions. Peer debriefing ensured the rigor and accuracy of my interview protocol. Peer debriefing provided experienced external insights to strengthen my research and enhance its credibility, validity, and reliability. Experts not associated with my study reviewed the interview protocol to ensure alignment and clarity. Subject matter experts provided insights into relevant constructs, suggested modifications, and evaluated the content and validity of the instrument. Their review of the interview questions and interview protocol aided in the confirmation that they aligned with the purpose of my study and would elicit data to answer the research question (see Creswell & Creswell, 2017). The conceptual framework and the literature review served as a guide to develop interview questions and assisted me in analyzing data from the interviews.

The interview questions were open-ended to encourage participants to share their perceptions. Semistructured interviews were conducted with participants, allowing for new ideas to be introduced and discussed. Participants' responses provided insight from their direct experiences with the phenomenon of the study (see Rubin & Rubin, 2012). When data saturation was achieved, I concluded the interview process because participants were not sharing new information (see Patton, 2015). MAXQDA software

was used to analyze the data. This software aided me in the coding of data. MAXQDA is designed to help researchers organize, manage, analyze, and visualize qualitative data. The interview textual data were transcribed, read, and coded using MAXQDA. This software is an additional tool in qualitative research for data analysis, consolidation, and reporting that helps researchers manage their data in an organized way.

Procedures for Recruitment, Participation, and Data Collection

The participants were K–12 principals who served in this role during the COVID-19 pandemic. The recruitment process began by obtaining permission to conduct the study through a research agreement from my company's human resources and legal department, which I obtained. I then sought Walden University research reviewer (URR) approval. After URR approval, I sought approval to conduct the study from the Walden Institutional Review Board (IRB). I received approval from IRB under approval #08-02-23-0992219. I then contacted site supervisors and administrators for the names and email addresses of school principals who were principals during the 2020–2022 school years (see Appendix A). Potential participants were invited by email to participate in the study. Invitations included my name, institution information, and the purpose of the study. The email also contained a letter of consent to access participants. The consent form within the email contained interview procedures, the nature of the study, risks and benefits, confidentiality information, identity masking on any collected data, and contact information for questions or concerns. Principals willing to participate replied with their consent.

There were eight principals who gave their consent to participate. Interviews with those who consented were scheduled for 1 hour at maximum. Because interviews were conducted with digital recording and transcription, recordings were saved, and conversations were transcribed using a speech to text application. The data were stored on a password-protected computer, and interviews were held privately where no one else could listen. Participants were provided with a copy of the interview transcript to review, add comments, or make corrections. Upon receipt of the transcript, participants had up to 7 days to reply with corrections, clarifications, or additions. The transcripts were updated with their revisions. During the interviews, I kept a journal to recollect the discussions and identify any bias that may have emerged. Participants had the opportunity to share any additional information or thoughts they deemed relevant. Prior to concluding the interview, I provided an overview of the next steps in the process and clarified the expectations the participants could anticipate from me moving forward.

Data Analysis Plan

As part of the data analysis plan, I listened to all interview recordings again and read each transcribed interview several times. Constant data comparison is a form of inductive analysis that contributes to emerging patterns in research (Patton, 2015). Copies of transcripts were sent to each participant for transcript review. Once accuracy was confirmed, the process of coding the data began. A systematic way to code data was necessary to analyze any data collected (see Ravitch & Carl, 2016). Transcripts were read, reviewed, and coded for word similarities to categorize data further and connect categories to emerging themes. MAXQDA, a qualitative data analysis software, was

chosen for this study to manage, organize, and analyze the data. Data were imported into the MAXQDA software, where I used tools to analyze the data to identify words, phrases, or sentences using open coding. This analysis identified patterns and themes in data. Within the program, I color coded the codes and organized them into categories by similar patterns that emerged. After creating these categories, I highlighted and determined themes, allowing data to be sorted and reviewed easily.

Textual analysis of data is essential in qualitative research to code words, phrases, or sentences (Rubin & Rubin, 2012). Labeling data in this way allowed for the organization of the data in a manner that helped me discover patterns and themes across the data (see Ravitch & Carl, 2016). Axial coding within the program allowed me to identify relationships among concepts, categories, and themes that emerged during the open coding process (see Saldana, 2016). According to Saldana (2016), axial coding provides a framework and structure for organizing data into categories and themes. Axial coding offers a systemic approach to organizing and making sense of the data by identifying relationships and connections between different elements. Data was effectively analyzed by combining open, inductive, and axial coding. Inductive coding is a bottom-up approach in which codes and categories are derived directly from the data while the researcher remains open to new insights (Saldana, 2016). Open coding is the initial phase in which codes are assigned to segments of data, inductive coding involves developing new codes and categories based on patterns identified during open coding, and axial coding focuses on establishing relationships and connections between the codes

and categories. Together, these coding approaches helped me facilitate a comprehensive and in-depth qualitative data analysis.

Issues of Trustworthiness

Researchers are ethically bound to identify and minimize bias when designing and undertaking research. Credibility, transferability, dependability, and confirmability are critical when establishing trustworthiness with participants (Ravitch & Carl, 2016). The same interview questions should be asked of each participant, guided by the interview protocol. In the current study, the data collection processes were explained to each participant. Creating relationships with interviewees and establishing rapport through continued communication and contact was important to this study.

Credibility, also known as internal validity, is the establishment of assurances to participants and data accuracy (Patton, 2015). To ensure credibility, member checking was used to verify the accuracy of the transcripts and identify inaccuracies. The data was analyzed and coded when the participant's transcript had been verified and deemed accurate.

Transferability, or external validity, means the study can be transferred or generalized (Patton, 2015). Transferability means that any research data collection or analysis findings can be transferred to another case or similarities to another case studied (Ravitch & Carl, 2016). A journal was maintained throughout the research process. Journaling supports qualitative inquiry through the thick description of the problem and the researcher's neutrality and transparency (Ravitch & Carl, 2016).

Dependability and reliability are those processes of inquiry and the responsibility that findings are consistent and can be repeated (Patton, 2015). The research design has been disclosed and reported, allowing other practitioners to use data analysis and collection of results to gather similar findings. Triangulation occurred through the collection of data from interviews. Data sets from multiple individuals of transcripts, observations, and notes during interviews were used to triangulate implicit and explicit data to develop a comprehensive understanding (Patton, 2015). Triangulation is one way to help ensure dependability by enhancing credibility, validity, and reliability by reducing bias and limitations through data collection from multiple participants (Ravitch & Carl, 2016).

Although researchers are immersed in research findings, their study relies on the ability to describe data trends and themes without bias and with accuracy. Confirmability aims to determine how researchers' biases and prejudices can affect interpretations of the data collected during a study (Ravitch & Carl, 2016). Adopting a reflexive approach to the study will help establish confirmability (Ravitch & Carl, 2016). Transcription and QDA software aided in creating an accurate, reflective study. Reflexive journaling was helpful for recorded notes and memos during each interview and verifying and checking data while promoting transparency.

Ethical Procedures

Ethical considerations were present throughout this study to avoid harm to any institution or individual. With the completion and consent of the Walden University Research Review (URR), I submitted the online request for Institutional Review Board

(IRB) for guidance on required forms, documentation of the study's data sources, and partner sites. I completed and submitted the Walden University IRB applications for research ethics approval and ethics self-check (Forms A and C). Beginning the research process required Walden Universities IRB and the company I work for, to approve the research before contacting participants or collecting data. I had obtained consent from my employer to conduct my research. I also obtained Walden Universities IRB approval. Participants understood the nature of the research and its risks and were not forced to participate (Rubin & Rubin, 2012). Participants were provided a consent form and understood the study procedures. They were informed that if they decided not to participate in the research, they were free to withdraw their participation at any time. If a participant chose to withdraw, any data collected from the individual would be destroyed. This information and verbal and written confidentiality statements were provided before any interviews occurred. Principals were purposefully selected for this study and perceived no harm or threat. Ethical challenges that may contribute to a study are influences of the researcher on participants, potential participants on the researcher, and confidentiality (Baker et al., 2016). Researchers and participants may have their own biases, values, or beliefs that may impact their interactions and could potentially impact the collection and interpretation of data. A potential bias could have arisen from conducting the study within my own work environment. However, as I am not a direct supervisor of any principal and do not have decision making authority over their performance evaluations or professional growth, the risk of bias related to power differentials is minimized. Participants were not incentivized for participation in this

study. Additionally, necessary precautions were taken to maintain privacy and confidentiality for participants while ensuring data collected was valuable potentially to inform future research. Participants' identities and all data collected has been safeguarded and kept confidential by being anonymized and aggregated to further mitigate potential bias. This data and recordings are stored on a password protected computer with multi-factor authentication for 5 years and then will be destroyed.

Summary

Chapter 3 contains a summary of the methodology and design that were used in this basic qualitative study. Also included within this chapter are research design and rationale, the role of the researcher, participant selection, procedures, instrumentation, data collection, data analysis, trustworthiness, and ethical procedures. Chapter 4 will include the setting, demographics, data collection, data analysis, themes, results, and evidence of trustworthiness.

Chapter 4: Results

The purpose of this basic qualitative study was to explore principals' perceptions on the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic. Analyzing the perceptions of principals in K–12 settings who served as principals during the COVID-19 pandemic provided further insight in the emerging area of educational leadership and technology integration. This approach not only aided in understanding the best practices for addressing the digital divide and barriers to learning but also contributed to providing all students with fair access to digital resources and opportunities. The following research question guided the research: What leadership responses and actions helped principals address the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic? The chapter addresses the setting, demographics, data collection, data analysis, evidence of trustworthiness, results by research question, and a summary of the data.

Setting

This qualitative study was conducted after the worldwide COVID-19 pandemic. In this study, I observed that the participants were highly motivated to contribute their experiences and insights to answer the research question. Despite the challenging circumstances of the COVID-19 pandemic, no significant personal or organizational conditions were identified that would have influenced the interpretation of the results. The participants actively engaged in the study, and their responses were not impacted by factors such as budget cuts, changes in personnel, or other external traumas. This

suggests a high level of dedication and commitment on the part of the participants to provide accurate and unbiased information for the study. Participants had at least 2 years of experience working as a principal and served in the role of principal during the COVID-19 pandemic. Because participants worked for a national education company across the United States, interviews were conducted through a video conferencing program. The participants were able to choose the dates and times that were most convenient for them.

Demographics

A total of eight participants who work as principals in K–12 education were included in my qualitative study. Table 1 includes the demographics and background information on each participant.

Table 1

Participant Background Information

| Participant | Grade range | Time served | Served as a principal during COVID-19? |
|-------------|-------------|-------------|-----------------------------------------|
| P1 | K–8 | 5+ years | <input checked="" type="checkbox"/> Yes |
| P2 | K–5 | 13+ years | <input checked="" type="checkbox"/> Yes |
| P3 | 9–12 | 5+ years | <input checked="" type="checkbox"/> Yes |
| P4 | 9–12 | 15+ years | <input checked="" type="checkbox"/> Yes |
| P5 | K–12 | 10+ years | <input checked="" type="checkbox"/> Yes |
| P6 | K–12 | 5+ years | <input checked="" type="checkbox"/> Yes |
| P7 | K–5 | 18+ years | <input checked="" type="checkbox"/> Yes |
| P8 | K–8 | 15+ years | <input checked="" type="checkbox"/> Yes |

Data Collection

The purpose of this study was to explore principals' perceptions of the leadership responses and actions that helped districts address the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic. Prior to data collection, approval from Walden University's IRB was received. Company approval had previously been received to conduct my study through a research agreement facilitated through the legal department. Data collection involved one-on-one semistructured interviews with eight K–12 principals who had served as principals during the COVID-19 pandemic. Purposeful sampling was used to select participants based on criteria ensuring the study's results aligned with the research goals (see Creswell & Creswell, 2017).

The initiation of contact occurred through email with district contacts who were site supervisors and administrators. These contacts were provided with background information about the study (see Appendix A). Following this, a formal consent letter was forwarded to prospective participants who had expressed interest through district contacts. Interested principals, after expressing their willingness to participate, provided their email addresses or contacted me directly. All potential participants received electronic invitations to participate through a formalized email sent from my Walden University email. The formal consent letter served as the body of the email asking for their consent and willingness to participate in the study. The consent form within the email contained interview procedures, the nature of the study, risks and benefits, confidentiality information, identity masking on any collected data, and contact information for questions or concerns. Principals willing to participate replied with their

consent. Upon receiving principals' consent responses and confirming their willingness to take part in the study, I scheduled the interviews. The scheduled interviews took place on specified dates and times. The day before the interviews, I sent reminder emails providing details of the interview's date, time, and link to access the interview via the video conferencing room.

Semistructured interviews were conducted privately via a video conferencing program. The video conferencing audio recording was used to transcribe the responses. The use of the video conferencing transcription was initially planned; however, it was not very accurate. Upon identifying the inaccuracies, I used a speech-to-text application. The speech-to-text program allowed for M4A audio files to be quickly turned into accurate text transcriptions. There were no unusual circumstances encountered during data collection. Patton (2015) stated that before conducting semistructured interviews, researchers develop a series of open-ended questions to encourage participants to freely share their perspectives and experiences, resulting in the generation of rich and in-depth data. The interviews were audio recorded and were conducted within the 30–60-minute time frame. Participants were interviewed in a noise-free area where the interviews were private and could not be overheard. Transcriptions were sent to each of the eight participants. Participants were given 7 days from receipt of the transcript to review it and return it to me if they had any corrections. Participant 1 returned the transcript with edits, and these edits were incorporated into the transcription. The edits were primarily on speech refinement and not the substance of the answers. Participants were given the opportunity to share any additional information or thoughts they deemed relevant before

the conclusion of the interview. A journal was kept to recollect the discussions with participants and help me identify any bias that may have emerged. Appendix B contains the interview protocol and scripts used when conducting the interviews. The interview questions were aligned to the research question.

Data Analysis

After the interviews were transcribed and all corrected transcripts were received from the participants, each transcript was thoroughly reviewed. Transcripts were imported in document form into MAXQDA software without time stamps for ease of coding. Eight interview questions were presented to each participant. The questions and answers were documented and categorized within MAXQDA. Once transcripts were uploaded, they could be activated for analysis, allowing the content to be accessible for coding and other analytical tasks.

Organizing the Data

Participant responses to each interview question were open coded by examining interview transcripts line by line, identifying preliminary codes. This process involved looking at the data without predefined categories or themes. A code in qualitative research represents a word or phrase capturing the essence of a set of data (Saldana, 2016). The purpose is to identify patterns, concepts, and themes by breaking data into small segments, such as words, phrases, or paragraphs. A second round of open coding was performed to identify subthemes and patterns. This extensive coding process led to the development of a second set of open codes. Table 2 demonstrates the progression from initial codes to open codes, representing the transformation of data.

Table 2*Sample of First Open Codes and Corresponding Second Open Codes*

| First open code | Second open code |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leadership | Participative leadership Servant leadership Decision making processes Empathy and trust building Modeling leadership |
| Consistency | Consistent schedules Routine and structure Online curriculum and instruction Virtual tools and resources Minimizing disruptions |
| Normalcy | Virtual learning Student support |
| Support | Teacher support and well-being Student support and well-being Community and family engagement |
| Communication | Communication and collaboration Decision making and empathy Connecting with the community Virtual meetings and professional development Parent–teacher interactions |
| Technology | Technology integration Challenges and adaptations Community and family engagement |

In the initial phase, raw data were systematically coded to generate first open codes, capturing broad themes such as leadership, consistency, normalcy, support, communication, and technology. These initial codes were then refined into more specific second open codes, representing detailed aspects such as participative leadership, consistent schedules, virtual learning, teacher support and well-being, communication and collaboration, and technology integration. This progression facilitated a focused coding approach, guiding subsequent inductive coding. During inductive coding, transcripts were revisited to identify emerging patterns and relationships, leading to the creation of new codes and categories. These preliminary codes were organized and highlighted using different colors in MAXQDA for clarity and systematic analysis.

Data Coding

After reading the transcripts multiple times, I conducted a first cycle of open coding by highlighting small portions of text, typically single words, to identify emerging concepts and themes. This phase allowed the identification of data segments capturing these concepts and themes. One hundred initial codes were identified during this process. A second round of open coding was performed to identify connections between a broad range of initial codes and the data. This step allowed for identification of subthemes and patterns related to leadership during the pandemic, providing a more nuanced understanding of the content. For example, the initial code “leadership” gave rise to “participative leadership” and “Servant leadership” during inductive coding. To illustrate this progression, Table 3 connects a sample of the initial 100 codes to subsequent open codes, representing the transformation of data.

Table 3*Sample of Categories and Corresponding Codes*

| Category | Code |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leadership style and approaches | Participative leadership Servant leadership Decision making processes Empathy and trust building Modeling leadership |
| Maintaining normalcy and consistency | Consistent schedules Routine and structure Online curriculum and instruction Virtual tools and resources Minimizing disruptions |
| Communication and collaboration | Communication with teachers, staff, and families Collaborative decision making Connecting with the community Virtual meetings and professional development Parent–teacher interactions |
| Teacher support and well-being | Supporting teachers’ needs Flexibility and understanding Teacher training and development Addressing teacher challenges Well-being and work–life balance |
| Student engagement and learning | Virtual learning experiences Student socialization and interaction Maintaining academic progress Assessing and addressing student needs Focusing on student well-being |
| Technology integration | Implementing and monitoring technology Allocation of technology resources Effective use of online tools Leveraging technology for education Digital resources and online platforms |
| Challenges and adaptations | Adapting to the pandemic Financial resources and funding Meeting the needs of vulnerable students Response to COVID-19 disruptions Managing changes and uncertainties |
| Community and family engagement | Collaborating with community partners Supporting families and students Community resources and connections Food distribution and support Outreach to local organizations |

Axial/Thematic Coding

Building on the insights gained from inductive coding, axial coding was performed to help examine subthemes within the data and refine overarching themes. This qualitative research method involves systematically categorizing and connecting larger data segments based on common attributes or meanings. It allowed for a more comprehensive and interconnected understanding of the information gathered from the transcripts. Axial or thematic coding, a qualitative research method, was used to identify and analyze patterns or themes within the data. This method involved systematically categorizing and connecting larger data segments based on their common attributes or meanings. The goal was to understand the underlying concepts and relationships identified during inductive coding. A systematic review of each transcript was conducted, focusing on common words and phrases forming the basis of the initial coded segments. Themes and subthemes based on relationships and patterns were discovered. Building on the insights gained from inductive coding, axial coding was conducted to examine subthemes. These themes represent the key findings of the qualitative analysis. Table 4 represents the outcome of axial coding capturing subthemes and refining overarching themes.

Table 4*Sample of Axial Coding*

| Theme | Category | Code |
|----------------------------------|----------------------------|--------------------------------------------|
| Leadership styles and approaches | Participative leadership | Involving stakeholders in decision making |
| | Servant leadership | Building trust and fostering collaboration |
| | Decision making processes | Collaborative decision making processes |
| | Empathy and trust building | |

This progression was based on grouped axial codes used to formulate overarching themes and capture the essence of related codes.

Themes

The final step involves the development of themes and sub-themes. Identifying connections and relationships among codes involved the synthesis and refinement of codes, aligning with the methodology outlined by Ravitch and Carl (2016). This process enabled a comprehensive examination of the dataset to unveil emergent themes that addressed the research questions of this study. The aim was to gain insights into the perceptions of K–12 principals and the responses and actions they took that helped to address the digital divide to improve equity and reduce barriers to learning during COVID-19. The resulting themes in Table 5 were derived from a synthesis of data analysis, the chosen conceptual framework, and the research question.

Table 5

Themes and Subthemes Identified from Participants' Semistructured Interviews

| Theme | Coded subtheme |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Leadership styles and approaches | Types of leadership Empathy and trust building Decision making processes |
| Communication and collaboration | Fostering responsibility for learning Communication with teachers, staff, and families |
| Community and family engagement | Supporting families and students Collaborating with families and community partners |
| Maintaining normalcy and consistency | Overseeing instructional programs Educational continuity Routine and structure |
| Teacher support and well-being | Strategic resource acquisition and allocation Flexibility and understanding Teacher training and development |

Discrepant Data

In this stage of the data analysis process, a search was conducted for any contradictory data to the emerging themes. Inconsistent data in qualitative research that could raise doubts regarding the validity of research findings (Yin, 2016). Authenticity of each participant's response is crucial to the study. Principals' responses varied based on the experiences they had during the pandemic. Based on this process, there have not been examples of discrepant data that would be contradictory to emerging themes.

Evidence of Trustworthiness

Credibility

Credibility in qualitative research is similar to a well-told story, where richness of data and the researcher's engagement weave a narrative that resonates with the truth of

the participants' experiences (Patton, 2015). Eight principals were interviewed that had a minimum of two years' experience and were working as principals during COVID-19. Each principal shared their perceptions on the actions or responses that helped them to address the digital divide, improve equity, and reduce barriers during COVID-19. For member checking, participants were provided a copy of their transcript to make corrections or clarifications if needed.

Transferability

Transferability provides in-depth and nuanced accounts of data, including direct quotes from participants, to help readers understand the context and meaning of the findings (Ravitch & Carl, 2016). Transferability provides readers with the necessary information and context to make informed judgements about the applicability of qualitative research findings to their own situations (Ravitch & Carl, 2016). All readers are given the necessary information and context from participants' responses to assess the applicability of these qualitative research findings to their unique situations (Patton, 2015). Additionally, to ensure transferability, transparency of data collection and analysis where themes were established based on participants responses and their relevance to the research question allows readers to identify parallels. This transparency enhances the transferability of this research because the readers can assess transferability of findings to other contexts.

Dependability

Dependability refers to the reliability and consistency of the research findings and the overall research process (Patton, 2015). Careful records were kept throughout the

research process. Audio recordings and transcription accurately captured data. A journal was used throughout the study to limit any chance of personal bias.

Confirmability

Confirmability refers to the extent to which research findings and interpretations of a study are grounded in the data and not influenced by biases, preferences, or preconceptions of the researcher (Ravitch & Carl, 2016). A researcher should engage in reflexivity to reflect on their own biases, assumptions, and potential influence on the research process. In this study, I gathered insights from principals with a minimum of two years' experience who served as principals during the COVID-19 pandemic. To enhance confirmability, eight interviews were conducted, and participant responses were rigorously analyzed and contextualized within the research question. I maintained objectivity during the interview process, devoid of personal biases or prior experiences, and encouraged reflexivity through journaling.

Results

The purpose of this basic qualitative study was to explore principals' perceptions of the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during COVID-19. For this study, eight K–12 principals were interviewed. Two of the principals were K–12 principals, two were 9–12 principals, two were K–5 principals, and two were K–8 principals. The coding process for this study followed a comprehensive qualitative analysis approach. The data analysis began with open coding, which involved the initial identification and labeling of relevant data segments. After open coding, a second round of open coding was conducted

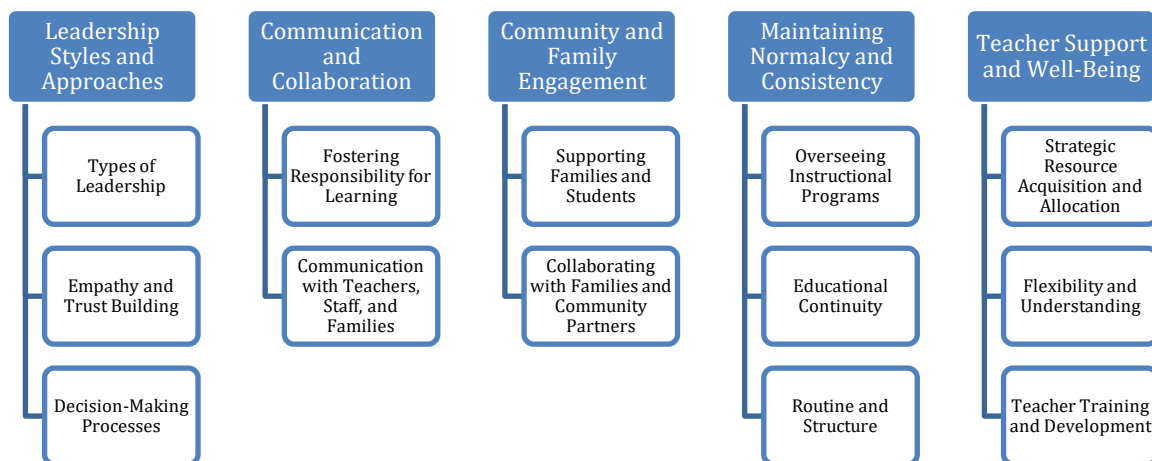
to further refine the codes and categories. These codes were then subjected to inductive coding, a process that involved identifying patterns, relationships, and themes within the data. Finally, axial coding was employed to connect the inductive codes into overarching themes and sub-themes. This multistage coding process allowed for a systematic and in-depth exploration of the data, facilitating the emergence of key themes that addressed the research questions. It provided a structured and rigorous approach to analyzing the data and drawing meaningful insights from the participants' responses (Braun & Clarke, 2012).

Every participant had the opportunity to respond to each of the interview questions. The eight participants' responses were consistent with one another which suggested that saturation was achieved. Through the analysis of data, five themes emerged. The following section will be a review of each theme, in detail, including quotes from participant interviews.

Research Question

What leadership responses and actions that helped principals address the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic?

The five themes that emerged from interviews with eight participants are shown in Figure 2.

Figure 2*Research Themes and Subthemes***Theme 1: Leadership Styles and Approaches**

Each of the eight participants provided insights into the various ways in which school leaders manifest their leadership qualities and employ strategies. The theme leadership styles and approaches represent various ways in which school leaders exhibit leadership qualities and strategies. Data revealed instances where administrators encouraged collaboration and sought input from teachers, students, and parents. For example, Participant 1 stated “I involve teachers and parents in school decision making. We have regular meetings where we discuss curriculum changes, school policies, and even allocation of resources.” Decision making processes where school leaders worked collaboratively in teams to make important choices. Participant 2 explained, “We have a collaborative decision making process in place. It involves teachers, staff, and sometimes even students. This ensures that decisions are well-informed and inclusive.” The significance of empathy, transparent communication, and trust building emerge as a

central theme in these discussions. Empathy and trust building were also key components of effective leadership. The data uncovered instances where administrators focused to build trust and demonstrate empathy towards their staff and students. Participant 7 shared, “I prioritize empathy and trust-building. It’s essential to show our teachers and students that we care about their well-being and needs.”

Types of Leadership

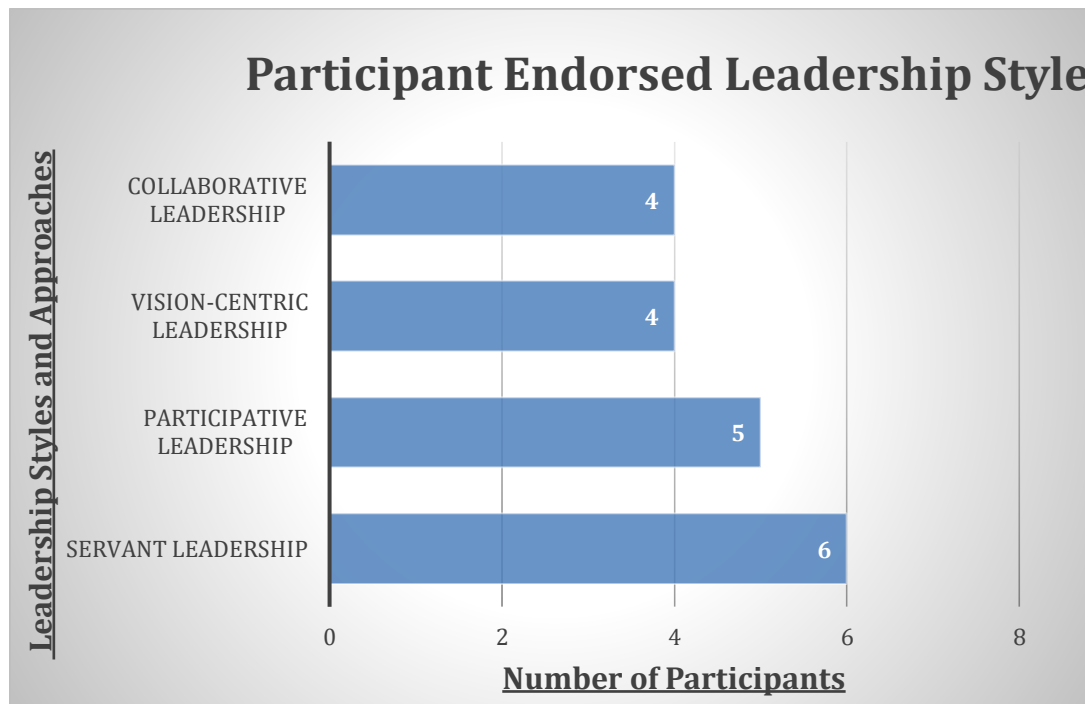
The data analysis shed light on the various leadership styles and approaches adopted by educational leaders during the unique challenges posed by the pandemic. The data offered valuable insights into the strategies employed by administrators to support their teachers, staff, and students. Through the participants’ narratives, we gain a deeper understanding of the leadership qualities, philosophies, and actions that played a pivotal role in navigating this complex educational landscape. The responses from participants reveals a spectrum of leadership and approaches employed during the pandemic. Six out of the eight participants mentioned servant leadership, participative leadership, vision-centric leadership, and collaborative leadership. Participant 5 found that channeling inner strength during a challenging time by placing an emphasis on servant leadership and working closely with the staff.

This exemplifies the importance of leaders being actively involved with their staff during challenging times. Participant 1 stated, “My style of leadership is participative leadership.” Similarly, Participant 4 stated, “You don’t always lead from the front.” Highlighting the type of leadership practiced emphasizing collaboration and shared decision making. For other leaders, maintaining the core mission and vision of their

institutions was paramount. Participant 5 stated, “Our mission and vision never changed.” This quote reflects leaderships commitment to maintaining a school’s mission and vision that focuses on the importance of preserving a school’s long-term goals and values even during tumultuous times. Participant 3 offered valuable insights, recounting the school’s participation in the Ohio State Wellness Initiative (OSWI) Pilot. This initiative, selecting 81 schools across Ohio, including ours, aimed at fostering a culture of wellness. Monthly meetings convened educators from diverse schools, creating a collaborative space to share and discuss wellness strategies. In these engagements, school leadership not only took part but also assumed roles as peers, engaging with external stakeholders and administrators from other institutions. This collaborative approach, exemplifying unique leadership styles and adaptive strategies, became particularly pronounced during the challenges posed by the pandemic as shown in Figure 3.

Figure 3

Distribution of Leadership Styles and Approaches Endorsed by Participants



Empathy and Trust Building

The subtheme of empathy and trust building in leadership styles, especially in the context of online education during the pandemic, is crucial. All eight participants stressed the significance of these qualities, highlighting how effective leaders applied them to navigate the unprecedented challenges of virtual education. To meet the needs of both school and stakeholders, effective communication by principals played a major role in establishing and maintaining relationships (Decman et al., 2021). In this role, leaders acted as empathetic guides, recognizing the shared humanity of all stakeholders, including staff, students, and families. Their approach was anchored in transparent communication and trust-building, crucial in times of uncertainty. The participants'

shared experiences underscore the vital role of these qualities in achieving success. These passages confirm that leaders who champion empathy and trust effectively create a climate where individuals feel valued and supported, steering their organizations toward resilience and success. As Participant 7 articulated, “The biggest lesson from the pandemic is that people come first. Taking care of our staff, families, and students, being mindful of their health and social-emotional needs, is essential for progress in teaching and learning.” Principals stressed the importance of prioritizing people and fostering trust as key elements during the pandemic.

Decision Making Processes

Within the context of leadership decision making processes, principals utilized a variety of strategies. One prominent strategy involves identifying struggling students and providing tailored resources and support, often through initiatives like professional development and school improvement. Another approach requires decisive decision making coupled with empathy, particularly during crises such as pandemic-induced school closures. Effective decision making is further fortified through transparent communication and collaboration among leaders and stakeholders.

Emphasizing the importance of involving teachers and stakeholders in decision making Participant 8 shared insights from within Professional Learning Communities (PLCs) and general professional development. Within these collaborative settings, targeted programs addressing the needs of struggling students are identified. The school engages collectively in the improvement process, identifying key challenges through observations and data analysis. Subsequently, resources and support are provided to assist

teachers in implementing necessary changes. A recent meeting, for instance, focused on the identification of students requiring extra support. In addition, the implementation of well-considered policies and protocols, exemplified by credit recovery policies and camera usage norms, acts as a cornerstone for reinforcing student success. Participant 4 reinforced this by mentioning that they had established norms for their school that staff would be on camera. Participant 4 emphasized the significance of establishing camera usage norms, advocating for a mandatory on-camera presence of teachers during COVID-19, irrespective of their personal situations or activities at home. This, according to Participant 4, aimed to foster a sense of connection between teachers and students, allowing students to perceive their educators as relatable individuals. Similarly, Participant 8 shed light on the process of identifying students facing academic challenges and subsequently offering tailored resources to bolster their support—an exemplification of the pivotal role decision making plays in enhancing student success. Describing this approach, Participant 8 articulated, “We’ve identified programs that specifically target struggling students. It involves engaging in the school improvement process collaboratively with a team of teachers, where we collectively identify the most prominent challenges students are grappling with.” This collaborative effort among teachers involves an analysis of data to identify struggling students, followed by problem solving team discussions on the available resources and potential professional development needed to support both teachers and the implementation of effective strategies.

In essence, effective leadership hinges on inclusivity, involving all stakeholders and deeply considering the diverse needs of individuals involved in the decision making process. Participant 1 underscored this by explaining, “What I do is involve all stakeholders when we decide.” Collaboration and teamwork were also significant factors, as emphasized by Participant 2, who noted, “The second thing I would say that I probably learned was the fact that most leaders all want to jump in together to help and create solutions together. And so, the collaboration and the teamwork was really great amongst leaders, amongst most teachers.”

Theme 2: Communication and Collaboration

In the complex landscape of education, effective communication serves as the cornerstone for overcoming challenges and fostering collaborative efforts. As we delve into this theme, the narratives unveil a tapestry of interconnected practices where educators, students, and families synergize their efforts to navigate the intricate demands of challenging times. From identifying students in need of support to fostering a culture that rewards academic skills over punitive measures, communication emerges as the linchpin that bridges the various facets of the educational ecosystem. This theme explores the multifaceted dimensions of communication and emphasizes the collaborative endeavors that extend beyond the classroom and school walls. During COVID-19 communication and collaboration played a crucial role in implementing strategic plans, providing essential technologies, and alleviating the concerns of both staff and parents. When work in tandem happens between leadership and parents by leveraging face-to-face virtual meeting sessions and official classes a robust communication network is created.

The focus extends beyond merely the transmitting of information to involving the explicit training of students to be active listeners, nurturing relationships, and transparently communicating safety protocols. Looking closely at these narratives, it becomes evident that effective communication is not just a tool but a transformative force that propels the education community forward, fostering resilience and adaptability in the face of challenges.

Fostering Responsibility for Learning

Principals highlighted diverse strategies to instill a sense of responsibility for learning in students. Participant 1 shared that collaboration with teachers and families is crucial to bridge the gap between students and teachers, fostering active listening in the classroom. Similarly, Participant 4 added that building relationships with students before focusing content. Meaningful learning involves understanding the school experience and forming connections with educators. This leads to improved student engagement and a stronger relationship with learning. These strategies emphasized in this passage emphasize collaboration and teamwork to enhance students' learning experiences, as well as the importance of meaningful learning and building relationships to enhance students' relationship with learning. These approaches not only focus on students but also highlight the support needed for teachers. This support includes fostering collaboration among teachers to raise awareness of progress, aiding teachers in maintaining focus during challenges, and promoting a positive and supportive learning environment. The overarching goal is to create a positive and supportive learning environment, empowering students to autonomously embrace their learning responsibilities.

Communication With Teachers, Staff, and Families

Communication dynamics were a primary focus in the pandemic-era educational landscape, particularly in the interactions with teachers, staff, and families. Participant 5 stated, “you have to become assertive and firm communicating and upholding job baseline expectations.” Emphasizing the need for assertiveness in communication, highlighting leadership’s role in setting and maintaining standards. This sub-theme includes articulating plans for providing devices to students, maintaining a visible and assertive presence in enforcing job expectations, and amplifying the use of face-to-face video conferencing meetings and official class communications. Challenges in reaching families without adequate technology are underscored, and strategies for allaying fears, emphasizing the importance of virtual class attendance, and disseminating safety protocols are discussed. The various dimensions of effective communication by principals during the pandemic encompass their proficiency in navigating the virtual environment. A recurring theme throughout is the crucial role of transparency and clarity in effective communication, underscoring the need for meticulous plan implementation by administrators. This highlights the multifaceted nature of principals’ effective communication strategies during these challenging times.

Theme 3: Community and Family Engagement

The theme of community and family engagement in education cannot be overstated. This theme explores the comprehensive strategies implemented by school leadership. These strategies not only welcome new parents but also offer additional support for students confronting academic and social-emotional challenges. The

commitment extends to providing enriched hardware and resources dedicated to addressing both academic and mental health needs.

Central to this theme is the emphasis on cultivating meaningful relationships with students. It involves celebrating their successes and extending unwavering support to those encountering difficulties. Moreover, the school's engagement transcends its physical walls. It actively collaborates with external partners and other districts, ensuring a broad spectrum of resources and support for families. This holistic approach to community involvement has resulted in high levels of parent satisfaction. The intentional efforts of leadership, including specialized sessions that cater to the unique needs of both families and students, underscore the commitment to fostering a supportive educational environment. This commitment is further highlighted by the collaboration with other districts and compliance partners, emphasizing leadership's dedication to providing tailored support for the school community.

Supporting Families and Students

To help families feel comfortable and somewhat acclimated to their technological tools, schools instituted onboarding processes for new parents. Open office hours were made available for families, and strategic programs like Mindful Mondays and Welcome Wednesdays were implemented to facilitate family support and ease the transition to online learning. Participants 1, 4, 8 shared they substantial onboarding and reinforcements as well as other supports to help families and ease transition. Celebrating achievements, providing essential supplies and technology access, and encouraging teachers to dedicate time to connect with students were key initiatives. Participant 7

shared that the school's proactive assistance to families and teachers in acclimating to online learning by helping "families and teachers make online school as a second nature."

In response to the academic and social-emotional challenges faced by students, the school implemented targeted measures to provide additional assistance. Notably, at the elementary level, a dedicated social-emotional curriculum and the presence of a counselor were established, accompanied by increased resources allocated for mental health support. Participant 5 highlighted the proactive role of the School Board in addressing the impact of COVID-19 on mental health and family crises. Their efforts included augmenting mental health resources through contracted services and the introduction of grade-level counselors. Throughout the pandemic, schools prioritized maintaining consistent connections with both staff and students. This support was facilitated through the establishment of various clubs, groups, and grief counseling initiatives. Participant 8 elaborated on the provision of grief counselors and mental health resources to meet the unique needs of students during this challenging period. Similarly, Participant 5 emphasized the prevalence of mental and emotional challenges among staff and families, arising from illness, loss, chaos, and chronic stress. Nevertheless, they found solace in staying connected and mutually supporting each other. School's comprehensive approach to communication with teachers, staff, and families emphasized the importance of support and connection in the face of challenges. This narrative portrays a multifaceted approach to addressing the well-being of the school community during the unprecedented circumstances of the pandemic.

Collaborating With Families and Community Partners

Principals emphasized community and family engagement, where they actively collaborated with external partners and worked to involve parents. Parent satisfaction was gauged through achieving high scores on parent satisfaction surveys. Community initiatives such as food drives and collaborative efforts with other districts and organizations were aimed to bolster support for students and families. Another community initiative involved the development of contingency plans designed to address emergencies, specifically tailored to the challenges presented by COVID-19. These plans outlined clear guidelines, including stay-at-home measures, return-to-school protocols, and a comprehensive framework for potential future occurrences. They served as field guides, providing a structured set of expectations and actions to be taken in the event of unforeseen circumstances. Participant 7 stated, “yes, we did need to have some food drives for our community.” Six out of eight participants also emphasized the importance of addressing food needs, highlighting their collaborative efforts to ensure that students and families had access to necessary food resources. Principals placed a premium on intentional onboarding sessions for families and viewed them as primary partners in the educational journey. Participant 1 underscored the pivotal role of students and families as essential collaborators in the educational journey. A proactive approach was taken to foster collaboration by engaging with district superintendents and principals. The school’s operations were further supported through partnerships with compliance and academic entities, reflecting a comprehensive network of support. In alignment with this perspective, Participant 8 shared insights from their district, highlighting the collaborative

efforts of external partners in engaging parents and working in tandem with local school districts. These collaborative endeavors encapsulate the ethos of shared responsibility and community engagement in the pursuit of educational excellence.

Theme 4: Maintaining Normalcy and Consistency

Amid the unprecedented challenges posed by the COVID-19 pandemic, educational institutions grappled with the imperative to maintain normalcy and consistency in the K–12 education landscape. This section explores the strategies and initiatives undertaken by schools to ensure a stable and meaningful learning environment for students during these tumultuous times. From targeted remedial programs for struggling students to the seamless integration of technology and innovative co-teaching models, the focus has been on fostering a sense of routine and continuity. By examining how educators managed disruptions, implemented engagement strategies, and collaborated with stakeholders to establish a stable educational foundation, we uncover their actions while preparing for an uncertain future.

Overseeing Instructional Programs

In the pursuit of maintaining instructional excellence amid pandemic-induced challenges, schools proactively secured additional funding to address the needs of struggling students. This financial boost enabled the implementation of targeted remedial programs in math and reading. Participant 8 emphasized the benefit of having additional dollars, by sharing their ability to target students with some programs that remediate math and reading skills, proving highly beneficial. Despite facing hurdles, schools' commitment remained centered on sustaining learning and delivering instruction through

technology. For Participant 7, resolving technology challenges was a crucial milestone, ensuring that technology was no longer hindering learning. Concurrent with these efforts, dedicated sessions were facilitated to empower students in accessing online resources. Efforts were also made to equip teachers with strategies for managing inappropriate behavior effectively in the virtual setting. Teachers were prompted to assess students' experiences beyond the classroom to gauge mastery of standards. By implementing effective co-teaching models leaders ensured that students did not miss out on instruction. Participant 3 shared they had created effective co-teaching models so that if one teacher was out, the students would not lose instruction, they had teachers on the team who could take over for one another. After certain schools reopened, safety protocols, including mandatory mask usage and restrictions on simultaneous entries of students into the building, were enforced. Continuous monitoring of resource utilization and growth was conducted to ensure ongoing effectiveness.

Educational Continuity

Amid the unprecedented challenges presented by the COVID-19 pandemic, the commitment of leadership to ensure educational continuity stood as a beacon of resilience and adaptability. Participant 3 noted that the impact of COVID-19 on staff or their families could affect students' learning. Instances such as staff members having to be absent to care for sick family members could disrupt the learning process. Recognizing this, it became crucial for leadership to anticipate and formulate plans to minimize interruptions to education to the greatest extent possible. Participants also provided insights into the widespread impact of the pandemic on students. Participant 4

emphasized the resulting trauma, loss, and disruption, underscoring the profound challenges faced by students. Moreover, Participant 2 highlighted the adverse effects on mental health caused by the absence of in-person schooling. Amidst these challenges, Participant 1 stressed the importance of having a technology plan and avoiding categorical statements like ‘never’ for unlikely events. Notably, the absence of fallback plans in many districts underscored the need for proactive measures. Recognizing the pivotal role of communication, regular interactions with families became a cornerstone. Participants 3 and 8 emphasized the necessity of newsletters, emails, and videos in fostering a collaborative environment that transcended physical boundaries. Teachers, acknowledged as agents of change, were encouraged to share their practices, promoting a culture of innovation and mutual support. Participant 3 highlighted the significance of teachers sharing their methods to ensure consistent and quality instruction for all students. Furthermore, Participant 4 emphasized the critical role of building relationships and connections with students for educational success, particularly during challenging times like COVID-19. Amid the disruptions, relationships were prioritized, understanding the profound impact of the pandemic on mental health. Central to their ethos was the acknowledgment of the need to be prepared for the unexpected, underscoring a proactive stance in ensuring uninterrupted educational experiences for their students. These insights collectively underscored the multifaceted approach taken by educational leaders to ensure continuity, support, and innovation in the face of unprecedented disruptions.

Routine and Structure

Within the backdrop of the pandemic's challenges, the importance of maintaining normalcy and consistency for students became evident. Participant 3, for instance, highlighted the evolution of virtually held lunch buddies into a communal affair, fostering a sense of community during isolation. The commitment to consistency echoed through the perspectives of Participants 4, 5, 6, and 7, who emphasized the priority of consistent class meeting times, ensuring students had regular access to their teachers. This commitment extended to the introduction of weekly social opportunities, mirroring in-school interactions, and became a lasting practice. Participants 2 and 6 further noted the intentional embedding of consistent socializing opportunities throughout the week was important to create a sense of normalcy. The idea of being able to provide normalcy and consistency also played a pivotal role in the collaboration time among teachers, facilitating the sharing of experiences and ensuring a collective awareness of students' needs. The creation of a clear and impactful schedule emerged as a cornerstone, focusing on both consistency and meaningful learning experiences. Principals directed efforts to allocate time for student socialization, recognizing its importance. Regular check-ins, spanning across classes, staff, and parents, became a fundamental aspect of connection and support. Participant 7 specifically highlighted the implementation of regular check-ins for students, staff, and the parent community.

The commitment to stability and consistency proved crucial, attracting families seeking a steadfast educational environment. This emphasis on a consistent schedule was a deliberate effort to provide a semblance of normalcy for students, a sentiment

articulated by Participant 5 noted that in their experience people craved normalcy and consistency. This commitment persisted, ensuring that, despite external uncertainties, the learning curriculum remained steadfast and reliable. This sub-theme underscores educators' unwavering dedication to provide routine and structure by creating a stable and consistent learning environment, recognizing the profound impact this had on students during the challenging times of the pandemic. Routine and structure, amidst unpredictability and lack of perceived safety, provided a reliable anchor for both educators and students because it was something they knew and was reliable when many things did not feel safe or were not predictable.

Theme 5: Teacher Support and Well-Being

Central to this theme is the commitment to valuing teacher input. Professional development initiatives are designed with teacher needs and preferences in mind, striving for relevance and engagement for all educators. Open office hours are provided specifically for new teachers, offering a dedicated space for questions and support. This theme encapsulates the school's holistic approach to education—one that prioritizes not only the academic well-being of students but also recognizes and addresses the crucial role teacher support and well-being play in sustaining a resilient educational community, especially in challenging times like the pandemic.

Strategic Resource Acquisition and Allocation

In the pursuit of addressing the challenges posed by the digital divide during the COVID-19 pandemic, school leadership engaged in strategic resource acquisition and allocation, collaborating seamlessly with district officials. The urgency to provide

equitable online access across diverse communities led to a vital initiative—ensuring the distribution of mobile hotspots where they were needed most. Participant 7 emphasized the collaborative efforts, by sharing, they were working with their district leadership, to ensure that mobile hotspots were placed in communities requiring them, ensuring all students had equitable access to online learning. The commitment to identify essential resources and allocate them judiciously manifested in various endeavors. Participant 8 shed light on leveraging increased funding from a significant number of students qualifying for free and reduced lunch. This deliberate choice echoed the school's dedication to maximizing resources to meet specific needs, reflecting a targeted and strategic approach. Moreover, the school demonstrated agility in responding to the evolving technological needs of educators. Participant 8 articulated this adaptive response, noting, that they had received some additional funding that allowed them to acquire some additional tools in the toolbox for teachers to utilize. This creative use of funding empowered teachers to experiment with technology, fostering a more effective and engaging online teaching experience.

Leadership's resourcefulness extended beyond technology to the realm of counseling services, where timely allocation proved critical for addressing students' social-emotional needs. Participant 1 shared insights into the strategic use of counseling resources, particularly in addressing instances of depression, exemplifying the school's holistic approach to student well-being. The commitment to impactful resource allocation echoed throughout the school, evident in investments in professional development and teacher wellness programs. Participants 5, 6, 7, and 8 highlighted the importance of time

allocation and continuous monitoring of resource usage. Participant 1 underscored a fundamental principle, by sharing if staff was not using the tool or technology purchased then, they were going to lose it. This principle emphasized the importance of thoughtful and effective channeling of resources to address the unique needs of students and educators. In essence, the strategic resource acquisition and allocation approach went beyond obtaining additional funding—it was about navigating educational needs with foresight and precision.

Flexibility and Understanding

During this time, there was a profound realization of the social and emotional needs within the teaching community. Leaders grappled with a delicate balance between professional duties and personal lives, sparking a cultural shift toward flexibility and understanding from colleagues and administrators. Within this evolving landscape, staff meetings transformed into vital forums where educators openly shared their challenges, forging a support system from within. Participant 4 eloquently portrayed this shift, revealing that in their staff gatherings, there is an acknowledgment of the difficulties faced, a space to share ongoing challenges, propose ideas, and provide support through shared venting sessions. As the shift to virtual classrooms unfolded, authenticity emerged as a linchpin. Teachers, embracing vulnerability, invited students into the real and sometimes chaotic aspects of their lives. The emphasis on being real and vulnerable during virtual interactions became a cornerstone, fostering meaningful connections. Participants 3, 4, 5, and 6 attested that authenticity carried profound meaning when everyone was working from home.

Recognizing the toll on teacher well-being, administrators took proactive steps, actively encouraging educators to prioritize self-care. Participant 3 emphasized the importance of allowing staff to take time off when drained or burnt out. Recharging and prioritizing mental health became paramount, acknowledging the transformed landscape of teacher burnout in the post-pandemic era. These narratives unveil tangible instances where flexibility and understanding transcended, becoming integral components in sustaining teacher well-being. The sub-theme unfolds as a testament to the resilience and adaptability of educators, showcasing how a supportive and flexible environment nurtured the social and emotional needs of the teaching community amidst unprecedented challenges.

Teacher Training and Development

In response to the influx of new teachers during the COVID-19 enrollment surge, schools embarked on extensive hiring initiatives, necessitating the creation of a comprehensive onboarding and training programs. Participant 1 highlighted the program's robust nature, emphasizing its focus on guiding teachers through the intricacies of online curriculum utilization, virtual class facilitation, student engagement in the virtual environment, and effective communication with families—standard practices in this new educational landscape. The commitment to ongoing professional development manifested in a thoughtful allocation of time for reflection and learning. Participant 7, recognizing the importance of addressing evolving challenges and refining teaching strategies, implemented a four-day instruction week with one day dedicated to professional learning. This reflective space emerged as a vital component in enhancing

instructional approaches, as Participant 7 underscored the significance of aligning professional development with the specific needs articulated by the staff. The introduction of new literacy and progress monitoring programs necessitated targeted professional development sessions. Participant 8 shared the excitement among teachers about the prospect of using the new literacy program, citing expert-led professional development as a catalyst for enthusiasm. Similarly, the adoption of progress monitoring programs introduced another layer of training, reflecting the school's commitment to staying abreast of evolving educational methodologies.

Acknowledging the diverse technological competencies among teachers, the school embraced a differentiated training approach, as affirmed by Participant 1. This tailored strategy ensured that technologically challenged teachers received the necessary support for successful integration into the virtual teaching environment, while more experienced educators received targeted assistance. Beyond formal training, schools cultivated a culture of open communication and support. Participant 1 highlighted the provision of a daily dedicated hour for new teachers to seek guidance and ask questions in a virtual open office format, establishing a personalized support system to promptly address individual concerns and queries. The multifaceted commitment of leadership to teacher training and development encompassed onboarding, professional development, differentiated training, and continuous support. This comprehensive approach underscores the paramount importance of equipping educators with the tools and knowledge essential for effective teaching in the dynamic landscape of virtual education.

Summary

In exploring the multifaceted experiences of educational leaders during the COVID-19 pandemic, this chapter had five themes that encapsulate the dynamic and resilient response of a school community navigating unprecedented challenges. Each theme unraveled a layer of the complex tapestry, showcasing the strategic initiatives and collaborative efforts that contributed to the school's resilience during these tumultuous times. Quotations from interview transcripts provided support for the themes generated.

In examining the responses provided by the eight Participants to the challenges posed by the COVID-19 pandemic, several key themes emerged, each representing a facet of the institution's resilience. First, leadership played a foundational role, with educational leaders demonstrating a commitment to adaptive and collaborative styles, as exemplified by the three-phase approach outlined by Longmuir (2023). Second, effective communication served as the linchpin, fostering collaboration among educators, students, and families. This emphasis on communication dynamics, responsibility for learning, and explicit training of students reflected a transformative force propelling the education community forward. Recognizing the centrality of community and family engagement, the school's comprehensive strategies addressed academic success while also attending to the social and emotional needs of students and families, through collaboration with external partners and intentional support initiatives. Amid disruptions, the school's commitment to maintaining normalcy and consistency stood out, with targeted remedial programs and innovative co-teaching models providing a stable foundation for student learning. Finally, the heart of the school's resilience lay in its commitment to teacher

support and well-being. Strategic resource acquisition, flexibility, understanding, and comprehensive training initiatives showcased a holistic approach that prioritized the social, emotional, and professional needs of educators.

Key Findings:

- Equitable resource distribution and strategic allocation were pivotal in addressing the unique needs of diverse communities.
- Flexibility and understanding proved essential in fostering a collaborative and supportive environment, acknowledging the social and emotional toll of the pandemic on both educators and students.
- Comprehensive teacher training, differentiated approaches, and continuous professional development reflected a commitment to adaptability and the evolving needs of educators.
- The school's resilience extended beyond academic success, emphasizing the importance of community engagement, maintaining routine, and prioritizing the well-being of all stakeholders.

The study's key findings indicate the need to examine the future implications of leadership's response and proposing recommendations for sustained educational resilience. Through the lens of these themes, the narrative unfolds, providing a comprehensive understanding of the journey principals faced while offering valuable insights for the broader educational community. In Chapter 5, The interpretation of the findings, limitations of the study, recommendations, implications and reflections, and conclusion will be provided.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to explore principals' perceptions of the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic. Ravitch and Carl (2016) underscored the dual nature of qualitative research, emphasizing the need for it to be descriptive and analytic. This means that the researcher should not only provide a detailed account of the phenomenon under investigation but should also provide the analytical processes used to interpret and make sense of the data. This twofold approach ensures a comprehensive understanding of the subject matter, combining rich descriptions with thoughtful analysis to uncover deeper insights. Patton (2015) also supported this dual perspective, advocating for a qualitative methodology that seamlessly integrates both descriptive and analytic elements to enhance the rigor and depth of the research.

In the current basic qualitative study, the primary objective was to explore and analyze the perceptions, experiences, and responses of principals. My aim was to provide a detailed description of the complex processes and meanings that educators attributed to their experiences, offering valuable insights into the intricate web of their perspectives. Through a qualitative lens, I sought to uncover the nuanced aspects of educators' experiences, delving into the rich tapestry of their perceptions and actions within the educational landscape.

Following a semistructured interview protocol with eight participants, I collected and transcribed data using a speech-to-text application. The analysis involved coding and

categorizing transcripts to identify themes, forming the basis for the study's findings. These findings highlighted the importance of equitable resource distribution, flexibility, comprehensive teacher training, and the school's resilience beyond academic success. This chapter includes the interpretation of findings, implications for future research, and recommendations to enhance educational resilience.

Interpretation of the Findings

The conceptual framework was considered when addressing the findings of the study. The study's findings are interpreted within the context of Hitt and Tucker's (2016) unified framework, which was selected for its relevance to the multifaceted experiences of educational leaders during the COVID-19 pandemic. I used the conceptual framework to interpret the multifaceted experiences of educational leaders during the COVID-19 pandemic. The selection of this framework was driven by its specific components, each contributing essential insights into the complexities of leadership dynamics during crises. By integrating this theory, I sought to provide a comprehensive understanding of the leadership responses in the face of adversity. Throughout the study, Hitt and Tucker's unified framework was applied systematically, allowing for a nuanced exploration of the intricate interplay between various factors. Despite acknowledged limitations, the study underscored the unique contributions of this framework, emphasizing its utility in guiding future research and practical strategies for educational leadership during crises. The following research question guided the research: What leadership responses and actions helped principals address the digital divide to improve equity and reduce barriers to learning during the COVID-19 pandemic? There were five themes in this study: (a)

leadership styles and approaches, (b) communication and collaboration, (c) community and family engagement, (d) maintaining normalcy and consistency, and (e) teacher support and well-being.

As presented in the literature review, much of the literature discussed Hitt and Tucker's (2016) unified framework: equal educational opportunities and COVID-19, digital divide in education, digital equity and access, remote learning and COVID-19, and principals' instructional leadership roles. The literature review presented the direct or indirect leadership actions and responses that flowed from leadership to teachers and from teachers to families and students that influenced outcomes and achievement (Azukas, 2022; Bartlett, 2008; Boyce & Bowers, 2018). As referenced by Pollock (2020), school leaders had to become technological leaders; understand online curriculum and virtual instructions; and become the lead communicator and deliverer of policy while transitioning and supporting teachers, staff, students, and families.

Theme1: Leadership Styles and Approaches

This study explored the diverse responses of educational leaders to the challenges posed by the COVID-19 pandemic, aligning with Hitt and Tucker's (2016) unified framework. The themes unfolded in a phased progression, mirroring the three-phased approach outlined by Hitt and Tucker (2016) and Longmuir (2023). Initially, leaders buffered and translated information, fostering community amid uncertainty. Subsequently, leaders made decisions, stabilized new practices, and sought feedback. Finally, attention shifted toward recovery, learning from experiences, and adapting to a new normal. The narratives of the eight participants revealed instances of collaborative

decision making emphasizing empathy, transparent communication, and trust building as central tenets of effective leadership. Participants identified servant, participative, vision-centric, and collaborative leadership as guiding principles.

The subtheme of empathy and trust building emerged as crucial, with leaders acting as empathetic guides recognizing the shared humanity of stakeholders. In the decision making processes, collaborative efforts, transparent communication, and inclusivity proved essential. This alignment with Hitt and Tucker's (2016) framework reflected the evolution of leadership styles to address the unique challenges of online education. The key findings underscored the significance of equitable resource distribution, flexibility, comprehensive teacher training, and community engagement in navigating the complexities of the pandemic. Effective leadership, as revealed in this study, encompassed resilience, adaptability, and a commitment to the well-being of all stakeholders.

Research indicated that effective school leadership influences teacher self-efficacy (Kraft et al., 2020). Teachers' confidence in meeting the needs of their students is closely tied to feeling supported by their leaders (Cardullo et al., 2021; Evans-Amalu & Luke Luna, 2021; Sahni et al., 2021). Principals who adeptly managed and maintained virtual spaces during this period played a crucial role in ensuring educational continuity (Pollock, 2020). Positive communication and proactive yet flexible decision making were identified as key factors that helped teachers, students, families, and the community comprehend and navigate the crisis effectively (Longmuir, 2023).

Theme 2: Communication and Collaboration

In line with Hitt and Tucker's (2016) emphasis on building a supportive organization through strategic resource allocation and collaborative decision making, this theme consistently underscored the importance of transparent and clear communication. Longmuir's (2023) acknowledgment of the elevated community leadership role of principals in the virtual environment emphasized the meticulous planning required in challenging times. The multifaceted nature of effective communication strategies by principals during the pandemic became a central theme, illustrating their adaptability and resilience in ensuring timely and transparent interactions. Participant anecdotes illustrated how transparent communication fostered collaboration among educators, students, and families. Principals communicated plans, provided necessary resources, and facilitated face-to-face video conferencing meetings, not only overcoming pandemic challenges but also fostering a cohesive and supportive educational community.

Research indicated that effective leaders dedicated significant time to timely and honest communication during this period (Longmuir, 2023). Clear policies addressing the needs of the learning community helped assuage fears and increase confidence (Decman et al., 2021; Tamar et al., 2023). Competency in online communication strategies is essential for virtual leadership to manage relationships and bridge the physical and mental distance among stakeholders (Decman et al., 2021; NAESP, 2020; Pollock, 2020).

Theme 3: Community and Family Engagement

This theme underscored the pivotal role of school leadership in fostering comprehensive strategies for community involvement, aligning closely with Hitt and

Tucker's (2016) unified framework, and reinforcing key findings from the study. The school's multifaceted approach became a cornerstone in addressing the well-being of the entire school community during the unprecedented circumstances of the pandemic. The strategies implemented by school leadership, such as welcoming new parents, offering support for students, and extending resources dedicated to academic and mental health needs, reflected a commitment to equitable resource distribution and strategic allocation (Tamar et al., 2023). Central to this theme was the cultivation of meaningful relationships with students, echoing the framework's principles of collaborative decision making and strategic resource allocation. Leaders influence teaching and learning through a familial path, working closely with parents and the community (Bailey & Weiner, 2022; Leithwood et al., 2019). Leaders' deliberate initiatives, such as offering specialized sessions for families and students, emphasized the dedication to fostering a supportive educational environment, maintaining relationships, and cultivating a healthy culture (Decman et al., 2021; LeChasseur, 2014). Anecdotes from participants illustrated the school's commitment to community and family engagement, seen in onboarding processes, open office hours, and strategic programs such as "Mindful Mondays" and "Welcome Wednesdays," demonstrating flexibility and understanding. Azukas (2022) highlighted how these initiatives helped build a sense of community, fulfilling the need for connection and well-being.

Leadership initiatives to provide essential supplies, technology access, and encouragement to teachers to connect with students aligned with the commitment to adaptability and meeting the evolving needs of educators. Collaborating with families and

community partners, where principals actively involved parents and gauged satisfaction, reflected the ethos of shared responsibility in the pursuit of educational excellence. Collaborative efforts with external partners, resulting in food drives and contingency plans for emergencies, aligned with the framework's emphasis on building a supportive organization through strategic resource allocation. McBrayer and Wells (2023) supported this, emphasizing how providing resources to meet student and family needs contributes to academic and nonacademic growth. The strategies employed not only helped overcome challenges but also fostered a collaborative and supportive environment essential for the well-being of all stakeholders.

Theme 4: Maintaining Normalcy and Consistency

This theme illuminated the relentless efforts of educational institutions to ensure stability and meaningful learning amid the challenges of the COVID-19 pandemic. Aligned with Hitt and Tucker's (2016) framework, this theme underscored the crucial role of routine, stability, and consistency for educators and students. Meticulous oversight of instructional programs demonstrated a commitment to sustaining learning excellence amid pandemic-induced challenges, in line with the framework's emphasis on strategic resource allocation and adaptability. Secured funding empowered schools to implement targeted remedial programs, integrate technology, and establish innovative coteaching models showcasing educators' adaptability.

Research affirmed that leadership consistency and engagement opportunities foster positive mental energy among staff, students, and families (Azukas, 2022; Bailey & Weiner, 2022; Lee & Lee, 2020). During the pandemic, maintaining educational

continuity proved pivotal by establishing normalcy and consistency, which significantly contributed to stability and mental health (Bailey & Weiner, 2022). The stability offered by consistent educational experiences became a dependable anchor for individuals amid the rapid and uncertain changes brought about by the crisis. This commitment attracted families seeking a steadfast educational environment, aligning with the framework's emphasis on building a supportive organization and engaging the community.

Longmuir's (2023) research underscored leaders' role in making sense of new information and bridging responses with prior experiences. Hitt and Tucker's (2016) unified framework reinforced key findings, showcasing educational leaders' resilience, adaptability, and commitment to providing stability and meaningful learning experiences during challenging times. Leadership initiatives, including virtual clubs, activities, and face-to-face events, were aimed to engage students and families, building a sense of normalcy even in virtual settings (Azuka, 2022).

Theme 5: Teacher Support and Well-Being

A school's commitment to teacher support and well-being was fundamental to its educational philosophy. Resources, including funding for smaller class sizes and mobile hotspots, were strategically allocated to ensure equitable access to online learning and foster an environment conducive to effective teaching. A distinctive feature was the cultivation of a culture characterized by flexibility and grace. The school acknowledged the demands on educators during the pandemic, encouraging necessary breaks and providing essential emotional support. This theme aligns with Hitt and Tucker's (2016) framework, emphasizing a supportive organization through strategic resource allocation,

flexibility, and understanding. The focus extends to teacher training and development, emphasizing ongoing professional development tailored for teachers to create technological empowerment. Decman et al. (2021) posited that a differentiated training approach, acknowledging diverse technological competencies among teachers, aligns with the framework's commitment to adaptability and evolving needs, a sentiment echoed by current participants.

Research emphasized the importance of building relationships and professional capacity through collaborative efforts, reflective practices, and constructive feedback mechanisms facilitated by leadership, creating robust support systems (Fornaro et al., 2021; McBrayer & Wells, 2023). Leadership's commitment to teacher well-being has positive indirect effects on social-emotional well-being, work, and teaching outcomes (Bailey & Weiner, 2022; Berkovich & Bogler, 2020; Leithwood et al., 2019). The ability of leadership to maintain flexibility during chaos helped overcome social-emotional and technological barriers for staff and students (Boyce & Bowers, 2018; Huck & Zhang, 2021; Tamar et al., 2023). This theme closely aligns with Hitt and Tucker's (2016) framework and reinforces key findings. This theme showcases the resilience, adaptability, and commitment of educational leaders in supporting teacher well-being, acknowledging the profound impact this has on sustaining a resilient educational community during challenging times such as the pandemic.

Limitations of the Study

A limitation highlighted was the challenge of recruiting principals for interviews. To overcome this obstacle, extensive efforts were made to contact numerous potential

participants, resulting in a sufficient number for the study. A second limitation was the feasibility of conducting in-person interviews due to constraints based on participant locations. To overcome geographical barriers, interviews were conducted through a video conferencing program. Time constraints and potential limitations related to data collection were addressed by employing digital audio recordings and a speech-to-text transcription application. This strategy proved effective in managing time constraints during the data collection process. Another potential limitation pertained to the uncertainty about the study's transferability and applicability in different educational settings. To enhance the study's relevance, common themes and patterns identified in the data were used to draw implications for broader educational contexts. Concerns about the accuracy and honesty of participant responses were addressed through rigorous protocols, including member checking and triangulation, ensuring the accuracy and dependability of the data. Potential bias due to my role at the organization was mitigated through bias reduction efforts. These efforts involved carefully designing interview questions, maintaining a research journal, and adopting a neutral stance throughout the study.

Recommendations

It is recommended that further research be conducted based on the study's findings and limitations. Comparative studies conducted across diverse educational settings can assess the transferability and applicability of leadership responses, providing a broader perspective on effective strategies and their adaptability. Additionally, exploring the direct or indirect styles of leadership on teacher well-being is crucial for understanding how leadership approaches contribute to the social-emotional and

professional aspects, fostering supportive environments (Bailey & Weiner, 2022; Wilson, 2021). Many school leadership programs inadequately prepare principals for virtual leadership (Azuka, 2022). To address this, it is recommended that further research assess the competencies required for virtual leadership and advocate for policy and programmatic changes to integrate these competencies into future principal preparation programs (Francisco & Nuqui, 2020; Javurek & Mendenhall, 2021; Harris & Jones, 2020; Pollack et al., 2021). These recommendations, drawn from the study's findings, aim to bridge gaps in existing knowledge, guiding future research endeavors and practical strategies for educational leadership during times of crisis. Continuing to refine leadership approaches is essential to meet the evolving needs of the education landscape.

Implications

The study holds significant implications for educational leadership, policy, and management with the potential to foster positive social change. Based on the results of this study a recommended reassessment of leadership skills considering the unique demands posed by crises such as the COVID-19 pandemic. Advocating for policy changes in leadership preparation can lead to more relevant and effective training, ensuring that educational leaders are better equipped to navigate unprecedented challenges. A broader perspective on leadership strategies and their adaptability can contribute to creating more inclusive and equitable educational practices, benefiting diverse student populations. Understanding the influence of different leadership styles on teacher well-being can guide the development of supportive environments. By recognizing the direct and indirect impacts of leadership approaches, institutions can

foster positive social-emotional and professional outcomes, creating a more supportive educational community. The recommendations in this study aim to bridge gaps in existing knowledge and inform future research endeavors. Ongoing refinement of leadership approaches to meet evolving educational needs is essential for sustaining resilient educational communities, especially during challenging times. The implications drawn from this study provided actionable insights for educational leaders, policymakers, and researchers, fostering an environment conducive to effective teaching, learning, and positive social change.

Conclusion

In navigating the challenges posed by the COVID-19 pandemic, educational leaders exhibited resilience, adaptability, and a commitment to fostering supportive environments. Aligned with Hitt and Tucker's (2016) unified framework, the study's themes—Leadership Styles, Communication, Community Engagement, Maintaining Normalcy, and Teacher Support—underscored the multifaceted responses that contributed to educational continuity. The findings emphasize the importance of refining leadership approaches to meet evolving educational needs. Acknowledging limitations, the study recommends further research, particularly in comparative studies across diverse settings and assessing competencies for virtual leadership. These insights aim to inform future strategies, bridge knowledge gaps, and enhance educational leadership during times of crisis.

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Appendix A: Letter of Cooperation

{Date}

{Organization Representative}

{Contact}

Dear {Organization Representative},

My name is Kristina Chittick, and I am pursuing my PhD in Education from Walden University. For my dissertation I will be conducting a research study. My dissertation title is, "Principal Perceptions on the Digital Divide, Equity, and Learning Barriers During COVID-19." The participants for my study will be principals that served as principals during COVID-19 from approximately March 2020 to December 2022. The purpose of this qualitative study is to explore principals' perceptions on the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during COVID-19. The perceptions of principals may help provide information to improve student achievement directly and/or indirectly.

I am seeking to collect data through semistructured interview questions. I hope to interview 8-10 participants in one-on-one sessions for at least 30 minutes but no longer than one hour. My interview preference is virtual via Zoom with audio recording for transcription, although telephone and email interviews are an option. Interviews will be recorded and then transcribed verbatim. Interviews will be confidential and anonymized. A transcript of the interview will be provided to each participant.

Potential participants will receive an invitation to participate with a consent form. An individual should read and understand the study and if they decide to participate an

email response of “I consent” is needed. Research participation is voluntary and at their own discretion. A participant may withdraw from the study at any time prior to submission.

My goal is to contribute to positive social change by understanding and sharing the perceptions of principals on the actions and responses they took to help students learn during COVID-19. I will follow up with an email in two days to address any questions you may have and provide additional information. You may always contact me via email at Kristina.chittick@waldenu.edu. If you agree to provide me with the email contact information of potential participants, please respond with “I consent” to this email and please “cc” this consent to IRB@waldenu.edu. I thank you in advance for all your help and time. Please keep a copy of this communication for your records.

Sincerely,

Kristina Chittick
Walden University

Appendix B: Interview Protocol

Appendix B: Interview Protocol**Dissertation Topic: Principal Perceptions on the Digital Divide, Equity, and****Learning Barriers During COVID-19**

| Topic: | Interview Questions and Script |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction and Demographic Information | <p>Hello! Thank you so much for meeting with me today virtually. I want to audio-record our conversation for the background and interview portions of our time together today. When the study is complete, all data and recordings will be kept for a period of at least five years, as required by the university. You will not need have your camera on during the interview. Do you consent for me to audio-record this interview today and use it in my study?</p> <p>Thank you for showing interest in my research and providing me with consent to participate in this study. I thank you for your time and participation. You may withdraw your participation from this study at any time. The responses you provide today will be confidential and anonymized.</p> <p>This interview will last a minimum of 30 minutes and no longer than 60 minutes. I will ask you several questions during our time together.</p> <p>The purpose of this qualitative study is to explore principals' perceptions on the leadership responses and actions that helped districts overcome the digital divide to improve equity and reduce barriers to learning during COVID-19.</p> <p>The theories that ground this study include Hitt and Tucker's unified framework (UF) model of effective leadership practices that incorporate principal instructional leadership and student achievement (Hitt & Tucker, 2016). The fundamental concepts of this framework serve as key concepts when understanding and exploring principals' perceptions about the actions they took to help students learn and achieve.</p> |

| | |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Background Questions | <p>I would like to start with a background questions.</p> <ol style="list-style-type: none"> 1. How long have you worked as a principal? <p>Thank you for providing me with some background information.</p> |
| Interview Questions | <p>Now I will ask you some interview questions.</p> <ol style="list-style-type: none"> 1. Can you provide specific examples of how you demonstrated leadership during the COVID-19 pandemic? 2. How did you and your district create and effectively communicate a shared mission and vision during the challenging circumstances of COVID-19? 3. Can you share some examples of how you facilitated meaningful learning experiences for students during this time? 4. What strategies did you employ to acquire and allocate resources effectively in order to create supportive learning environments for students? 5. Could you highlight some specific decisions you made as a technological leader that had a positive impact on students' learning experiences during COVID-19? 6. What actions did you take to build professional capacity among your staff during the COVID-19 pandemic? 7. How did you successfully connect and engage with external partners and stakeholders to support student learning during this time? 8. From your perspective as a leader, what are the most important lessons or insights you gained from leading during the COVID-19 pandemic? |
| Concluding Interview | <p>Thank you for answering all of my questions. Before we conclude our interview is there anything else you would like to share with me?</p> |
| Closing | <p>I appreciate your time and responses. I will be sending you a transcript of our interview to review which should take up to thirty minutes but no longer than sixty minutes of your time. If there are any corrections to be made to the interview transcript, please return them to me within seven days of their receipt. If there are any changes to be made, I will revise the transcript.</p> |

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|--|------------------------------------------------------------------------------------|
| | Are there any questions you would like to ask me before we conclude the interview? |
|--|------------------------------------------------------------------------------------|