The Impact of Principals’ Leadership on Teachers’ Self-Efficacy and Collaboration During COVID-19

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THE IMPACT OF PRINCIPALS' LEADERSHIP ON TEACHERS' SELF-EFFICACY AND COLLABORATION DURING COVID-19

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Abstract

This qualitative study was designed to examine the impact of principals' leadership on teachers' self-efficacy and collaboration during COVID-19. Forty-six K-5 teachers who provided remote/- hybrid instruction and integrated digital technology during the COVID-19 pandemic and 10 principals of grades K-5 who provided instructional leadership during the same period participated in a researcher-designed online survey containing 18 Likert-scale statements and four open-ended questions. In addition, four teachers and four principals voluntarily participated in a follow-up interview. Teachers' responses to the survey revealed differences in their perceptions of how they believed principals' leadership impacted their self-efficacy and collaboration during the pandemic. Teachers believed that principals' knowledge of technology was inadequate to assist teachers in implementing remote learning, principals did not provide direct support (such as modeling lessons), and teachers were evenly divided on principals handling discipline issues during synchronous remote instruction and hybrid/blended learning. Teachers' interview responses reflected that they felt principals' leadership actions created a foundation for teachers to address the adverse conditions and challenges during the pandemic. Overall, most teachers' perceptions of their principals' leadership revealed that their principals' leadership was impactful in enhancing their self-efficacy and collaboration during the COVID-19 pandemic. Principals' responses to the survey presented slight differences in their perceptions. Principals were divided concerning whether they called teachers to determine their well-being and provided them opportunities to explore remote learning platforms. Overall, all principals believed they positively impacted teachers' self-efficacy and collaboration during the pandemic.
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My soul glorifies the Lord, and my spirit rejoices in God, my Savior. For he has been mindful of the humble state of his servant. For the Mighty One has done great things for me, and holy is his name. Luke 1:46-49

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Chapter One – Introduction

Overview

The COVID-19 pandemic unleashed unparalleled circumstances that rippled throughout the world’s educational school systems and created chaos as teachers and administrators sought ways to provide students access to learning. According to Rasmitadila et al. (2020), the outbreak of the COVID-19 pandemic affected school systems internationally and transformed multiple facets of society, which caused regulatory requirements for employees to work from home and school systems, primary to higher education, to implement remote learning. McDonald et al. (2020) indicated, “The current outbreak of severe acute respiratory syndrome coronavirus (SARS-CoV-2), the virus that causes Coronavirus Disease 19 (COVID-19), has spurred a large governmental response from all levels of the U.S. intergovernmental system” (p. 186).

School districts have contingency plans to address many circumstances, including various communicable diseases; however, discontinuing classroom instruction is unprecedented (Brinkley, 2020). The onset of COVID-19 required timely online learning implementation for school districts to advance the educational process continuity due to local governments’ mandate to close schools.

School closures have prompted school districts to pursue digital technology to activate their students’ learning process. “As schools have been closed to cope with the global pandemic, students, parents, and educators around the globe have felt the unexpected ripple effect of the COVID-19 pandemic” (Pokhrel & Chhetr, 2020, p. 131). The discontinuation of in-school instruction would become detrimental by creating insurmountable setbacks in youths’ lives; many schools were not equipped to facilitate online learning systems (Morgan, 2020). The 2020-2021 academic year resumed
nationwide as school districts substituted classroom instruction with remote learning. “It remains unclear how effective remote learning instruction was given that most K-12 students and teachers had little experience with online instruction and that large gaps in technology access exist in many parts of the country” (Kuhfeld et al., 2020, p. 549). Nationwide, school districts substituted classroom instruction with remote learning; the uncertainty of how effective remoting learning instruction would become evident.

Richards (2020) noted that approximately 70% of the nation’s school systems faced school closures, citing an absence of direction as more administrators echoed similar sentiments concerning shutdowns. The Northshore School District, north of Kirkland, Washington, discontinued their remote online learning citing that they could not provide equitable access to their students. The superintendent stated that they alleviated some of the challenges; however, a substantial amount still existed, which comprised the guidelines enumerated in federal and state regulations, such as special education, English language learners, meals, and childcare (Tanner, 2020). The School District of Philadelphia faced similar inequity circumstances and inability to comply with federal and state regulations and provide services to students’ priority groups, which caused the suspension of their remote learning process (Mezzacapp & Arent-Wolfman, 2020).

The onset of the COVID-19 pandemic had created major interruptions in education, which prompted school systems to implement online remote learning platforms equitably with dependable resources. The beneficial aspects of online learning occur when students have reliable internet access; however, many families lack internet access (Morgan, 2020). America has made substantial gains in decreasing the digital divide among students attending school. In 2017, 14% of the American student
population between 6 and 17 years old resided in homes without the internet, which was down from 19% in 2015 (Goldberg, 2018). “Still, significant challenges remain, especially for the approximately 7 million school-age children that lived in households without home internet service in 2017. These children were also less likely than their peers to use the internet from other locations” (Goldberg, 2018, p. 1). The nation’s school systems’ process of initiating access to remote learning has been a tumultuous endeavor; school districts have struggled in their ability to replace classroom instruction with remote learning.

Doucet et al. (2020) mentioned, “A very crucial part of online distance learning is the presence of helpful formative assessment and timeliness of feedback to online learners” (p. 28). Remote online learning became an elixir for education during the onset of the unprecedented pandemic, a problematic undertaking for students and teachers to transition from traditional classroom instruction (Pokhrel & Chhetri, 2021). The COVID-19 pandemic caused teachers to adjust formal classroom instruction to provide lessons to the entire class remotely, teaching half remotely when half of the class attended school for in-class instruction. Teachers had to develop multiple lesson plans of the same content per week for their students. “The unplanned and unprecedented disruption to education changed the work of many teachers suddenly, and in many aspects” (Kaden, 2020, p. 1). “This shift caused many teachers to face challenges in preparing and delivering quality content remotely during this pandemic…. pedagogical practices, platform features that fit the need of assessment, responsive learning and application, and the customization of the learning management system” (LMS) (Cardullo et al., 2021, p. 32).

In an educational construct, collaboration has been viewed as an effective form of communication, improving educational initiatives as principals and teachers collectively
address barriers that impede creating a high academically performing school (Campbell, 2020; Harris & Jones, 2019). Principals must be adequately prepared to handle the educational issues that emerged from the impact of COVID-19 (Darling-Hammond & Hyler, 2020). “Principals’ leadership practices lay a foundation for teachers’ resources and outcomes at work” (Collie et al., 2020, p. 2). The intrigues that underline the dynamics of teachers’ and principals’ working relationships have broadened in scope and effect during COVID-19, which has created a degree of urgency in responding to issues arising from the pandemic (Anderson et al., 2020). The onset of COVID-19 heightened principal leadership accountabilities in creating a healthy environment for their students, parents, faculty, and staff; principals were bewildered by the uncertainty of the impact that the virus would have on education (Kaul et al., 2020). Richter and Idleman (2017) reported that teachers indicated that support was vital in enhancing teacher self-efficacy for providing remote online instruction; administrators must offer professional development to enable teachers to develop the necessary online teaching skills.

**Need for the Study**

Teachers have shifted their mindset to develop strategies and tactics to deal with severe mental and psychological backdrops to approach teaching in this paradigm shift created by COVID-19 (Merrill, 2020). Yang (2020) asserted, “It appears that the full adoption of online teaching methods and comprehensive training in online teaching skills was only conducted in response to the control of this epidemic” (p. 740). The COVID-19 pandemic has created daunting circumstances for teachers in addressing the challenges of providing remote learning instruction for their students while maintaining their health. Collie (2021) explained, “The pandemic required a very sudden shift to remote learning,
and teachers were called upon to support students’ academic development and well-being throughout this shift, while also navigating adversity and stress in their own lives” (p. 1).

COVID-19 required teachers to shift their current instructional practices to remote distance learning instruction; with limited or no preparation, teachers had to make quick decisions on determining their approach in providing education (Cardullo et al., 2021). Rasmitadila et al. (2020) indicated, “Teachers have tasks and responsibilities that are not easily transferrable when they must change from the face-to-face learning system in the classroom to an online system coupled with online learning experiences that have never been implemented before” (p. 92). Hwang (2018) suggested, “Given the importance of team cohesiveness in either learning from other team members or at the individual level, it is important to consider how team cohesiveness could be improved in an online/hybrid learning environment” (p. 588). “Key factors which predicted instructor engagement in the emergency transition were the type or level of school, asynchronous or synchronous modality, and the instructors’ level of coping” (Jelińska & Paradowsk, 2021, p. 316). Teachers considered several hybrid approaches to implement remote online learning; distance learning can involve a combination of synchronous and asynchronous processes (Doucet et al., 2020).

The synchronous system enables teachers to interface with their students actively, and each student can be seen in real-time while the teacher provided comments and explanations to students’ questions. The asynchronous approach enables students to learn independently, allowing them to work independently on assignments and to be engaged at their own pace (Doucet et al., 2020). Teachers faced various challenges while implementing remote learning, such as connecting to the internet, limited interfacing, insufficient resources for students, and motivating them (Murray et al., 2020; Verma et
al., 2020). The drawbacks of these issues created a sense of ineptness in teachers and affected teachers’ self-efficacy during the COVID-19 pandemic. Teacher self-efficacy can gauge how teachers feel about their ability to accomplish various duties (Morris et al., 2017). “Among various reasons, anticipated difficulties with technology, losing connection with students, insufficient understanding of online pedagogical knowledge, and time-consuming features of online teaching were reported threatening online teacher self-efficacy (TSE)” (Ma et al., 2021, p. 19). Cardullo et al. (2021) concluded, “To ensure quality remote instruction and that students receive the support to make instruction equitable, teachers need to perceive that their instructional technology needs are met to focus on teaching, learning and needs of their students” (p. 43). Providing teachers support is vital to enhancing remote online teaching progress. Administrators should acknowledge teachers for their commitment and effort; moreover, teachers who were provided preparation time and administrative support experienced heightened teacher self-efficacy levels (Richer & Idelmane, 2017).

The emergence of the COVID-19 pandemic has created pressing challenges in how teachers and principals collaborate in addressing the complexities that occurred during the pandemic. Campbell (2020) believed that the pandemic provided the opportunity to revive emphasis on developing more effective professional collaboration approaches to enable teachers and principals to address the concerns deeply embedded in their communities that heightened during the pandemic. COVID-19 required teachers and principals to reevaluate issues and develop support systems for their constituents. To establish new collaboration methods derived from the impetus of the COVID-19 pandemic while dialoguing about the technology platforms and resources, and to sustain the collaboration relationships, clear foundations of respect and trust must exist.
(Hargreaves & Connor, 2018). Teachers carried most of the burdens in addressing their constituents’ concerns effectively and expediently during the pandemic, providing information on instruction and equity accessibility; for collaboration to be continuous and effective, it must be ingrained in our professional conduct (Campbell, 2020).

The onset of COVID-19 has created a paradigm shift in educational leadership and collaboration worldwide. Zoom meetings on laptops or smartphone devices have replaced typical faculty meetings and interpersonal hallway chats (Pokhrel & Chhetr, 2021). As a result, teaching and learning practices have dramatically altered, the core functions of schools have shifted, and educational leaders have been pushed to the very limit. Being adequately prepared to address the educational issues that will emerge from the impact of COVID-19 will enhance principal leadership abilities to effectively develop collaboration with teachers and build and increase teachers’ self-efficacy (Harris, 2020).

Principal leadership must have the ability to effectively respond to students’ and parents’ concerns, develop effective collaboration channels with teachers, and increase teachers’ self-efficacy. Anderson et al.’s (2020) study of principal leadership during COVID-19 indicated that the overarching theme that reflected the responsibilities of principals' leadership in the United States when COVID-19 forced school closures was that of a caretaker for their faculty, staff, students and their families, and themselves. Innumerable complex challenges surfaced as principals compassionately addressed concerns. They responded to the inequities of internet access services and technology to ensure equity in remote laptops or broadband service and created food banks for families (Anderson et al., 2020). Principals were also cognizant that their teachers needed support; nationwide, teachers experienced a significant plummet in their sense of self-efficacy in providing instruction during the pandemic (Kaul et al., 2020).
Statement of the Problem

As the COVID-19 pandemic began to spread rapidly throughout educational school systems, schools suspended classroom instruction; all face-to-face instruction transitioned to remote online learning (Kufeld et al., 2020). The immediate challenge facing schools was to develop remote online learning platforms that would enable students’ and parents’ access to online learning systems and professional development for teachers and staff on the techniques of technology associated with remote learning (Morgan, 2020). The abrupt shift to online learning created obstacles in implementing blended models of synchronous and asynchronous education to educate students imminently (Jelińska & Paradowsk, 2021). Teachers encountered many challenges in implementing the various remote learning platforms for their students (Jelińska & Paradowsk, 2021). The transition from classroom instruction to remote online learning was a new undertaking for students and teachers. It was particularly challenging for teachers because the lack of support and resources to teach students effectively impacted teachers’ self-efficacy. “The success of remote teaching and remote learning is impacted by the teachers’ perceived teaching self-efficacy and attitude toward the remote learning management system” (Cardullo et al., 2021, p. 32).

Collaboration has been a critical element in addressing the barriers and challenges to ensuring that effective responses reach school districts’ constituents. COVID-19 has caused a new form of collaboration to develop as teachers navigated through the technology platforms (Campbell, 2020). It has become imperative that adequate, meaningful collaboration is embedded in school systems’ professional relations (Hargreaves & O’Connor, 2018). Principals’ leadership practices have laid a foundation for teachers’ resources and outcomes at work.
Therefore, the purpose of this qualitative study was to identify principals’ leadership behaviors that impacted teacher efficacy and collaboration in the remote learning that occurred during the COVID-19 pandemic.

**Definition of Terms**

The following terms are used operationally in this study:

*Asynchronous Learning* – Students’ choice of their own time to engage in learning through different media tools such as email or discussion boards. They can log in to communicate and complete activities at their discretion (Kim, 2020).

*Collective Teacher Efficacy* – Teachers’ perceptions that their efforts, as a group, can have a positive impact on students (Goddard et al., 2000).

*Covid-19* – An illness caused by the virus SARS-CoV-2. Coronaviruses are a large family of viruses that can cause disease in animals or humans (Centers for Disease Control and Prevention, 2019).

*Digital Technology* – A part of modern education that generates, shares, stores, or processes information on digital electronic tools such as laptops, multimedia, mobile phones, supporting the learning process (Selwyn & Facer, 2014).

*Equity Education* – Any differences in learner outcomes that do not result from socio-economic differences but rather reflect differences in ability, skill, or aptitude to learning (Harris & Jones, 2019).

*Hybrid/Blended learning* – A pedagogical approach that includes face-to-face (F2F) instruction with computer-mediated instruction (Ferdig et al., 2012).

*Remote Distance Learning* – A combination of synchronous and asynchronous learning (Doucet et al., 2020).
**Self-Efficacy** – The belief in one’s capabilities to achieve a goal or an outcome (Bandura, 1997).

**Synchronous Learning** – Instructors and students meeting online using video conferencing during the designated class hours, and teachers giving lectures on the subjects while students participating in the lessons can ask questions vocally or via live text chat (Lapitan et al., 2021)

**Teacher Collaboration** – Working collectively to exchange ideas, responsibilities, experiences to accomplish more than could be accomplished by one person on their own to promote educational change. (Barfield, 2016).

**Teacher Efficacy** – The necessary skills and abilities to accomplish various educational tasks (Donohoo, 2017).

**Limitations**

Several factors may have posed limitations to this qualitative study. The scholarly literature about the impact of COVID-19 on education in general and on teachers and principals in particular, was limited because of the relative newness of the topic. This study’s participants were limited to principals and teachers in several public-school districts in southern Pennsylvania. Therefore, the results may not be generalizable to other educational institutions across the state.

**Research Questions**

This study addressed the principals’ leadership behaviors that have impacted teacher efficacy and collaboration during the COVID-19 pandemic by answering the following questions:
1. What do teachers believe are the principal leadership behaviors that impacted their self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

2. What leadership behaviors do principals believe impacted teacher self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

3. What do teachers believe are the principal leadership behaviors that impacted their collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

4. What leadership behaviors do principals believe impacted teacher collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

Summary

As school districts began to prepare for school closures that could last for weeks or more during the pandemic, they immediately began preparing lesson plans for remote online learning (Brinkley, 2020). The immediate challenge facing schools was to develop remote online learning platforms that would enable students and parents access to online learning systems and professional development for teachers and staff on the techniques of technology associated with remote learning (Morgan, 2020). Teachers transitioned their current instructional practice of face-to-face to remote distance learning with insufficient time to be trained or prepare lessons.

Teachers encountered many challenges in implementing the various remote learning platforms for their students; the impact on teachers was stressful (Murray et al., 2020; Pokhrel & Chhetri, 2021). Implementing a hybrid blend approach of synchronous
and asynchronous to give students access to their teachers’ instruction required collaboration among teachers (Hargreaves & O’Connor, 2018). COVID-19 initiated a greater appreciation in developing collaboration channels between teachers and principals in addressing the barriers and challenges that occurred during the pandemic. Collaboration is more than conjure and speech; it is an essential practice in education, although it can become challenging to implement (Hargreaves & O’Connor, 2018).

Campbell (2020) found that a revived interest in collaboration occurred during the COVID-19 pandemic, which provided school systems an opportunity to reflect on the issues that derived from the pandemic and address them. Undoubtedly, teachers have been challenged with unprecedented circumstances that have placed them at a disadvantage in providing quality instructional practices. School districts lacked the necessary resources and failed to provide appropriate technology training on remote online learning platforms, which affected teacher self-efficacy (Cardullo et al., 2021). Teacher self-efficacy was a critical factor in developing successful remote learning instruction.

The occurrence of COVID-19 has radically caused a paradigm shift in the manner education previously functioned; teachers were immersed in preparing remote online instruction as principals adapted to new ways of communicating. The pandemic has led principals’ instructional leadership to enhance teacher collaboration and teacher self-efficacy to develop sustainable, successful schools post-pandemic.

The purpose of this qualitative study was to identify principals’ leadership behaviors that impacted teacher self-efficacy and collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic.
Chapter Two – Literature Review

Introduction

If principal leadership ever needed to emerge on the educational landscape with relentless energy and fortitude, it was in reaction to the COVID-19’s impact on educational institutions. Stone-Johnson and Weiner (2020) asserted, “In the current context of uncertainty, chaos and change, the pressure on leaders to stay in the role and to succeed has never been greater” (p. 367). Principals had the task of creating a learning environment that would assimilate aspects of a school day and facilitate the learning and teaching process for their teachers, students, and families in an unprecedented time in education (Weiner et al., 2021). The pandemic created distinct circumstances pertinent to the demographic and socio-economic areas that principals had to address immediately. Kaul et al. (2020) indicated that principals prioritized their responses to address the difficulties and concerns that their students and teachers needed to feel physically and psychologically safe before entering the classroom.

“Principals advocated for technology and broadband resources so students could continue to learn, and they provided support to families with food and resources” (Anderson et al., 2020, p. 2). Kerrissey and Edmondson (2020) stated that human instinct could be misdirected during the onset of unexpected crises due to principals’ trepidation and uncertainty of what approaches to take to address the problems, consequently hesitating on taking action causing their constituents to worry. Urgent issues require leaders to respond in an expedient and truthful manner, understanding that oversights are inevitable while taking ownership is a prudent approach to the crisis (Kerrissey & Edmondson, 2020). "For some districts, this meant placing food and nutrition services as the top priority, while other districts honed in on swiftly implementing 1:1 computers or
other technology (e.g., Chromebooks) so students may access educational resources at home” (Price & Mansfield, 2021, p. 1).

Some principals responded to the COVID-19 pandemic by focusing on developing safe psychological learning and working conditions in their schools. “We find principals reported varied levels of psychological safety in their schools with associated differing levels of organizational learning and responsiveness to the crisis” (Weiner et al., 2021, p. 1). Principals initiated preventive measures to restrict the transmission of COVID-19 from infiltrating schools and communities. “As such, principals understood that building a safe and trusting working environment for their staff was critical in responding to the broader needs of their school community” (Kaul et al., 2020, p. 2). The COVID-19 pandemic created some unforeseen circumstances that fostered more profound independence between teachers and principals, requiring them to collaborate more to address the circumstances that affected the educational community. Forester and McKibbon (2020) explained:

The incentives to learn and collaborate are strong; we risk our lives by ignoring the needs, feelings, dependency, and risks of others… acting together might seem just strategically sensible, developing such shared strategies, requires trust especially when… acting together means making sense together. (p. 207)

The pandemic has provided the opportunity to examine how principal leadership characteristics can enhance teachers’ self-efficacy and collaboration, ensuring effective community responses during a crisis. “The impact of COVID-19 has potentially powerful implications for principals as members of an emergent profession and how they view their work moving forward” (Stone-Johnson & Weiner, 2020, p. 370). The pandemic has caused hardships inextricably linked to principal leadership approaches to counter their
impact on their students, parents, and especially their teachers who encountered difficulties in implementing remote learning and constantly communicating with parents during the crisis. Kaul et al. (2020) stated that the COVID-19 pandemic caused an unparalleled concern for school systems globally, which placed principals in unchartered situations that required them to lead their schools amid the crisis. “However, the pandemic can also be viewed as an opportunity to embrace new ways of thinking and change the nature of the work performed by principals and other school leaders” (Hauseman et al., 2020, p. 70).

This literature review provides a historical perspective of the COVID-19 pandemic impact on students and their families, school systems, teachers, and principals. This literature review will also examine the challenges encountered by teachers while attempting to implement remote online education and their perceptions of what principal leadership behaviors impacted their self-efficacy and collaboration during the pandemic. In addition, the literature review will examine principals’ perceptions of what leadership behaviors they believed impacted their teachers’ self-efficacy and collaboration while trying to implement remote online instruction during the pandemic.

The COVID-19 Pandemic

COVID-19 emerged out of “Wuhan, Hubei province of China, on December 13, 2019 (coronavirus disease 2019) categorized as a new infectious respiratory disease, named by the World Health Organization as COVID-19 (corona virus disease 2019)” (Chazkraborty & Maity, 2020, p. 1). A new class of corona virus, known as SARS-Co V2 (severe acute respiratory syndrome coronavirus 2) was found to be responsible for the occurrence of this disease. The Coronavirus Study Group (CSG) of the International Committee on Taxonomy of Viruses, which is responsible for developing the official
classification of viruses and taxa naming (taxonomy) of the Coronaviridae family, assessed the novelty of the human pathogen tentatively named 2019-nCoV (Gorbalenya et al., 2020, p. 2). “COVID-19, 'CO' stands for 'corona,' 'VI' for 'virus,' and 'D' for disease, and 19 represents the year of its occurrence, a single-stranded Ribonucleic acid (RNA) virus with a diameter ranging from 80 to 120 nm” (Chakraborty & Maity, 2020, p. 2). COVID-19 was also named "novel virus" which referred to the disease that infected humans because there is an incomplete match between the current coronavirus to the previous genomes (chromosomes) (Gorbalenya et al., 2020).

The coronavirus has created a pandemic health crisis internationally and the most significant challenge humanity has encountered since World War II (Chakraborty & Maity, 2020). COVID-19 not only posed critical health issues but also has become the most significant risk to worldwide public health, has ignited a catastrophic socio-economic and political crisis in countries that are infected by the disease, and is considered an indicator of inequity and deficiency of social advancement (Chakraborty & Maity, 2020). “Exposure history to the Huanan Seafood Wholesale market served as an important clue at the early stage, yet its value has decreased as more secondary and tertiary cases have appeared” (Wang et al., 2020, p. 2). In essence, "The spectrum of clinical manifestations associated with SARS-CoV-2 infections in humans remains to be determined” (Gorbalenya et al., 2020, p. 2)

The magnitude of the pandemic has caused substantial global hardships in every field of human endeavor, triggering an aggressive approach in the scientific community to develop and research a vaccine. The degree of the impact of COVID-19’s effects on humanity and the economy was the driving force for accelerating the process of evaluating the next generation of vaccines through novel paradigms (Le et al., 2020).
Wherry et al. (2021) stated that the biomedical research community responded quickly to assemble specialists to address the challenge with the assistance of government and private sector funding, and were able to develop various vaccines successfully. However, many questioned the efficacy of the expedient development of COVID-19 vaccines because vaccines for HIV and most cancers are unachievable. Wherry et al. explained that developing an effective vaccine to eradicate the coronavirus began in approximately 2003; the quick development of the vaccine was made possible as a result of previous test results which culminated in phase 1 human vaccine trial. Several years later, a further test was conducted on the Middle East Respiratory Syndrome (MERS). The results from the MERS test identified key components that were essential for developing the SARS-CoV2 vaccine. The earlier scientific processes were instrumental to developing coronavirus vaccines, Moderna and Pfizer (Wherry et al., 2021).

Impact on Schools

The COVID-19 pandemic created critical issues in school systems. The high number of students in close proximity and insufficient bacterial hygiene access caused sudden mandatory school closures to preserve the well-being of students, teachers, and staff. How grades K-12 in the United States responded to the pandemic differed based on the school districts’ financial capacity, technology accessibility, socioeconomics, and their constituents' specific needs (Reich et al., 2020). School closures were implemented under similar circumstances that precipitated the immediate mandate to close schools during the outbreak of the influenza virus in 2009 to mitigate the spread of the virus in school systems. School closures were standard non-pharmaceutical methods during the influenza pandemic to reduce the circulation of a virus that could cause significant
morbidity and mortality rates, mainly when medications are not available (Zhang et al., 2011).

Educational systems experienced a shift from their standard classroom instruction to remote online learning platforms as school closures were forced by government officials worldwide. “Many governments around the world have been compelled to close educational institutions to break the cycle of transmission of COVID-19 virus” (Palit & Guha, 2021, p. 62). More than 188 countries experienced mandated school closures due to the COVID-19 outbreak, which interrupted the education process of more than 1.7 billion students and their families. As the pandemic increased, government officials began to develop strategic plans to cope with a crisis of epic proportion (Gouëdard et al., 2020).

The pandemic eliminated the aspirations of students (especially seniors in high school and college) and their families, teachers, and administrators, of potentially discovering new realms of knowledge, events, and activities that would create lifelong memories in the minds of all who had great expectations for the academic school year. “Many of the principals spoke of the increased stress of having to cancel all spring semester sports and end of the year activities, such as prom, graduations, and parties” (Anderson et al., 2020, p. 3). Principals created innovative ways so that students and families could have opportunities to embrace the customary traditions that they valued, such as “proms, graduations and awards ceremonies”; creating memorable events was significantly important to the students (Stone-Johnson & Weiner, 2020, p. 367).

The circumstances that occurred from the emergence of the COVID-19 pandemic and the gravity of the coronavirus required teachers and principals to respond quickly to the mandated school closures. The pandemic required them to transfer educational
components which was unprecedented. Globally, governments were forced to change the format to stop the transmission of COVID-19, which negatively impacted students (Palit & Guha, 2021). As the coronavirus continued to expand globally, school systems enforced social distancing and closed their buildings to inhibit the transfer of the disease. Unfortunately, closing schools also increased medical, social, and economic problems (Esposito & Principi, 2020; Lancker & Parolin, 2020). "The fact that schools are closed for a long period of time could have detrimental social and health consequences for children living in poverty, and are likely to exacerbate existing inequalities” (Lancker & Parolin, 2020, p. 243.)

The impact of school closures is likely to widen the learning gap between children from lower-income and higher-income families (Lancker & Parolin, 2020), exacerbate inherent inequalities in school systems (Palit & Guha, 2021), and create challenges accessing the internet. The constraints imposed due to the coronavirus made the existing challenges more daunting (Dooley et al., 2020). “School closures not only lead to a loss of education opportunities, and thus long-term social and economic prospects of students, but the longer disadvantaged children are out of school, the less likely they are to return” (Reimer & Schleicher, 2020 p. 20). Although COVID-19 essentially forced school closures as a health crisis, it has placed significant perils in other aspects of students' lives, such as social interaction and meals. Schools are an epicenter for students to engage in reciprocal human relationships with their peers. School closures impeded students’ contact and interaction which provides synergy for cognitive and social development (Akinwumi & Itobore, 2020).

About 35 million children depend on the meals and snacks provided by government agencies. These services provided about two-thirds of a child's daily
nutrition requirements. School closures restrict students' access to meals, and emergency assistance only fulfills a fraction of the students who regularly receive meals (Dunn et al. 2020; Palit & Guha, 2021; United States Dept. of Agriculture Economic Research Service, 2019). COVID-19 has caused numerous barriers that are affecting the wellbeing of children and youth worldwide, but the most pervasive has been the disruption of education.

However, while this potential learning loss may only be temporary, other elements that happen in the absence of traditional schooling, such as the curbing of educational aspirations or the disengagement from the school system, will have a long-term impact on students’ outcomes. (OECD, 2020, p. 1)

**Impact on Teachers**

World-wide school systems experienced massive school closures to minimize the spreading of the COVID-19 pandemic, dismantling the inner workings of the pillars of education, interrupting the learning process of over 7.3% of students globally, and uprooting teachers’ instructional practices (UNESCO, 2020). Before the COVID-19 pandemic, teachers were optimistic about delivering instruction face-to-face, but the pandemic forced teachers to conduct remote classes on internet platforms (Rogers Haverback, 2020). Teachers were thrust into instructing their students remotely and many were unprepared and untrained for the task. Teachers were content with the status of the education system before the COVID-19 pandemic. However, the pandemic caused some trepidation among teachers’ perceptions of their mental well-being: Factors such as gender, tenure, and teaching rigors created uncertainty about their future in the teaching profession (Alves et al., 2021).
“During COVID-19, almost all schools have been transformed into something unlike what they were before...teaching that was done in person is now done virtually, with little to no preparation” (Rogers Haverback, 2020, p. 1). The COVID-19 pandemic necessitated teachers and students to adjust to remote instruction without adequate notice or training, as schools hustled to establish continuity of instruction to provide education for students (Jelińska & Paradowsk, 2021). As the COVID-19 pandemic caused vast disruptions throughout educational institutions, teachers changed the scope and effect of their teaching methods as they researched ways to interact with their students in familiar ways. Teachers adjusted to remote instruction by implementing instructional strategies that they were accustomed to using; however, it was complicated by addressing their families’ needs while providing education from home and adapting to new technology (Baker et al., 2021).

The teachers’ new processes of creating educational plans for students and parents became time-consuming, which instantly caused teachers to feel overwhelmed; in some cases, the students’ work would be sent back as incomplete, and answers were provided by the parents (Johannes, 2020; Scull et al., 2020). Many of the students and parents were unfamiliar with remote online learning or the rigors of sustaining academic progress. Teachers had to tutor them which was a complex undertaking since many students lacked resources; these additional demands impacted teachers’ well-being and provoked emotions of ineptness (Baker et al., 2021). Teachers were inundated by constant changes from social and political entities that impacted instructional delivery and affected teachers' mental states (Reimer & Schleicher, 2020). Immersing teachers with technology, websites, and digital platforms during the initial phase of implementing
online instruction, while intended to be supportive, was perceived by teachers as demanding and laborious which initiated further stressful moments (Sokal et al., 2020).

Sokal et al. (2020) indicated that teachers are individuals who care deeply about vulnerable students and who go beyond the realms of the classroom. Situations that impact their students have a ripple effect on their perspectives about their students. This is especially true with the impact that COVID-19 has had on students’ lives. “Teachers are flexible by nature; they take on additional requirements, assignments, tasks, just about anything thrown at them; and they stay flexible throughout the pandemic and remote teaching” (Carullo et al., 2021, p. 41).

Recent reports have indicated inequities in students' access to remote learning access are prevalent among students with unique learning or mental health requirements and those who live in poverty and are characterized as a racial or ethnic minority group (Harris et al., 2020). The awareness of the inequities that their students are experiencing in accessing the internet has initiated symptoms of distress in teachers, which have inspired teachers to reach out to students to provide the instructional material they need (Baker et al., 2021; Sokal et al., 2020). The significant levels of stress that teachers experienced in the wake of the COVID-19 pandemic have correlated to inadequate mental help in responding to teaching challenges; at times, teachers have shown movements of resilience in coping with the rudimentary aspects associated with teaching (Baker et al., 2021).

**Virtual/Hybrid Learning**

During the COVID-19 pandemic, remote online/blended learning was used to address the academic needs of students; school systems used of communication technology as the primary source of teaching. However, having the necessary skills to use
technology was an essential qualification on the part of teachers and students for the process to work successfully (Bordoloi et al., 2020). The occurrence of the coronavirus prompted school systems worldwide to reconstruct their instructional practices to a hybrid/blended position, as students participated in classroom lessons with their teachers through remote synchronous and asynchronous instruction if students had adequate technology resources and the internet. To maintain the teaching-learning approach and sustain school systems’ endurance, remote online learning through digital platforms became the essential resource during this time (Palit & Guha, 2021). Implementing an educational system that would ensure equity in delivering educational content that immersed students in the learning process and provided support in remote online training and blended learning could be the impetus to promote change and create a more equitable educational school system (Bordoli et al., 2020).

It was a significant undertaking to educate students methodically and steadily during the pandemic while focusing on aligning technology and teaching to engage students in the learning process. School systems secured various remote online platforms with companies that provided free infrastructures during the pandemic; accessing the internet for students of diverse socioeconomic backgrounds remains challenging (Pokhrel & Chhetri, 2021; Teräs et al., 2020). “The introduction of online and distance learning by some schools also threw up another challenge for parents and families as the equity of access to the devices required for such learning and being technology savvy vary across families nationwide” (Akiwumi & Itobore, 2020, p. 94).

Schwartz et al. (2020) surveyed school district superintendents and charter management organization (CMO) directors about the circumstances that were the most prevalent in their attempts to address issues while navigating the COVID-19 pandemic.
The directors indicated that the inequality in students’ opportunities to engage in the learning process was the most significant challenge. Hwang (2018) suggested that when considering implementing an online curriculum, the school system should develop an approach that examines the local requirements and global perspective.

Any large-scale approach towards an online/hybrid learning environment is likely to require significantly enhanced technology foundation, various types of faculty, a new set of pedagogical skills and development capabilities, more technically savvy support staff, and other unique learning environment support that have yet to be fully understood by educators. (Hwang, 2018, p. 561)

The COVID-19 pandemic was a turning point in educational systems globally, which triggered a massive challenge, mainly when a significant number of schools were inadequately prepared for remote online learning, conceivably the anchor for sustaining school systems’ functions.

The responsibilities of teachers in a hybrid learning environment will be a continuously developing process; the interactions between teacher and students and student-to-student have demonstrated impactful factors of remote online/hybrid educational outcomes (Hwang, 2018). The rudimentary aspects of teaching may become subordinate objectives compared to the role of teachers becoming the facilitators of the learning process and accessing the learning outcomes (Hwang, 2018). The COVID-19 pandemic has facilitated an opportunity to transform how digital learning is being introduced (Dhawan, 2020). “How we respond, and the actions we take now will have a profound impact on the society of the future, including the future of education” (Stanistreet et al., 2020, p. 627). “Therefore, this is a critical moment to reflect how the current choices educational institutions are making might affect COVID-19 education
and online learning: Will they reinforce capitalist instrumental views of education or promote holistic human growth?” (Teräs et al., 2020, p. 863).

**Teacher Self-Efficacy**

Research has demonstrated that an increase in teacher self-efficacy has a beneficial impact on different components of teaching, which is a crucial factor during the COVID-19 pandemic (Rogers Haverback, 2020). Teachers' self-efficacy is based on their capacity to execute the activity and on what they think and believe which varies depending on the scope of the task (Haverback & Mee, 2015). COVID-19 caused an abrupt shift in education which transitioned teaching to remote online platforms, generating a significant toll for teachers in preparing lesson plans for delivering instruction remotely during the pandemic. Before the pandemic, teacher planning at various educational levels was the core activity encompassing teachers' collegiality, organizing, coordinating, and planning for the future (Rogers Haverback, 2020).

“Teachers need opportunities to explore the platforms and to experience success in this environment before they are exposed to the high stakes of preparing students to meet K-12 standards” (Carullo et al., 2021, p. 32).

The successful implementation of remote online instruction and remote learning is influenced by how teachers perceive their teaching self-efficacy and sentiments on learning management systems technology (Carullo et al., 2021). Teachers who participated in a professional development program had increased levels of teacher self-efficacy (Bebas, 2016). Teachers' confidence heightened when they attended professional development workshops and understood the benefits of how professional development could enhance the quality of their teaching of their students. Professional development enhanced their level of self-efficacy and improved instructional practices (Baez-
Hernandez, 2019). Prior studies had indicated a misconception deeply rooted in education, in teachers' professional development and best pedagogy practices, that teachers would inevitably have time to plan. However, the momentum of the COVID-19 pandemic did not allow time to prepare for remote online formats (Rogers Haverback, 2020).

Venkatesh and Davis (2000) suggested that an individual's intentions on using technology are determined by how an individual perceives the effectiveness of the technology, the belief that it will improve their work performance, and operating the system, not present difficulties. “The effects of external variables (e.g., system characteristics, development process, training) on intention to use are mediated by perceived usefulness and perceived ease of use” (Venkatesh & Davis, 2000, p. 187). Teachers were launched into remote online teaching devoid of professional training, as they resolutely gained knowledge of various online learning platforms (Rogers Haverback, 2020). Teachers' dedication to familiarizing themselves with technology and increasing their self-efficacy in accomplishing the necessary skills and abilities is a testament to their devotion to their students and the teaching profession.

To achieve this level, teachers enhanced their self-efficacy skills by gaining knowledge of virtual instruction, observing a teacher who was proficient, receiving encouraging remarks from a mentor teacher, and resolving to succeed while instructing in virtual platforms (Rogers Haverback, 2020). “When one combines the great effort and preparation teachers employ to include these essential characteristics with the sudden onset of COVID-19, it is especially vital that teachers feel efficacious in what they are teaching” (Rogers Haverback, 2020, p. 4).
Implementing online teaching is not a novel occurrence; however, transitioning to remote online education during the COVID-19 created numerous challenges for both teachers and their students' perspectives (Ma et al., 2021). Several challenges that affected teachers' self-efficacy were the separation from their students and the limited training in remote online platforms and digital resources. The sudden shift from face-to-face to remote online learning separated students from teachers, making it difficult to interface effectively, restricting teachers from modifying teaching in the classroom. Teachers adjusted the writing and assessment components of the curriculum because students lacked resources (Putri et al., 2020). Teachers with a high degree of teacher self-efficacy have high resilience expectancy in achieving tasks and have personal fulfillment in producing results in the face of challenging moments which can be beneficial in teaching remote online learning (Glackin & Hohenstein, 2018).

During the initial phase of the COVID-19 pandemic, teachers experienced a diminishing self-efficacy due to the influx of demands to implement remote online learning and the absence of classroom interaction with students. However, as teachers adjusted to the nuances of teaching on digital platforms, their efficacy had the potential to improve (Rogers Haverback, 2020). Undoubtedly during the pandemic, teachers experienced increasing fatigue and complaints, but regardless of increasingly adverse sentiments of the inability to have classroom instruction, teachers remained positive and continued to do their best to support remote online teaching (Sokal et al., 2020). Remarkably, over the last 3 months of the school calendar year, a transformation occurred over the initial steady decline in teacher self-efficacy in their experience dealing with student misconduct during lessons and a heightened sense of achievement in their instructional practices (Sokal et al., 2020).
Teachers could improve their self-efficacy by countermanding the countless social and political demands to implement remote online learning using digital platforms with limited familiarity by aspiring to master the intricacies of remote online instruction, interfacing with experienced teachers, inspiration from faculty members, and their will to be successful (Rogers Haverback, 2020). “Teachers can increase their self-efficacy beliefs to respond to the pandemic-related challenge of teaching virtually experiences, verbal persuasion, and physiological and affective states while teaching in virtual platforms” (Rogers Haverback, 2020, p. 5).

Teacher Collaboration

The infectiousness of the COVID-19 pandemic caused school systems’ leaders to acknowledge that collaboration is an essential component that would enable teachers and administrators to overcome the difficulties that the pandemic had caused in education (Hauseman, 2020). The intensity of the pandemic required principals to increase their levels of accountability and responsibility to support their teachers, students, and families promptly, while illustrating and promoting transparent meaningful collaboration (Hauseman, 2020). “Teachers and school leaders have been able to creatively and collaboratively rethink how they support the learning, development, and well-being of their communities now and are beginning to consider what this could mean for the future” (Campbell, 2020, p. 338). While the pandemic has caused havoc throughout educational systems globally, it has provided an opportunity to galvanize communication channels among educators worldwide to collaborate and triumph over the challenges and to navigate changes to improve in the area of collaboration (Lackie et al., 2020). Although individuals might like to collaborate to address the complexities of turbulent events, their philosophical ideologies may impede the process, causing impediments in
the collaborative process, such as other ideological differences and limited time to forge trusting relationships (Rosenblum, 2020).

Because of the impingement that COVID-19 had placed on the lives of students, families, and the educational systems collectively, theoretical discourses such as budget concerns and administrative issues were disregarded, and collaboration channels were opened (Rosenblum, 2020). Collaborative relationships were more important because of the pandemic; relationships could have been challenged significantly when different perspectives impacted the decision process (Frederick et al., 2020). COVID-19 had created problems in sustaining collaboration channels among teachers, especially when classroom instruction transitioned to remote online or hybrid arrangements. Collaboration is critical to teachers' sense of self-efficacy, particularly when managing the educational issues posed by the pandemic (Cristol & Gimbert, 2021).

Teachers benefit from having periods set aside to collaborate; it serves as therapeutic support, spending time together diminishes their anxiety and vexation created by educational demands (Datnow, 2018). “Time and space need to be built into professional development processes for teacher dialogue to allow them to discuss feelings such as fear, anxiety, and worry and to share enjoyment and confidence” (Saunders, 2013, p. 329). As the coronavirus outbreak spread globally and within the United States, schools allotted more time for teachers to have team meetings to organize and collaborate. The importance of collaboration had been thrust to the forefront of education and, in some cases, schools dedicated a full day each week for collaboration (Darling-Hammond & Hyler, 2020). Scheduling time in teachers' schedules to collaborate while implementing remote online learning during COVID-19 developed multiple issues; making the transition from in-class instruction to remote online instruction necessitated
time to research new instructional pedagogy (Rannastu-Avalos & Siiman, 2020).

Teachers had to acclimate themselves to the novel instructional nuances of remote online instruction. It was equally challenging in trying to collaborate with students remotely; students also needed time to assimilate to online digital platforms (Rannastu-Avalos & Siiman, 2020). Social distancing made it difficult for teachers to implement collaborative learning processes with remote online digital platforms and to provide support as a result of the COVID-19 pandemic; this inability was equally challenging for students. “A challenge to implementing collaboration with online digital technologies may relate to establishing a social presence, that is, the ability to communicate social cues using technology” (Rannastu-Avalos & Siiman, 2020, p. 310). Datnow (2020) asserted that principal leadership had a pivotal role in developing working conditions that provided emotional support that enabled teachers to work collaboratively; principals must also consider whether the expectations for what teachers can accomplish in collaboration are realistic in light of current working conditions. “Given that emotions are at the core of teaching and the process of change, it is important to continue to explore the connections between teacher emotions and the professional capital they build in collaboration with each other” (Datnow, 2020, p. 157). Likewise, Campbell (2020) stated:

> The giving of the space and opportunity for teachers and school leaders to act with an increasing sense of agency has enabled them to develop a shared understanding of the nature of the needs within their communities and how they might act on those. (p. 340)

In the United States, teachers provide more instruction during the week than other teachers internationally, but they have less time to meet during the day to plan personally
or collaboratively with other teachers (OECD, 2014). When collaborative work has explicit goals, the school systems gain momentum toward creating change. This process can only be accomplished if the time for teachers and principals to collaborate is in their daily schedules, which is supported by policies that enable teachers to collaborate (Jensen et al., 2016). Understanding how teachers express their emotions and considering ways to empower their professional value can enhance teachers’ collaborative capability to address issues that arise in education (Hargreaves & Fullan, 2012).

Principal leadership is pivotal in developing organizational change; however, principals must create a school culture that promotes professional collaboration. “Negotiating change and brokering and nurturing new relationships are important factors in the sustainability of collaborative activity” (Armstrong, 2015, p. 5). Jones and Harris (2013) found that when principals allowed teachers to actively engage with their peers to develop novice lesson plans and network with other school systems, the principals were able to retain and attract highly qualified teachers in their schools due to their ability to collaborate. Principals who created the most effective, high performing school systems achieved that by their ability to develop powerful collaboration teams among their teachers (Harris, 2013). In high-performing school systems, principal leadership has a pivotal role in creating a culture that facilitates changed instructional and collaborative practices that will ensure that the professional development of teachers is directly aligned to promoting positive changes throughout the school system (Harris, 2013).

Principal Leadership

Principals' instructional and managerial leadership behaviors have significant implications in creating an enriched learning community, enhancing teachers' self-efficacy, developing effective collaboration, and retaining teachers. Levin et al. (2019)
noted that principals are essential in establishing a positive school culture that motivates faculty and staff, assures student success, retains highly qualified teachers, and enhances teachers’ instruction. It is equally vital that principals promote a healthy school climate. The principal’s ability to effectively communicate with their teachers is essential in maintaining a healthy working environment in which teachers feel appreciated. Burkhauser (2017) acknowledged that research has provided evidence that indicates principal leadership behaviors such as supporting teachers in managing student behavior situations, protecting them from external confrontations, and recognizing teachers’ achievements enhanced teachers’ attitudes toward their job. “That principals can affect how teachers feel about their schools is intuitive, but it is also supported by research” (Burkhauser, 2017, p. 128).

How teachers collaborate within the school system is directly related to principal leadership. The more that principals engage in accountability roles, the more school improvement occurs when there is strong leadership that provides guidance and consistently monitors classroom instruction. Instructional leadership affects how teachers work collaboratively to address comprehensive planning, enhance teacher efficacy, and strengthen the school system (Goddard et al., 2015). Principal leadership is central for creating highly academic improving schools and improving their teachers’ instructional pedagogy (Hallinger & Lee, 2014).

While instructional leadership has a critical role in developing sustainable school systems, the demands have heightened the degree to which principals must accomplish the task due to education reforms. Rafferty and Turunen (2015) expressed concerns about how educational reform would influence principal leadership, including how principals would implement educational reform. When principals facilitate educational reforms,
they must have a systemic approach to address educational reforms, support teachers, and understand teachers’ perspectives toward change (Brezicha et al., 2015). When implementing educational reforms effectively, principals should include all stakeholders to promote a collaborative learning climate (Pyhalto et al., 2011). “While experiencing and enacting reform demands principals go through a sense-making process in which they attach a new meaning to their leadership practices” (Ganon-Shilon & Schecter 2018, p. 280).

The current goal of the research is to contribute knowledge on principals' attention to teachers' instructional practices, collaboration, and self-efficacy (Coban et al., 2020). Brezichz et al. (2015) suggested that principals implement a systemic approach to understand the dichotomy of teachers' perspectives. One conceptual model proposed is the conceptual framework; the conceptual framework originated from years of theoretical and empirical research in the subject area of educational leadership management (Coban et al., 2020). The first phase of the model examines the internal and external variables that affect instructional leadership behaviors and practices. The second concerns how instructional leadership impacts schools' processes and teachers' actions and perceptions. The collection of knowledge focused on the various aspects that affect instructional leadership, such as teacher outcomes, student academic performance, trust teachers have in their principals, teacher communication, and professional development. "We first proposed that teachers' trust in principals is a prerequisite for school leaders to become productively involved in instructional matters. Second, we presume that principals' focus on teaching would positively influence both teachers' collaboration and their self-efficacy perceptions" (Coban et al., 2020, p. 3).
The COVID-19 pandemic created concerns that principals encountered in performing their daily work to address the crises arising from the pandemic; new approaches had to be developed to address the complexities and new leadership behaviors to effectively handle situations (O’Connell & Clarke, 2020). Principals were challenged with assisting their teachers in “meeting the social-emotional needs of children and implementing trauma- and healing-informed practice, all while making up for learning loss and preparing for the coming unpredictable combinations of distance learning, blended learning, and–classroom learning” (Darling-Hammond & Hyler, 2020, p. 457).

Thornton (2021) mentioned that the various phases occurred in addressing circumstances that evolved in school systems. The first phase, the crisis phase, required principals to ensure the people were safe and connected and to mitigate the equity issues; the second phase was regular communications, adjustments to routines, and documentation. The final step was to reflect and learn from the experiences.

**Impact on Teacher Self-Efficacy**

Research findings have shown principal leadership and teacher collaborative practices substantially projected teachers' self-efficacy and job satisfaction; collaboration was the dominant factor that facilitated teachers' self-efficacy and job gratification (Duyar et al., 2013). The most potent force that encourages teachers to go above and beyond their assigned duties and responsibilities is the belief that they are valued and what they are doing matters, thereby enhancing their self-efficacy (Cansoy et al., 2020; Lambersky, 2016). Effective leadership accentuates teachers' importance in creating the school's success by indicating that they have confidence in teachers' abilities by providing motivational message notes in their mailboxes, which enriches teachers' efficacy beliefs personally and collectively. Principals can inspire teachers' sense of appreciation for their
commitment and dedication in school by acknowledging their participation in achieving the school’s vision and safeguarding them from unpleasant situations (Lambersky, 2016). Teachers' self-efficacy empowers their capacity to address school challenges and has a pivotal function in impacting student achievement and enhancing their welfare in the school system (Barni, 2019). "Evidence from many meta-analyses of more than two decades of the study shows that efficacy beliefs contribute significantly to the level of motivation and learning, socio-cognitive functioning, emotional well-being, and performance accomplishments" (Katz & Stupe, 2015, p. 70). Cansoy et al. (2020) believed that principals' instructional leadership benefits teachers' professional understanding of instruction and their ability to promote an optimistic school culture.

Theoretical and empirical research has shown that teacher self-efficacy affects objectives throughout various aspects of the school system. Zee and Koomen (2016) suggested that teacher self-efficacy revealed a positive correlation with student achievement, teacher demeanor, and instructional practices, and with factors associated with teachers' mental health, personal achievement, employment gratification, and dedication. Kim and Seo (2018) also confirmed that the connection between teacher efficacy and students' academic performance was substantial. Transitioning from in-class instruction to remote online education during the emergence of the COVID-19 pandemic evoked multiple challenges for teachers and students internationally (Cardullo et al., 2020). “The pandemic created challenges for students and teacher interaction under the circumstances of social distancing” (Cardullo et al., 2021, p. 39)

Ma et al.'s (2021) examination of teachers’ self-efficacy during the pandemic revealed that online instruction did not increase teacher self-efficacy while instructing students. School systems inadequately prepared teachers for transitions from in-class
instruction to online education. Teachers were disconnected from their students and school administrative procedures and saw disappointing student academic progress; all of these were singled out as major contributory factors that impacted teacher self-efficacy (Cardullo et al., 2021; Kuhfeld et al., 2020; Morgan, 2020; Morris et al., 2017). Several additional components were examined, such as adaptability and teacher burnout, but teachers’ passion burnout significantly impacted teacher self-efficacy (Ma et al., 2021).

Granzier and Perera (2019) indicated teachers' work ethic and commitment are reciprocally linked over time. Teacher self-efficacy determined their contentment at their school through employment, and the fulfillment in their work impacted teacher self-efficacy. Teachers were able to adjust their behaviors, emotions, and attitudes to the daunting circumstances that the pandemic created by adapting their approach to instruction and other issues that were negatively affecting students as well. Adaptability was positively connected to teacher self-efficacy, which enabled teachers to effectively focus on situations that affected education (Collie, 2021).

Principals who impact teacher self-efficacy possess a broad understanding of the best pedagogical practices related to teaching. “In this era, principals must be capable of drawing on a knowledge base that includes powerful learning practices, models of teaching for active learning, learner-centered assessment, and coaching teachers for success” (Liu & Hallinger, 2018, p. 522). “When principals demonstrated instructional leadership behaviors, teachers’ perceptions about their own self-efficacy grew stronger...they saw themselves more sufficient in educating and teaching students” (Calik et al., 2012, p. 2501). The principal’s role in establishing high levels of teacher self-efficacy lies in their ability to support teachers by providing physical resources, setting instructional goals, and providing training that will help motivate teachers; both
collaboration and principal leadership are positively related to teacher self-efficacy (Sehgal et al., 2017).

During the onset of the COVID-19 pandemic, teachers were exhausted; when principals provided technology support, teachers experienced increased self-efficacy for providing instruction and a sense of accomplishment (Sokal et al., 2020). Teacher self-efficacy increased when principal leadership created a school climate in which teachers felt comfortable interacting with their principal on sensitive matters and received prudent guidance and direction from their principal (Ware et al., 2013). When principals ask teachers for suggestions on decisions that will affect the faculty, when principals are knowledgeable on curriculum and instructional practices, and when they give teachers opportunities for instructional leadership roles and discretion on practices in their classroom, they model leadership behaviors that increase teacher self-efficacy (Ware et al., 2013). “The more principals engage in accountability roles (such as ensuring the teachers’ understanding of educational goals, improving the teachers’ teaching skills, holding the teachers accountable for educational results, and involving parents), the higher the teachers’ self-efficacy will be” (Duyar et al., 2013, p. 713). Principals who participated in instructional leadership professional development that emphasized improving teacher instructional practices and student learning, influenced teachers’ self-efficacy, and enhanced teachers’ instruction (Sebastian & Allensworth, 2012; Supovitz et al., 2010).

When principals “support co-operation among teachers for developing new teaching practices…. and ensure that teachers take responsibility for improving their teaching skills and feel responsible for their student's learning outcomes” (Bellibas & Liu, 2016, p. 232), their teachers are more likely to develop increased self-efficacy
(Duyar et al., 2013). Additionally, in developing an academic and working environment that will increase instructional practices, principals ensure that teachers are not disturbed during instruction, enabling them to have more time to enhance instruction (Bellibas & Liu, 2016; Duyar et al., 2013). Moreover, meeting with teachers before conducting evaluations heightened teacher self-efficacy. “Principals’ proactive involvement in instructional leadership has a positive, direct, and significant relationship with teachers’ self-efficacy in teaching and student engagement” (Bellibas & Liu, 2017, p. 63).

Principals who provided incentives for teachers and students to aspire to higher levels of instruction and academics were effective in increasing teacher self-efficacy and student learning (Bellibas & Liu, 2017).

**Impact on Teacher Collaboration**

In an educational construct, collaboration is viewed as a valid form of communication, which can improve educational initiatives as principals and teachers collectively address barriers that impede creating a highly academic performing school (Campbell, 2020). Today, collaboration has become a vital factor for maintaining and perpetuating a sustainable school culture. According to Klein and Falk-Krzesinski (2017), collaboration is the mantra for addressing concerns throughout various academic disciplines and effectively initiating change in the 21st century. The principal's ability to collectively address issues and problems by collaborating with teachers helps establish a school's culture and initiates high expectations for all stakeholders. The benefits of developing a school system that fosters a climate of collaboration empower teachers to respond to school-imposed challenges (Muckenthaler et al., 2020). “These advantages of collaboration also contribute to the quality and efficiency of the individual school because healthy teachers, who can deal with innovation and support students as well as
possible, represent a fundamental aspect of school development” (Muckenthaler et al., 2020, p. 490). The absence of collaboration in schools has serious ramifications, which can jeopardize team group meetings’ stability and the continuity of sharing knowledge on mutually concerned issues (Honingh & Hooge, 2014).

Supovitz et al. (2010) noted that instructional leadership has a pivotal role in motivating teachers to initiate collaborative channels. Collaboration amongst teachers cultivates teachers’ discussion of their instructional practices, enhancing student achievement. “With the rapid development of technologies and the gradually increasing requirements of technology integration to teaching, teachers have been facing stress to keep pace with new technologies and to design pedagogical usage of technologies” (Dong et al., 2019, p. 1). Teacher collaboration becomes equally significant to advance student achievement and implement digital technology in the classroom (Drossel et al., 2017). To effectively address the challenges of advancing equal and fair educational resources for students to access quality education, it is imperative that collaboration exists between principals and teachers so they can work collectively to forge systemic change (Boyland et al., 2019).

"In order to handle conflict within the school, principals emphasized positivity and gaining a better understanding through collaboration and teamwork" (Khanal et al., 2020, p. 1037). In addition, principals implemented a participatory leadership approach for transforming the school operating system into reciprocal communications between teachers and the principal. Principals also eradicated elements of mistrust that may be counterproductive for the school’s sustainability, which could impact student achievement and teachers' collaboration; principals enacted various leadership practices to effectively manage their school (Khanal et al., 2020). Principals who created a school
culture of trust were able to develop interrelationships that developed collaboration amongst teachers. "Thus, principals must be prepared to engage collegially with teachers in ways that are consistently honest, open, and benevolent, while also dependably demonstrating sound knowledge and competent decision making associated with administering academic programs" (Tschannen-Moran & Gareis, 2015, p. 66). By establishing a school culture that emphasizes instructional practices, setting school goals and high expectations, and supporting teachers, principals created a safe and collaborative school environment for teachers to interact and enhance their instructional practices (Supovitz et al., 2010).

Principals also implemented a team approach to address the challenges teachers encountered with technology by placing teachers who were knowledgeable in technology as mentors for other teachers and allowing time for collaboration to address student needs meaningfully (Hauseman et al., 2020). The momentary pause of in-classroom instruction and student learning while developing remote learning culture frustrated many teachers who required principal leadership immediately while social distancing (Kafa & Pasiardis, 2020). New approaches had to be developed by principals to facilitate collaboration channels by setting up a digital network that would allow teachers to set an online meeting with the principal to address concerns and collaborate with other teachers (Kafa & Pasiardis, 2020). Rudimentary elements encompassed in teachers’ daily schedules affect their ability to collaborate; time, paperwork, and duties have been the common themes noted in several studies that significantly impact teachers’ ability to collaborate, with their students (MetLife, 2013).

Various strategies to offset issues that interfered with their instructional time and impede teacher collaboration were implemented by principals. Carrying out the routine
duties that teachers ordinarily performed, principals freed teachers from those duties which enabled more collaboration time between teachers and teacher-student interaction (Sterrett et al., 2018). Principals scheduled time to plan collectively with teachers; they scheduled time to meet for an entire day every two weeks and set 40 minutes to meet before school and 30 minutes after school, which enhanced their ability to collaborate (Sterrett et al., 2018). In addition, teachers need time to discuss instructional practices and collaborate to develop differentiated lessons that would meet the varying needs of their students. When creating an equitable duty schedule that would provide more time for teachers to collaborate, principals considered teachers' class size, schedules, and class location. Principals allowed teachers to participate in the scheduling process collaboratively; teachers could choose duties that they believed met their skills, empowering teachers to take ownership and enabling greater collaboration among teachers and more significant teacher-student interaction (Sterrett et al., 2018).

**Leadership Needed During the Pandemic**

The magnitude of the COVID-19 pandemic has raised questions concerning accountability measures for principals. They experienced unprecedented and unanticipated demands in providing remote online education for students during the pandemic and for the safety and well-being of their staff. Thornton (2021) explained that principals needed to be involved in crisis leadership during COVID-19 to respond to the various challenges they encountered, such as familiarizing students and teachers to remote online instruction and learning, sustaining students' and teachers' well-being, and effectively collaborating with compassion to all stakeholders. Central office administration provided principals basic information and direction that depicted the essential matters to the school district; however, principals had the latitude to use their
discretion in addressing crisis issues that were community and building specific (Hubbard et al., 2020).

Although the coronavirus disrupted education globally, it has created an opportunity for school systems and organizations of different perspectives to transform the weakness that presently exists in educational systems, encourage better motivation, and understand the views of others (Koehn, 2020). COVID-19 has dramatically changed the perspective of leadership behavior, requiring principals to respond to the pandemic with a sense of equilibrium. “In a time of crisis, leaders must act swiftly and with foresight but also with careful consideration of options, consequences and side effects of actions taken” (Netolicky, 2020, p. 2). A principal must be able to develop effective converging procedures in addressing the social-emotion well-being of the students and educators because the pandemic has caused havoc in the lives of individuals and their families (Anderson et al., 2020). Developing partnerships with community outreach centers to ascertain if students and their families had adequate necessities for living was a paramount concern for many principals.

During the pandemic, principals were responsible for their constituents’ well-being, consisting of students, the community, staff, and teachers, all struggling with burdensome emotions, initiated by the dread of uncertainties of the coronavirus and the perpetuation of the coronavirus isolation. Anderson et al. (2020) indicated that in response to the overwhelming circumstances of the pandemic, principals became caretakers by advocating for the essential resources that students and their families needed: technology, a broadband resource, and food. The emergence of COVID-19 has created a change in principal leadership that is more collaboratively oriented; principals must be prepared to address unprecedented and unpredictable circumstances that may
arise and impact the foundation of education (Harris et al., 2020). A greater sense of benevolence has now become the benchmark for accomplishing a challenging task, requesting more reasonable demands on colleagues and possessing the ethic of care and patience for other individuals (Harris et al., 2020).

The pandemic has unquestionably diminished teachers’ self-efficacy which affected their attitude and well-being while in the process of acclimating to the nuances of remote online instruction and caring for their students (Cardullo, 2020). “We have shown that teachers’ knowledge (e.g., technology, pedagogy, and content) and their appraisals of that knowledge can inform their efficacy beliefs” (Morris, 2017, p. 819). Principal leadership must rejuvenate teachers’ self-efficacy and enhance the well-being that was impacted by the pandemic and other contributory factors (Goodwin & Shebby, 2020). The current state of teachers’ well-being requires urgent attention from principals to eradicate the mental decline that teachers are experiencing. Goodwin and Shebby (2020) suggested that teachers have time to communicate and connect with each other at least for 30 minutes via video or team meeting.

Principals believed their essential role during the pandemic was providing pertinent information to their constituents in the community as they embraced daunting circumstances. Stone-Johnson and Weiner (2020) noted:

The deep relationships principals have with their communities provide an opportunity to control the terms of what schoolwork looks like: grading policies, school communication, teacher support, and parent engagement should be indicators of professionalism and determined by principals’ knowledge of their school. (p.372)
The coronavirus has provided an opportunity to ensure that collaboration channels for responding to community and teachers' concerns are effectively addressed (Campbell, 2020). "Principals' instructional leadership may support the degree to which teachers work together to improve instruction, and together leadership and teacher collaboration may contribute to school effectiveness by strengthening collective efficacy beliefs" (Goddard et al., 2015, p. 501).

**Summary**

The COVID-19 pandemic has created new educational leadership challenges that principals must respond to; they must be prudent and persistent in their leadership practices when faced with unprecedented challenges. Principals served as support sources when teachers experienced stress and frustration with challenges that created demands on their time and shifts in their learning and teaching (Anderson et al., 2020; Datnow, 2018). Hybrid/remote learning has become today’s normal due to the insurgence of the COVID-19 pandemic; school systems have struggled with implementing remote learning primarily due to the inequities within their school districts and the inadequate training of their teachers.

Because they plan the design of distance learning for students and manage the technology systems, teachers need to participate in professional development and have technical assistance to address technical issues (Doucet, 2020). School districts' implementation of distance learning curriculums should go beyond their regional area and transcend globally to prepare students for the future (Hwang, 2018). Many of the school systems’ superintendents and charter school managers believed that the inequities that existed in their areas made it difficult for teachers to implement remote/hybrid
education effectively; thus, school administrators had to advocate for resources to assist students and teachers during the pandemic (Bordoli et al., 2020; Schwartz et al., 2020).

Collaboration is an essential component that empowers teachers and enhances their instructional practice. It is a critical factor in developing effective, sustainable school systems and a primary factor that promotes teacher communication; the lack of collaboration in schools threatens the school culture (Kleina et al., 2017; Muckenthaler et al., 2020; Supovitz et al., 2010). When principals and teachers collaborate, the process empowers teacher collaboration and self-efficacy and improves their job satisfaction (Datnow, 2018; Duyar et al., 2013). The COVID-19 pandemic has exposed many of the inequities that were prevalent in school systems before the pandemic and placed on the shoulders of principals, which impacted teachers’ self-efficacy, collaboration, and well-being; hindering their ability to provide quality remote online instruction to their students (Harris et al., 2020; Lancker & Parolin, 2020; Palit & Guha, 2021), but also an opportunity for principal leadership to develop new approaches to creating a holistic change in their schools (Hauseman et al., 2020; Stone-Johnson & Weiner, 2020; Teräsvirta et al., 2020).

Although the pandemic caused turmoil and significantly disrupted the foundational fiber of education, teachers were resilient and committed to overcoming the elements that were imposed on their teaching and well-being. Principals responded and became caretakers and advocated for resources and necessities that their constituents and teachers needed during the pandemic (Anderson et al., 2020; Harris et al., 2020). The ethic of care and compassion has become the guiding force that will empower principals to lead schools to a greater sense of normalcy and develop meaningful, trusting
relationships that will enhance teacher self-efficacy and collaboration to withstand the impact of crises (Cristol & Gimbert, 2021; Lackie et al., 2020; Thornton, 2021).
Chapter Three – Methods and Procedures

Introduction

Before the pandemic, principals’ leadership responsibilities traditionally dealt with the daily routine occurrences that essentially had not changed for years, focused on having the authority, management, and providing support to others. COVID-19 significantly altered the perceptions of leadership and behaviors (Harris, 2020). The intricacies that describe the responsibilities of teachers and principals were magnified during the COVID-19 pandemic (Campbell, 2020). The purpose of this qualitative study was to identify principals’ leadership behaviors that impacted teacher self-efficacy and collaboration during the virtual/hybrid learning, which took place during the COVID-19 pandemic. The participants in the research study consisted of teachers and principals in grades K-5.

Data collected via an online survey tool included Likert-scale items, open-ended responses, and voluntary interviews from consenting K-5 teachers and principals to gather a more in-depth analysis of teachers’ and principals' perspectives on self-efficacy and collaboration during the COVID-19 pandemic. These three sources provided triangulation of the data. The qualitative research design enabled the researcher to examine the central phenomenon of understanding teachers' and principals' perspectives of behaviors that impacted them during the COVID-19.

Subjects

The participants of the study consisted of 46 teachers in grades K-5 who provided remote/hybrid instruction and integrated digital technology during the COVID-19 pandemic and 10 principals of K-5 schools who provided instructional leadership during the same period. Teachers and principals were invited to participate in a survey and
interview. Teachers and principals were chosen for this study because they were the primary individuals who worked with students during COVID-19. The researcher selected individuals who were "available in well-defined, intact groups that are easily studied" (Creswell & Gutterman, 2019, p. 328). The researcher included teachers and principals to determine what leadership behaviors teachers and principals perceived that significantly impacted teachers’ self-efficacy and collaboration while providing remote online education and leadership during the COVID-19 pandemic. The pandemic has allowed the researcher to examine how principal leadership behaviors can enhance teachers' self-efficacy and collaboration in the school system, especially during a crisis.

Setting

The study participants consisted of 46 teachers in Grades K-5 who provided remote/hybrid instruction and integrated digital technology during the COVID-19 pandemic and their K-5 principals who provided instructional leadership during the implementation and use of the digital technologies during the same period. Data were gathered from urban, suburban, and rural school districts in southeastern Pennsylvania. This research study was conducted in five public school districts in which 22 elementary schools in southeastern Pennsylvania were selected to participate in this qualitative study. Although the schools' demographics varied, several schools were classified as urban school districts located in small cities. District A (urban) had approximately 17,000 students, 840 teachers, and seven elementary schools; the student-to-teacher ratio was 14 to 1. District B (encompassing three sectors) had approximately 6,100 students, 380 teachers, and five elementary schools; the student to teacher ratio was 14 to 1. District C (rural) had approximately 5,025 students, 390 teachers, and three elementary schools; the student to teacher ratio was 15 to 1. District D (suburban) had approximately 4,700

students, 380 teachers, and three elementary schools; the student to teacher ratio was 14 to 1. District E (rural) had approximately 3,550 students, 250 teachers, and three elementary schools; the student to teacher ratio was 14 to 1.

Instruments

This qualitative study used multiple data collection instruments to examine teachers' and principals' perceptions regarding principal leadership behaviors during the COVID-19 pandemic. The instruments used to collect the data consisted of a survey using Likert-scale and open-ended questions, and interviews with questions which allowed participants to expound on their perceptions. Interviews in a qualitative study provided the researcher with beneficial information. In addition, they allowed the participants to describe detailed personal information (Creswell & Guetterman, 2019).

Survey

For this study, the researcher developed 18 survey questions to elicit responses to the four research questions. The questions were designed to examine teachers' perceptions of how principal leadership impacted their collaboration and self-efficacy during the remote/hybrid learning during the COVID-19 pandemic. Additionally, the survey examined what leadership behaviors principals believed impacted their teachers' self-efficacy and collaboration while implementing remote/hybrid learning during COVID-19. The survey was presented electronically using SurveyMonkey and disseminated electronically through each school district's email network. The response options were configured so that participants could specify their level of agreement to a statement using a Likert-Scale with four options: strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). The instruments for this study were comprised of a researcher-designed questionnaire for teachers entitled Teacher Survey (Appendix A) and
for principals entitled Principal Survey (Appendix B), which consisted of one
demographic question, 18 Likert-scale questions, and four open-ended questions. The
Survey took approximately 15 minutes to complete.

**Interviews**

Teachers and principals were invited to participate in voluntary interviews
Teacher Interview Questions (Appendix C) and Principal Interview Questions (Appendix
D), a second measurement which allowed them to expound on their survey responses.
The interviews consisted of seven questions and took about 15 minutes. The interview
process was beneficial to expand common themes that evolved from the survey results. In
addition, interviews in a qualitative study enable the participants to expound on distinct
personal experiences and provide information to help the researcher better understand the
participants' perspectives (Creswell & Guetterman, 2019). Participants were asked to
complete a consent form before the interview.

**Reliability and Validity**

Reliability reflects that the scores derived from the instruments are steady and
consistent. How a participant responds to one question should be close to their responses
to a similar question (Creswell & Gutterman, 2019). Reliability and validity are
connected in "complex ways" because at specific points in the research, they become
"mutually exclusive" (Creswell & Gutterman, 2019, p. 158). The researcher administered
the two instruments to five different school districts that consisted of 22 elementary
schools, that determined the reliability of the test if the results generated the same
outcomes and were stable over time. Reliability determined if the scores derived from the
instruments are steady and consistent.
The researcher also developed pilot instruments to ensure the reliability of the research and ascertain if the participants understand the questions. Three teachers and three principals who did not participate in the study piloted the instruments. Each participant provided the researcher with written responses relating to the clarity of the questions and if the questions were relative to their experiences during the pandemic. Based on the participants' responses, the researcher made any necessary adjustments to the questionnaires.

Validity is the formation of compelling evidence demonstrating that the data are accurate and meet the study's intended purpose. The researcher validated the study by receiving responses from participants and affirming that the information was correct. "This check involves taking the findings back to participants and asking them (in writing or an interview) about the accuracy of the report" (Creswell & Guetterman, 2019, p. 261). Additionally, the researcher combined different data from teachers and principals including Likert-scale items, open-ended questions, and interview questions that ensured triangulation. Triangulating the data validated the study's validity and accuracy, and enabled the researcher to develop a thorough understanding of the central phenomena. "The triangulation of the data ensures that the study will be accurate because the information draws on multiple sources of information, individuals, or processes … that will encourage the researcher to develop an accurate and credible report (Creswell & Gutterman, 2019, p. 261). Data were coded to examine common themes related to teachers' perspectives on how their self-efficacy and collaboration were impacted by principal leadership behaviors and principals' perspectives of how their leadership behaviors impacted teacher self-efficacy and collaboration during COVID-19.
Design of the Study

This study used a qualitative research design to examine the perceptions of what teachers believed were the principal leadership behaviors that impacted their self-efficacy and collaboration while implementing remote/hybrid learning during the COVID-19 pandemic. Additionally, the study addressed leadership behaviors that principals believed impacted teacher self-efficacy and collaboration while implementing remote/hybrid learning during the COVID-19 pandemic. Thus, qualitative research was appropriate for this study because it enabled the researcher to "explore a problem and develop a detailed understanding of the central phenomenon…in which the literature might yield little information about the phenomenon of the study" (Creswell & Gutterman, 2019, p. 16).

Procedure

This study was conducted in five public school districts that consisted of 22 elementary schools in the southeastern part of Pennsylvania with teachers and principals in grades K-5. The populations of each school district were vastly different, between large and small cities, suburban and rural. Permission letters to conduct the study were sent out to the superintendents in the various school districts. After the superintendent granted permission, the questionnaire items and interview questions were sent to three teachers and three principals who were not part of the study to pilot. After the researcher received the teachers’ and principals' responses from the piloting of the instruments, revisions were made based on their recommendations.

After making any necessary revisions to the instruments, a proposal for this study was submitted to the Immaculata University Research Ethics Review Board (RERB). After the RERB granted permission to conduct the study (Appendix E), the researcher forwarded a letter to each principal that informed them that the district superintendent
had granted the researcher permission to conduct a study in their school. In addition, the survey was sent via email to each participating school district's principal which requested their assistance in disseminating the survey to their teachers and assistant principals and inviting their participation in the study. Each teacher and principal received an invitation to complete the online survey, which took approximately 15 minutes. The invitation had an attachment link to the website to ensure anonymity, consent information, and an additional invitation to participate in an interview.

Participants were informed that the online survey would be available for 2 weeks. The researcher provided an email address to participants who decided to participate in an interview to arrange a time and location convenient for the participant. Data were collected from the online surveys and participant interviews. The data were then analyzed and coded to determine trends and patterns relative to the teachers' perceptions of how principal leadership behaviors impacted their self-efficacy and collaboration while implementing remote online education during the COVID-19 pandemic and principal's perceptions of how their leadership behaviors affected teachers during the same time frame.

**Data Analysis**

The data collection consisted of a survey that contained one demographic question, 18 Likert-style items, four open-ended questions, and seven interview responses from teachers and principals. The interviews allowed the participants to provide more insight into their perspectives on the survey questions. Once all the data were received, they were organized and coded into separate categories. The collected data were segmented into themes that provided insight into understanding teachers' and principals' experiences of how the COVID-19 impacted their instruction and principal leadership.
Summary

The purpose of this qualitative study was to identify principals’ leadership behaviors that impacted teacher self-efficacy and collaboration during the virtual/hybrid learning, which took place during the COVID-19 pandemic. The setting for the study consisted of five school districts located in southeastern Pennsylvania comprised of 22 schools of grades K-5 that varied significantly in population and demographic characteristics. Teachers who provided remote/hybrid instruction and principals who provided leadership during the COVID-19 pandemic were the subjects for the study. Multiple instruments were utilized to collect the data, surveys with Likert-scale and open-ended questions, and individual interviews. The researcher utilized a sample pilot group to test the questions to determine if the participants in the sample understood the questions. The participants provided written comments about the questions, and the researcher made any necessary adjustments that related to the participants' concerns. The data collected from the surveys and interviews were evaluated and analyzed to identify any themes relevant to the research questions. These findings are reported in Chapter Four.
Chapter Four – Results

Introduction

The purpose of this qualitative study was to identify principals' leadership behaviors that teachers believed impacted their self-efficacy and collaboration while implementing remote/hybrid instruction and integrated digital technology during the COVID-19 pandemic. In addition, the researcher identified principals' perceptions of the leadership behaviors they believed impacted their teachers' self-efficacy and collaboration while implementing remote/hybrid instruction during the same period. This study involved teachers in grades K-5 who provided remote/hybrid instruction and principals who provided leadership during the COVID-19 pandemic. The instruments for this study were administered to teachers and principals in grades K-5 in southeastern Pennsylvania's urban, suburban, and rural school districts. This research study was conducted in five public school districts in which 22 elementary schools in southeastern Pennsylvania were selected to participate in this qualitative study.

This chapter presents the findings of a researcher-designed questionnaire consisting of one demographic question, 18 Likert-scale statements, four open-ended questions, and seven interview questions. This chapter also includes findings from the researcher-designed interview protocol, allowing participants to reflect and expound on their survey answers and articulate their perspectives based on personal experiences. The three-fold data collection design, which included Likert-scale items, open-ended responses, and interview responses, was developed to strengthen the study's reliability and validity and to determine if any compelling themes existed in the study. The survey and interview data findings are arranged to correspond to each of the four research questions. The results for each research question are provided in an explanatory narrative,
which may also be followed by tables that represent the participants’ responses in numbers and percentages.

Demographics

This study was conducted during the 2020-2021 school year in five school districts in southeastern Pennsylvania. Data were collected from five school districts located in southeastern Pennsylvania; schools varied significantly in population and demographic characteristics. A total of 46 teachers submitted responses to the demographic question that asked what type of online teaching they were involved in during the COVID-19 pandemic. Forty-two teachers (91%) provided remote and hybrid instruction, while four teachers (9%) provided fully remote education. Table 4.1 illustrates the data collected from the demographic question.

<table>
<thead>
<tr>
<th>Table 4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What Type of Online Teaching Were You Involved in During the 2020-21 School Year?</strong></td>
</tr>
<tr>
<td>Type of Teaching Instruction</td>
</tr>
<tr>
<td>Remote and hybrid</td>
</tr>
<tr>
<td>Fully remote online</td>
</tr>
</tbody>
</table>

*Note. N=46.*

Research Question One

What do teachers believe are the principal leadership behaviors that impacted their self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

The purpose of research question one was to examine teachers' perceptions of what principal leadership behaviors impacted their self-efficacy while implementing
remote/hybrid learning during the COVID-19 pandemic. Forty-six teachers who participated in the online survey answered 10 Likert-scale statements and forty-three teachers answered two open-ended questions. In addition, four teachers voluntarily participated in follow-up interviews and answered three interview questions to indicate their perspectives regarding research question one. Teachers' responses were provided through the survey statements, open-ended questions, and interview questions designed to provide data on teachers' perspectives on research question one.

**Likert-Scale Items**

Ten Likert-scale statements (1, 2, 3, 4, 5, 6, 7, 8, 9, and 10) were designed to examine the teachers' perspectives of principals' leadership behaviors that they believed impacted teachers' self-efficacy. The participants were provided four response options which indicated whether they strongly agreed, agreed, disagreed, or strongly disagreed with a statement. In the data collected concerning statement one, whether the principal’s knowledge of technology assisted teachers during the implementation of online/hybrid instruction, five teachers (11%) strongly agreed, 17 (37%) agreed, 16 (35%) disagreed, and eight (17%) strongly disagreed. Statement two asked if principals provided direct support during the pandemic (e.g., modeled a lesson, did virtual walkthroughs) enabling them to feel confident in providing online learning. Four teachers (9%) strongly agreed, 16 (35%) agreed, 16 (35%) disagreed, and 10 (22%) strongly disagreed.

Responses to statement three indicated that 14 (30%) teachers strongly agreed that principals’ openness and transparency created a culture of trust which enhanced their self-efficacy, 15 (33%) agreed, 12 (26%) disagreed, and five (11%) strongly disagreed. When asked in statement four if principals provided resources to enable teachers to
implement online instruction during the pandemic, nine teachers (20%) strongly agreed, 18 (39%) agreed, 14 (30%) disagreed, and 5 (11%) strongly disagreed.

In statement five, 15 (33%) teachers strongly agreed that principals kept in contact with teachers to determine their well-being during the pandemic, 15 (33%) agreed, 12 (26%) disagreed, and four (9%) strongly disagreed. When asked in statement six if principals provided teachers with opportunities to explore remote learning platforms before they were expected to prepare students to meet K-5 curriculum standards, five teachers (11%) strongly agreed, 20 (43%) agreed, 16 (35%) disagreed, and 5 (11%) strongly disagreed. Teachers' responses to statement seven revealed that seven teachers (15%) strongly agreed that principals provided professional development on using technology to prepare teachers for remote online instruction, 25 (54%) agreed, 13 (28%) disagreed, and one (2%) strongly disagreed. Regarding whether principals supported teachers in maintaining discipline during classroom instruction, responses to statement eight showed that 11 teachers (24%) strongly agreed, 12 (26%) agreed, 18 (39%) disagreed, and five (11%) strongly disagreed. In response to statement nine that principals were readily available to discuss teachers' concerns during the pandemic, 18 teachers (39%) strongly agreed, 18 (39%) agreed, seven (15%) disagreed, and three (7%) strongly disagreed. Finally, question 10 examined whether principals showed compassion when guiding teachers through the circumstances that were created during the pandemic; 20 teachers (43%) strongly agreed, 14 (30%) agreed, 10 (22%) disagreed, and two (4%) strongly disagreed. Table 4.2 illustrates the data collected from the Likert-scale statements.
### Table 4.2

**What Principal Leadership Behaviors do Teachers Believe Impacted Teacher Self-Efficacy During the COVID-19 Pandemic?**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Principals’ knowledge of technology assisted teachers’ implementation of online/hybrid instruction.</td>
<td>5 (11%)</td>
<td>17 (37%)</td>
<td>16 (35%)</td>
<td>8 (17%)</td>
</tr>
<tr>
<td>2. Principals provided support during the pandemic (e.g., modeled a lesson, did virtual walkthroughs).</td>
<td>4 (9%)</td>
<td>16 (35%)</td>
<td>16 (35%)</td>
<td>10 (22%)</td>
</tr>
<tr>
<td>3. Principals openness and transparency created a culture of trust which enhanced teachers’ self-efficacy.</td>
<td>14 (30%)</td>
<td>15 (33%)</td>
<td>12 (26%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>4. Principals provided resources to enable teachers to implement online instruction.</td>
<td>9 (20%)</td>
<td>18 (39%)</td>
<td>14 (30%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>5. Principals kept in contact with teachers to determine our well-being during the pandemic.</td>
<td>15 (33%)</td>
<td>15 (33%)</td>
<td>12 (26%)</td>
<td>4 (9%)</td>
</tr>
<tr>
<td>6. Principals provided opportunities to explore remote learning platforms before preparing students to meet K-5 curriculum standards.</td>
<td>5 (11%)</td>
<td>20 (43%)</td>
<td>16 (35%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>7. Principals provided professional development on using technology for remote online instruction.</td>
<td>7 (15%)</td>
<td>25 (54%)</td>
<td>13 (28%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>8. Principals supported teachers in maintaining discipline during classroom instruction.</td>
<td>11 (24%)</td>
<td>12 (26%)</td>
<td>18 (39%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>9. Principals were readily available to discuss concerns during the pandemic.</td>
<td>18 (39%)</td>
<td>18 (39%)</td>
<td>7 (15%)</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>10. Principals showed compassion through the circumstances created during the pandemic.</td>
<td>20 (43%)</td>
<td>14 (30%)</td>
<td>10 (22%)</td>
<td>2 (4%)</td>
</tr>
</tbody>
</table>

*Note. N=46. The total percentage in each statement will not equal 100% due to rounding.*
Open-Ended Survey Responses

The responses collected through the open-ended survey questions were structured and presented in relation to research question one. Open-ended question one asked teachers: What did your principal do to promote your self-efficacy when you instructed students remotely during the pandemic? Seven common themes evolved from the teachers' open-ended responses to question one; principals (a) were supportive (10), (b) scheduled meetings (four), (c) were encouraging (eight), (d) were available (four), (e) provided tech support (four), (f) addressed health concerns (three), or (g) did nothing (10).

Forty-three teachers responded to open-ended question one. Ten teachers stated that principals were supportive, which resonated throughout the teachers' responses. One teacher stated, "Our principal understood the challenges we faced with remote learning and hybrid learning." Another said, "She had a saying of, ‘Just do your best as we're in uncharted territory.’" One teacher wrote, "My principal promoted my self-efficacy by being a listening ear; she was learning alongside the teachers."

Four teachers mentioned that principals meeting with teachers was also an essential factor in promoting self-efficacy. Two responses included "regular observations and meetings to review and evaluate how a lesson went" and "made arrangements for district departments/staff members to troubleshoot technology concerns."

Another theme manifested in the teachers' responses to the principals' impact on teachers' self-efficacy was the need for principals to encourage teachers, which eight teachers mentioned. One teacher remarked that principals “encourage us to use our skills
we already had and to share with other colleagues.” Another teacher stated that their principal "sent positive messages about our capabilities." In addition, four teachers believed that principals' availability to teachers was impactful to their self-efficacy as one teacher stated, "He was available to teachers before, during, and after school to answer questions and ease worries."

Three teachers also expressed that principal leadership behaviors that exhibited concern for teachers' health impacted their self-efficacy. One teacher mentioned, "She always supported the emotional and mental needs of my family and me first before my job." Another asserted, "My principal encouraged me to engage in self-care so that I could do my best teaching." Four teachers also stated that having technical support was beneficial for providing online education. One teacher wrote, "She shared docs of websites and videos of how to-to make a Google slide and get on Canvas, and Zoom." Another teacher shared, "She assigned knowledgeable teachers to provide technical support and also arranged meetings with IT department to discuss our issues." A similar comment was, "A distance learning specialist gave us professional development."

Ten teachers believed that their principals failed to heighten their level of self-efficacy. One teacher explained, "We felt on our own most of the time; the district provided some scope and sequence." Likewise another teacher shared, "Honestly, I felt that I needed to figure this out alone; the district as a whole didn’t support their teachers, told to figure it out and be careful.” Several teachers indicated that their principals did "nothing" to enhance their self-efficacy.

Forty-three teachers responded to open-ended question two, which focused on what principal leadership behaviors prepared teachers to transition from in-class
instruction to online education. Six common themes that evolved from the responses to open-ended question two were that principals (a) were supportive (six), (b) communicated (seven), (c) provided technical support (nine), (d) scheduled meetings (six), or (e) did nothing (15).

Being supportive of teachers continued to resonate as a principal leadership behavior that six teachers believed had impacted their self-efficacy. "My principal allowed us to express our frustration, contacted the Tech department and district officials," stated one teacher. According to another teacher, the principal “placed a teacher on assignment to support online instruction.” In addition, providing support for parents was beneficial in promoting teacher self-efficacy. One teacher noted, "She arranged for parents/students to pick up supplies that teachers distributed before the start of school." Seven teachers provided statements regarding communication and transparency as a factor that assisted them in the transition to online education. They included "open communication, honesty, and transparency" and "It was a swift transition; she communicated with us via Zoom/email." Another comment was, "I had open communication with my principal, but central administration left us to the wolves and demanded us to do things we were not prepared to do without empathy."

Nine teachers also mentioned that principals assigned knowledgeable teachers to provide technical support. One teacher noted, "The principal assigned a distance-learning coach who collected online teaching resources and gave them time to explore them." Similarly, another said, "A teacher was placed on assignment to support online instruction." Six teachers mentioned that scheduling times for teachers to meet was beneficial as one teacher said, "Fridays were planning and small group instruction days at
the beginning of virtual instruction." Another teacher mentioned that they were given "time to collaborate with the subject area and team teachers."

Fifteen teachers' responses to open-ended question two expressed concerns about principals' inability to adequately prepare them to transition to online education. One teacher stated, "No principal leadership behaviors prepared me to transition from in-class instruction to online education." Another teacher asserted, "Our leadership did not have the time to help teachers." "Just going with the flow, we took things day-by-day and never worried about what we couldn't control," another teacher noted. One teacher believed, "He understood that we were on a steep learning curve and consistently told us to do our best." Another teacher reflected:

Honestly, little was done to prepare for this transition as it occurred so suddenly; attempts were offered for professional development training but were hastily prepared and ineffective. Teachers were expected to provide grace to students, but none was offered to teachers.

**Teacher Interview Responses**

Four teachers who volunteered to participate in the personal interview protocol shared their perspectives on three interview questions. Questions 1, 2, and 3 of the teacher interview were associated with research question one to examine further how principal leadership behaviors impacted teachers' self-efficacy during the remote/hybrid learning process implementation during the COVID-19 pandemic.

The first interview question asked teachers what principal leadership behaviors promoted their self-efficacy in providing remote online instruction during the pandemic. Teachers described how their principals supported the teachers by developing ways to help them implement remote instruction and by being supportive. Teacher A stated, "My
principal paired teachers who were knowledgeable with technology with inexperienced
teachers to set up their Canvas pages." Likewise, Teacher C mentioned, "We were trained
on how to use Zoom and to set up our Canvas page." In their response, Teacher B said,
"Our principal emphasized that teaching has changed; we must exercise more empathy,
patience, and flexibility." Teacher D commented, "Our principal was available and
helpful, provided positive emails, and stayed in contact."

Interview question two inquired about what principal leadership behaviors
teachers believed promoted their well-being during the pandemic since they could impact
their self-efficacy. Teachers mentioned that their principals were supportive and caring,
provided feedback and communication, and created a culture of trust. Teacher A
indicated, "She came around pushing a cart with coffee and hot chocolate during online
training. She would settle us when a new directive came from the administration; she
made us feel empowered and successful." Likewise, Teacher C shared, "Our principals
communicated that this was unchartered territory, we're in this together, and insured that
we had the materials we needed to be successful." Teacher B noted that their principal
“reminded us to take care of ourselves, take mindful breaks so that we can help others"
while Teacher D mentioned, "Our principal gave positive feedback, expressed concern
for our health, and provided an open door where we could talk freely."

When asked what supports their principals provided to help teachers understand
different remote teaching platforms to enhance their self-efficacy, teachers offered
various responses. They referenced that principals allowed teachers to work collectively,
provided professional development, and supported co-teaching for teachers to understand
different remote platforms. Teacher A mentioned, "She allowed first grade to teach as a
team to ease our stress and to alternate teaching lessons which was nice; this was a new
experience." Teacher B noted, "Well, one thing I have to say, not just for the principal here, but the school district also provided lots of professional development on how to navigate through Google Classroom and Canvas."

Teacher C remarked, "Great PD training. I created clickable buttons on Canvas, and my kindergarten students could just click on an icon and go straight to my video lesson. Principals paired us with a teacher that knew how to navigate different platforms." Likewise, Teacher D said, "Our principal had teachers who were tech-savvy develop how-to booklets that empowered us to connect with our students, and we had time to collaborate."

Research Question Two

What leadership behaviors do principals believe impacted teacher self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

The purpose of research question two was to identify behaviors that principals believed impacted their teachers' self-efficacy while implementing remote/hybrid instruction during the COVID-19 pandemic. The 10 principals who participated in the online survey answered 10 Likert-scale statements and nine principals answered two open-ended questions to indicate their perspectives regarding question two. In addition, four principals voluntarily participated in a follow-up interview and answered three interview questions.

Likert-Scale Items

Ten Likert-scale statements (1, 2, 3, 4, 5, 6, 7, 8, 9, and 10) were designed to examine what leadership behaviors principals believed impacted teachers' self-efficacy.
The participants were provided four response options which indicated whether they strongly agreed, agreed, disagreed, or strongly disagreed with a statement.

The data collected concerning statement one, whether the principals' knowledge of technology assisted teachers during the implementation of online/hybrid instruction, revealed that two principals (20%) strongly agreed, 8 (80%) agreed, and no principal disagreed or strongly disagreed. Statement two asked if principals provided direct support during the pandemic (e.g., modeled a lesson, did virtual walkthroughs). Two principals (20%) strongly agreed, five (50%) agreed, three (30%) disagreed, and none strongly disagreed. Responses to statement three revealed that three principals (30%) strongly agreed that principals' openness and transparency created a culture of trust, seven (70%) agreed, and no principal disagreed or strongly disagreed.

When asked if principals provided resources to enable teachers to implement online instruction during the pandemic, principals' responses to statement four revealed that two principals (20%) strongly agreed, seven (70%) agreed, one (10%) disagreed and no principal strongly disagreed. Statement five reflected that three principals (30%) strongly agreed that principals kept in contact with teachers to determine their well-being during the pandemic, seven (70%) agreed, and no principal disagreed or strongly disagreed. In statement six, regarding whether they provided teachers with opportunities to explore remote learning platforms before the teachers were expected to prepare students to meet K-5 curriculum standards, five principals (50%) agreed, five (50%) disagreed, and no principal strongly agreed or strongly disagreed. Statement seven inquired if principals provided professional development on using technology to prepare teachers for remote online instruction. The responses revealed that two principals (20%)
strongly agreed, seven (70%) agreed, one (10%) disagreed, and no principal strongly disagreed.

Responses to statement eight, regarding if principals supported teachers in maintaining discipline during classroom instruction, one principal (10%) strongly agreed, eight (80%) agreed, one (10%) disagreed, and no principal strongly disagreed. Principals' responses to statement nine pertaining to principals being readily available to discuss teachers' concerns during the pandemic indicated that seven principals (70%) strongly agreed, two (20%) agreed, and one (10%) disagreed. Finally, statement 10 examined whether principals showed compassion when guiding teachers through the circumstances created by the pandemic; seven principals (70%) strongly agreed, three (30%) agreed, and no principal disagreed or strongly disagreed. Table 4.3 illustrates the data collected from the Likert-scale statements.

Open-Ended Survey Responses

The responses collected through the open-ended survey questions were organized and presented in relation to research question two. Open-ended question one asked principals: What leadership behaviors do you believe impacted teacher self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic? Data were collected from nine of the 10 principals who responded to the open-ended questions; the responses ranged in scope and effect regarding the principals' perspectives. Three common themes evolved from the principals' open-ended responses to question one: (a) meeting with teachers (six), (b) encouraging teachers (four), and (c) supporting teachers’ professional development (six).
Table 4.3
What Leadership Behaviors do Principals Believe Impacted Teacher Self-Efficacy

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My knowledge of technology helped me to assist our teachers during the implementation of online/hybrid instruction.</td>
<td>2 (20%)</td>
<td>8 (80%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>2. I provided direct support during the pandemic (e.g., modeled a lesson, did virtual walkthroughs), enabling teachers to feel confident in providing online learning.</td>
<td>2 (20%)</td>
<td>5 (50%)</td>
<td>3 (30%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>3. My openness and transparency created a culture of trust which enhanced teachers’ self-efficacy.</td>
<td>3 (30%)</td>
<td>7 (70%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>4. I provided resources which enabled teachers to implement remote online instruction during the pandemic.</td>
<td>2 (20%)</td>
<td>7 (70%)</td>
<td>1 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>5. I called teachers to determine their well-being during the pandemic.</td>
<td>3 (30%)</td>
<td>7 (70%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>6. I provided teachers opportunities to explore remote learning platforms before they were expected to prepare students to meet K-5 curriculum standards.</td>
<td>0 (0%)</td>
<td>5 (50%)</td>
<td>5 (50%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>7. I provided professional development on using technology to prepare teachers for remote online instruction.</td>
<td>2 (20%)</td>
<td>7 (70%)</td>
<td>1 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>8. I supported teachers in maintaining discipline during classroom instruction.</td>
<td>1 (10%)</td>
<td>8 (80%)</td>
<td>1 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>9. I was readily available to discuss teachers' concerns during the pandemic.</td>
<td>7 (70%)</td>
<td>2 (20%)</td>
<td>1 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>10. I showed compassion when guiding teachers through the circumstances created during the pandemic.</td>
<td>7 (70%)</td>
<td>3 (30%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Note. N=10.

Four common themes evolved from the responses to open-ended question one that principals believed impacted teachers' self-efficacy. Some principals identified more than
one characteristic that promoted teachers’ self-efficacy. Six principals indicated that
meeting with teachers was impactful. One principal indicated, "I had daily office hours
and held grade-level meetings." Similarly, another said, "We increased grade level
meetings around curriculum, instruction, and technology." One principal wrote, "We
frequently met virtually with teachers first, then staff; I wanted everyone to feel
connected. I think that connectivity was even more important than the actual instruction."
Another mentioned, "I attended Team Leader meetings to understand better the concerns,
questions, and the needs of the classroom teachers by grade level." Finally, one principal
stated, "I would come into the virtual classes, announcing that I was there and often
interacted with the students while I visited."

Four principals reassured teachers that they mattered by encouraging them and
reminding them that they were capable of teaching their students. One principal
indicated, "The biggest thing we did was encourage teachers; all staff were impacted both
personally and professionally." Another stated, "We had a team mentality; we're all in
this together." Two other comments included, "I assured the teachers that they can do it"
and "I praised excellent work."

Three principals believed that supporting teachers was critical to teachers' self-
efficacy when it came to providing student instruction. One principal wrote, "I provided
teachers opportunities to connect and collaborate with colleagues." Another said, I
assisted in contacting parents and reaching out about student behavior." Another
remarked, "I believe I gave my teachers grace and tried to ease their stress during the
transition from in-person to online instruction."

Three principals also referenced that providing professional development and
transparency were leadership behaviors that promoted their teachers' self-efficacy. One
principal stated, "We increased professional development until December. Similarly, another said, "I provided professional learning opportunities and modeled the use of technology." One principal mentioned being transparent, "I continued to be open and honest with information."

Open-ended question two asked principals: What actions did you take to enhance your teachers' self-efficacy in transitioning from classroom instruction to remote online instruction? Nine principals responded to open-ended question two. Professional development emerged from principals' responses as the overarching theme. Six principals believed professional development was crucial in assisting teachers in transitioning to remote learning. One principal mentioned, "We provided professional development to help our teachers feel more comfortable." Another principal remarked, "I provided professional development on instructional platforms for teachers and staff;" while another said, "I coordinated regular professional development with Intermediate Unit."

Four principals believed that having meetings was an essential factor in assisting teachers in transitioning to remote learning. One principal asserted, "I had daily office hours for my teachers, held grade-level meetings, and assisted in contacting parents about student behavior." Another said, "I had open sessions to allow teachers to express their concerns. I called, emailed, and made personal visits." Lastly, one principal said, "I attended training sessions with my teachers."

Principal Interview Responses

Four principals who volunteered to participate in the personal interview protocol shared their perspectives to three interview questions. Questions one, two, and three of the principal interviews were associated with research question two to examine further
The first interview question asked principals what principal leadership behaviors promoted their teachers' self-efficacy in providing remote online instruction during the pandemic. Principals described how their leadership behaviors supported the teachers by developing ways to help them implement remote instruction and by being supportive. Principal A explained, "We purchased software for teachers to use with their students, provided professional development, and bought lots of different digital platforms that would make life easier for teachers." Principal B commented, "Initially, the district offered professional development; however, my teachers still had trepidations after attending the sessions. I invited a parent who was proficient with the platform to offer more training." Principal C stated, "I paired teachers who were knowledgeable with technology to help teachers who were struggling with the nuances of remote learning via Zoom and the different platforms that the district was using." Similarly, Principal D asserted, "I had Zoom office hours. I was available every day at this time, and teachers could come in if they had any questions or any concerns."

Interview question two provided principals the opportunity to explain how their leadership behaviors promoted their teachers' well-being during the pandemic since it could impact their self-efficacy. Principals felt that having a sense of empathy for, and consideration of, the circumstances teachers were dealing with was critical to enhancing teachers' well-being. Principal A commented, "Being understanding and compassionate to teachers' plights. One of my teachers has two toddlers, her husband is an essential worker, and she's trying to teach; I told her to log off when she needs to." Principal B shared, "I made myself available. The stress was very high for teachers; allowing them to
have an outlet and time to be with their colleagues to build their capacity with what they needed to do for online learning helped." Principal C explained, "I asked my teachers to inform me of their circumstances. Teachers had children at home when trying to teach. I let them know that I was experiencing the same situation. I told them to make self-care a priority." Principal D indicated, "I think this is probably something that I didn't do well enough. I knew that we were all struggling; I think it was more about just being understanding and compassionate to teachers' plights."

From the interview responses to question three, it became evident that principals believed that providing additional professional development and personnel were most effective in assisting teachers in understanding how to utilize different remote teaching platforms. Principal A shared, "I gave latitude to teachers in making decisions for students, not be overburdening, being graceful, and saying, ‘I know you're doing your best.’"

Principal B responded, "I offered additional professional development and connected teachers to a representative from the company that they could talk to when they had questions." Principal C stated, "In addition to the district's support, I had a parent who is a college professor certified on the platform that we used; she increased my teachers’ understanding of using the platform." Finally, Principal D mentioned, "We implemented a more kid-friendly program for the younger kids that teachers could put on their Canvas page, and I had our IT department walk us through Google classroom and Canvas."
Research Question Three

What do teachers believe are the principal leadership behaviors that impacted their collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?

The purpose of research question three was to examine teachers' perspectives of what principal leadership behaviors they believed impacted their collaboration while implementing remote/hybrid learning. Forty-six teachers who participated in an online survey answered eight Likert-scale statements and 43 teachers answered two open-ended questions. Four teachers answered four interview questions to indicate their perspectives regarding question three. Teachers' responses were provided through the survey statements, open-ended questions, and interview questions designed to provide data on teachers' perspectives on research question three.

Likert-Scale Items

Eight Likert-scale statements (11, 12, 13, 14, 15, 16, 17, and 18) were designed to examine the teachers' perspectives of principals' leadership behaviors that they believed impacted teachers' collaboration. The participants were provided four response options which indicated whether they strongly agreed, agreed, disagreed, or strongly disagreed with a statement. Statement 11 inquired about teachers' perceptions concerning principals' collaboration with them to address equity issues and access to technology for their students. Sixteen teachers (35%) strongly agreed that their principal collaborated with them, 17 (37%) agreed, nine (20%) disagreed, and four (9%) strongly disagreed. In response to statement 12, regarding principals creating structures that enabled more collaboration among teachers and more teacher-student interactions, seven teachers (17%) strongly agreed, 17 (37%) agreed, 15 (33%) disagreed, and seven (15%) strongly
disagreed. When asked in statement 13 if their principal provided time for them to co-plan with other teachers, seven teachers (15%) strongly agreed, 20 (43%) agreed, 14 (30%) disagreed, and five (11%) strongly disagreed.

In teachers' responses to statement 14, that their principal maintained regular faculty meetings during the pandemic, six teachers strongly agreed (13%), 13 (28%) agreed, 20 (43%) disagreed, and seven (15%) strongly disagreed. Statement 15 inquired if the principal's supervision of instruction resulted in increased collaboration among teachers; six teachers (13%) strongly agreed, 13 (28%) agreed, 20 (43%) disagreed, and seven (15%) strongly disagreed. In response to statement 16, regarding if teachers’ daily interactions with their principal created a culture of trust which enhanced collaboration among teachers, six teachers (13%) strongly agreed, 13 (28%) agreed, 20 (43%) disagreed, and seven (15%) strongly disagreed.

The responses to statement 17 revealed that 16 teachers (35%) strongly agreed that their principal encouraged them to discuss and share the best strategies for online teaching, 20 (43%) agreed, seven (15%) disagreed, and three (7%) strongly disagreed. Finally, statement 18 inquired if principals' interaction and collaboration with teachers eased the pressures that they experienced from parents on remote online instructional practices; 11 teachers (24%) strongly agreed, 16 (35%) agreed, 12 (26%) disagreed, and seven (15%) strongly disagreed. Table 4.4 illustrates the data collected from the Likert-scale statements.
Table 4.4

What do Teachers Believe are the Principal Leadership Behaviors That Impacted Their Collaboration During the Implementation of the Remote/Hybrid Learning?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. My principal collaborated with me to address equity issues and access to technology for my students.</td>
<td>16 (35%)</td>
<td>17 (37%)</td>
<td>9 (20%)</td>
<td>4 (9%)</td>
</tr>
<tr>
<td>12. My principal created structures that enabled more collaboration time among teachers and more teacher-student interactions.</td>
<td>7 (15%)</td>
<td>17 (37%)</td>
<td>15 (33%)</td>
<td>7 (15%)</td>
</tr>
<tr>
<td>13. My principal provided time for us to co-plan with other teachers.</td>
<td>7 (15%)</td>
<td>20 (43%)</td>
<td>14 (30%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>14. My principal maintained regular faculty meetings during the pandemic.</td>
<td>6 (13%)</td>
<td>13 (28%)</td>
<td>20 (43%)</td>
<td>7 (15%)</td>
</tr>
<tr>
<td>15. My principal’s supervision of instruction resulted in increased collaboration among teachers.</td>
<td>6 (13%)</td>
<td>13 (28%)</td>
<td>20 (43%)</td>
<td>7 (15%)</td>
</tr>
<tr>
<td>16. Interactions with my principal created a culture of trust which enhanced collaboration among teachers.</td>
<td>8 (17%)</td>
<td>18 (39%)</td>
<td>14 (30%)</td>
<td>6 (13%)</td>
</tr>
<tr>
<td>17. My principal encouraged teachers to discuss and share the best strategies for online teaching.</td>
<td>16 (35%)</td>
<td>20 (43%)</td>
<td>7 (15%)</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>18. My principal interacted and collaborated with me to ease the pressures that I experienced from parents on remote online instructional practices.</td>
<td>11 (24%)</td>
<td>16 (35%)</td>
<td>12 (26%)</td>
<td>7 (15%)</td>
</tr>
</tbody>
</table>

*Note. N=46. The total percentage in each statement will not equal 100% due to rounding.*
Open-Ended Survey Responses

The responses collected through the open-ended survey questions were organized and presented in relation to research question three. Forty-three teachers answered two open-ended questions. Open-ended question three asked teachers, "What principal leadership behaviors promoted teacher collaboration during the time of remote online/hybrid learning?" The general themes that emerged from teacher responses were that principals (a) scheduled time for planning (16), (b) held staff meetings to discuss concerns (10), (c) provided professional development sessions (seven), or (d) did nothing (10).

Sixteen teachers wrote that time for planning was beneficial. One teacher stated, "My principal provided time for lesson planning; meetings were very purposeful." Another wrote, "We were provided PLC time." Ten teachers mentioned that meetings promoted their self-efficacy. "I truly appreciated daily office hours that were held to provide time for collaboration and discussing dilemmas that needed solving." Several comments were, "We had faculty meetings where multiple people shared their concerns and technical issues," and "I appreciated the grade level meetings." Equally important was providing professional development communities to promote teacher collaboration. Seven teachers mentioned that providing professional development promoted teacher collaboration. One teacher explained, "Asynchronous learning days allowed opportunities for professional development, collaboration, planning, and other necessary tasks that were difficult to find time to complete on a day-to-day basis."

Another theme that evolved from teachers' responses was that principals did not exhibit leadership behaviors that promoted teacher collaboration. Five teachers explained that principals did not exhibit leadership behaviors that promoted teacher collaboration.
One teacher mentioned, "We were not encouraged to meet. Instead, meetings were arranged on our own, understanding the technology and the instruction process was done outside of school hours amongst trusted colleagues and me." Another teacher wrote, "Teacher collaboration happened among our grade level because we initiated it. We helped each other." Another teacher commented, "Collaboration demands time and an atmosphere of respect. School teams rose to the challenge of collaborating virtually. As a result, we became closer and more effective." A similar sentiment was, "It became difficult for principals to schedule professional learning communities."

Five teachers mentioned that their principal was considerate but did not initiate collaboration time. One teacher wrote, "Our principal is nice, no transition time, we are expected to do so many things on our time" According to another teacher, "Our principal was kind and did ask about us, but enough time wasn't allotted for teacher collaboration. There was little sensitivity shown from the district about the situation; we were told to figure it out."

Open-ended question four asked teachers how collaborating with their principal impacted their ability to provide remote/hybrid instruction during the pandemic. The prevailing themes that emerged from teachers' responses were that principals (a) designated a person with whom teachers could collaborate to discuss issues (12), (b) addressed remote/hybrid instruction (15), (c) provided support and materials (16), or (d) did not collaborate (15).

Twelve teachers stated that principals provided a support person with whom teachers could discuss issues about remote instruction. One teacher commented, "We didn't collaborate with our principal but did with a distance learning specialist." Similarly, another mentioned, "They provided the people we needed to support us."
Another teacher wrote, "We did not collaborate with the principal directly, but we had a distance learning specialist that would relay information and aid us." Sixteen teachers’ responses indicated that principals who provided support and materials influenced their ability to implement remote/hybrid instruction. One teacher wrote, "My principal was always available, and I felt I could discuss my struggles with her without judgment; I do believe my principal did her best." Other comments included, "Teachers were worried about meeting the needs of all students in a remote setting. Our principal reassured us that we were doing great things" and "My principal understood the challenges we faced with remote learning and hybrid learning. He was supportive and offered assistance however he could."

Conversely, 15 teachers expressed that they did not collaborate with their principal to support their instruction. One teacher explained, "Honestly, there was little collaboration unless a teacher reached out for help; the principals were busy dealing with other things. As a result, teachers and principals were overwhelmed and felt inadequate in the way their roles suddenly shifted." Another teacher expressed, "I felt alone during the pandemic in this teaching world. We didn't get much instruction on what to do and how to do it." "While everyone was doing their best, they were all stressed, and collaboration was one aspect that sometimes fell away," remarked one teacher.

**Teacher Interview Responses**

Interview questions 4, 5, and 6 aligned with research question three to further examine what teachers believed were the principal leadership behaviors that impacted their collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. Interview question seven asked teachers to assess overall how they thought their principals' leadership impacted their self-efficacy and
collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic.

Teachers' responses to interview question four provided insight into principals' activities to promote collaboration among teachers during the pandemic. The most frequently mentioned activity was meeting with teachers to collaborate. Other responses included providing teacher-led meetings, encouragement, understanding, and acts of kindness. Teacher A said, "We had faculty meetings and collaborated more so than we ever had at any time in my teaching career; everybody was in the same boat." Teacher B expressed, "The principal went to every teacher's home and delivered flowers. She knew the work we were doing was challenging; that really touched me." When questioned, Teacher C said, "So, definitely we had a lot of Zoom training. We went into breakout rooms; the teachers were in charge of helping one another. We discussed technology issues and what we needed to set up remote learning for our students." Teacher D explained, "We had faculty meetings; our principal encouraged us, let us know she was with us, and that she understood what we were going through; we're all in this together."

Interview question five allowed teachers to explain principals' actions that promoted collaboration among teachers and their students' families. Teachers indicated that principals provided training sessions for parents on Zoom, family meeting nights, and office hours to get laptops. Another mentioned that her principal defied district protocol to allow parents to get their child's laptop regardless of paying for the insurance.

Teacher A mentioned, "We communicated with parents and had office hours. I spent a lot of time on the phone calling my students' parents. We had a family meeting, an online family night, each teacher read a story, and students received a book."
Teacher B expressed:

Our principal reminded us that the efforts and the time we put into this would help our students. I posted this on my Canvas page by Nelson Mandela: "It always seems impossible until it's done." We reminded our students and parents of this.

Teacher C indicated, "Principals provided opportunities to teach parents how to navigate online learning with their little ones. We had fun nights on Zoom; we read a story about Pete the Cat. The events were terrific." Likewise, Teacher D expressed, "Our principal provided Zoom meetings for parents about Canvas and office hours. She allowed parents to get their child's laptop without paying $40.00 for the insurance; otherwise, they wouldn't have come in to get them."

Question six asked teachers if their principals' communication enhanced teachers' collaboration. The four teachers identified various principal leadership behaviors that enhanced their collaboration. Meeting with teachers, communicating, listening, and being supportive were the common themes. For example, Teacher A stated, "She would listen to our frustrations and then try to find a solution; nice way of making us feel like it's okay." Teacher B elaborated:

We had meetings that reminded us to think outside the box, we're not alone and to be prepared for whatever challenges arise. Many students didn't have Wi-Fi, had internet issues, and didn't have hot spots; most of my students had younger siblings. But I told him, "It's okay to hold your baby brother in your arms."

Meeting with the teachers and creating communication channels were essential principal leadership behaviors that enhanced Teacher C’s and Teacher D’s collaboration. Teacher C stated, "We had Zoom meetings, and she made a OneDrive so teachers could put resources into Access and see what other teachers were doing in our building and the
district; that connected all of us via the internet.” Teacher D remarked, "She had an open-door line of communication, she listened to our concerns and questions. It made it easy for us to meet with our parents when we had questions or concerns."

Overall, teachers were asked how their principal's leadership behaviors impacted their self-efficacy and collaboration during the remote/hybrid learning process implementation during the COVID-19 pandemic. Unanimously, teachers shared that their principals displayed the utmost regard for their self-efficacy and collaboration by exhibiting a sense of understanding, support, and empathy for the challenges teachers encountered while implementing remote/hybrid instruction for their students. Teacher A stated, "My principal had a positive attitude and understanding of teaching. With each new challenge we grew stronger; our relationship was renewed and strengthened." Teacher B declared, "We talked 24/7. I contacted our principal on Sundays with IT issues; she contacted the IT director who Zoomed me on Sunday night; I was up and running." Likewise, Teacher C said, "Our principals did a terrific job of building our self-confidence by providing training and anything that we needed to access online resources during remote learning; they gave us their cell phone numbers." Teacher D expressed, "Initially, I felt overwhelmed, but our principal assured me that we'd figure this out; she’d say, ‘Put it down until Monday.’ She was very empathetic about what we were going through.”

**Research Question Four**

**What leadership behaviors do principals believe impacted teacher collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?**
The purpose of research question four was to examine what leadership behaviors principals believed impacted teacher self-efficacy during the implementation of remote/hybrid learning during the COVID-19 pandemic. Ten principals participated in an online survey answering eight Likert-scale statements and nine principals answered two open-ended questions to indicate their perspectives regarding research question four. In addition, four principals voluntarily participated in follow-up interviews and answered four interview questions.

**Likert-Scale Items**

Eight Likert-scale statements (11, 12, 13, 14, 15, 16, 17, and 18) were designed to examine the principals' leadership behaviors that they believed impacted teachers' collaboration. Principals were asked to provide responses that accurately represented their perspectives. The participants were provided four response options which indicated whether they strongly agreed, agreed, disagreed, or strongly disagreed with a statement.

Statement 11 inquired if principals collaborated with their teachers to address equity issues and access to technology for their students. Five principals (50%) strongly agreed, five (50%) agreed, and no principals disagreed or strongly disagreed.

The responses to statement 12 revealed that four principals (40%) strongly agreed that they created structures that enabled more time for collaboration among teachers and more teacher-student interactions, five (50%) agreed, one disagreed, and no principal strongly disagreed.

In response to statement 13, four principals (40%) strongly agreed that they provided teachers time to co-teach with others, six (60%) agreed, and no principal disagreed or strongly disagreed.
In statement 14, regarding whether the principal maintained regular faculty meetings during the pandemic, five principals (50%) strongly agreed, five (50%) agreed, and no principal disagreed or strongly disagreed.

Statement 15 inquired if principals' supervision of instruction resulted in increased collaboration among teachers. One principal (10%) strongly agreed, seven (70%) agreed, two (20%) disagreed, and no principal strongly disagreed.

In response to statement 16, which asked if principals' daily interactions with their teachers created a culture of trust which enhanced teachers' collaboration, one principal (10%) strongly agreed, nine (90%) agreed, and no principal disagreed or strongly disagreed.

Statement 17 inquired if principals encouraged teachers to discuss and share the best strategies for online teaching; three principals (30%) strongly agreed, seven (70%) agreed, and no principal disagreed or strongly disagreed.

Statement 18 asked if principals interacted and collaborated with their teachers to ease the pressure that they experienced from parents on remote online instruction; three principals (30%) strongly agreed, seven (70%) agreed, and no principal disagreed or strongly disagreed. Table 4.5 illustrates the data collected from the Likert-scale statements.

Open-Ended Survey Responses

The responses collected through the open-ended survey questions were structured and presented regarding research question four. Open-end question three asked principals: What activities did you implement to promote teacher collaboration during remote online/hybrid instruction?
Table 4.5

What Leadership Behaviors do Principals Believe Impacted Teacher Collaboration

During the Implementation of the Remote/Hybrid Learning Process During the COVID-19 Pandemic?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. I collaborated with my teachers to address equity issues and access to technology for our students.</td>
<td>5 (50%)</td>
<td>5 (50%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>12. I created structures that enabled more collaboration time among teachers and more teacher-student interactions.</td>
<td>4 (40%)</td>
<td>5 (50%)</td>
<td>1 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>13. I provided the teachers time to co-plan with others.</td>
<td>4 (40%)</td>
<td>6 (60%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>14. I maintained regular faculty meetings during the pandemic.</td>
<td>5 (50%)</td>
<td>5 (50%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>15. My supervision of instruction resulted in increased collaboration among teachers.</td>
<td>1 (10%)</td>
<td>7 (70%)</td>
<td>2 (20%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>16. Daily interactions with my teachers created a culture of trust which enhanced their collaboration.</td>
<td>1 (10%)</td>
<td>9 (90%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>17. I encouraged teachers to discuss and share best strategies for online teaching.</td>
<td>3 (30%)</td>
<td>7 (70%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>18. I interacted and collaborated with teachers to ease the pressures that they experienced from parents on remote online instructional practices.</td>
<td>3 (30%)</td>
<td>7 (70%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

*Note.* N=10

Data were collected from nine of the 10 principals who responded to open-ended question three. Some principals identified more than one characteristic that promoted teachers’ collaboration. Open-ended question three asked principals what principal
leadership behaviors promoted teacher collaboration during remote online/learning; the responses ranged in scope and effect regarding the principals' perspectives.

Multiple common themes emerged from the principals' responses to open-ended question four; principals held (a) professional learning community meetings (4), (b) joint administration and teacher meetings (2), (c) virtual events and social educational learning activities (5).

Four principals indicated that they believed meetings were critical in promoting teacher collaboration during remote online/hybrid instruction. One principal wrote, "PLC meetings occurred daily, and our admin team held weekly meetings with teachers to discuss concerns and SEL activities." Five principals explained that virtual meetings were beneficial in promoting teachers’ collaboration. One principal stated, "I would hold virtual social events to allow teachers and staff time to communicate, which often led to discussions about the virtual environment." Another comment was, "Teachers were given the flexibility of time and space, particularly with the implementation of virtual Fridays where students completed asynchronous work in the afternoons to allow for teacher planning." Additional and similar responses mentioned by principals included weekly grade-level meetings, faculty meetings, department meetings, and frequent elementary principal meetings and virtual Fridays when students completed asynchronous work in the afternoons to allow for teacher planning.

Open-ended question four asked principals how they communicated with their teachers to understand teachers' needs for remote/hybrid instruction during the pandemic. Principals provided diverse ways in which they communicated
such as (a) attending and holding meetings (4), (b) conducting surveys (3), (c) emailing (2), and (d) using Google forms (1).

Four principals noted that meetings were critical in understanding teachers’ needs in implementing remote instruction. "We attended team and content area meetings to support the teachers, students, and instruction," noted one principal. Another principal commented, "I shared feedback surveys that focused on bright spots and what is working well and I was always available via phone/email and in the school at all times." One principal stated, "I held Zoom sessions and visited teachers at their homes to offer support." Another wrote, "I emailed, conducted PLC and SEL meetings, and placed correspondence in the teachers’ mailboxes." Five principals also made references to other key aspects of their communication with their teachers through "sharing feedback surveys and using Google forms" and "listening and empathizing; our staff recognized that many of their troubles were beyond anyone's control; they needed to be heard."

**Principal Interview Responses**

Four principals who volunteered to participate in the personal interview protocol shared their perspectives on four interview questions. Interview questions four, five, and six of the principal interviews were associated with research question four to examine further what leadership behaviors principals believe impacted teacher collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. In addition, question seven asked principals to assess how their leadership impacted teachers' self-efficacy and collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic.
The first interview question asked principals what activities they provided to promote collaboration among teachers during the pandemic. Principals' responses to interview question four revealed that they wanted their teachers to have time to collaborate and that they had empathy for their teachers. Principal A explained, "Teachers had specific times to meet as a team to plan lessons together; they prepped for one or two content areas to take the burden off individual teachers. They pre-recorded lessons for students who didn't log on synchronously." Similarly, Principal D remarked, "We had common planning time, which was very important if they needed to meet and wanted to plan together. In addition, during our faculty meetings, teachers would break into grade levels in different classrooms." Principal B stated, "We did an Easter egg hunt; there might have been money, candy, or a professional development question; when they found an egg, they would have to answer the questions as a team. I tried to make them feel good." Likewise, Principal C shared, "I visited my teachers at their homes to deliver flowers; I wanted them to know that I appreciated the work that they are doing at school for our students and in their homes."

Interview question five inquired about principals' actions to promote collaboration with teachers and students' families during the pandemic. Principals' responses showed that they were focused on ensuring that their teachers, students, and their families were informed; available to meet with families; and had the necessary learning materials. Principal B stated, "Communicating with our teachers, students, and families was important. Teachers used ClassDojo to keep communication open with families, and they would drop off things that their
students needed on their porch.” Likewise, Principal C said, "Teachers used Class Dojo to collaborate with families; everyone had office hours available for students/families to log on to Zoom. However, families were having technical issues, and they didn't understand; I went to students' homes.” Lastly, Principal A expressed:

Teachers had office hours to be available on Zoom. I also had office hours for families. It ended up with students coming in to say, “Hi.” I was in homes bringing computers to kids and setting up hot spots; our families weren't digital people. I got a parking ticket for being in a parking spot too long.

When principals were asked in interview question six how their communication enhanced teacher collaboration, their responses indicated that continuous communication and working collectively were vital to improving their communication with teachers.

Principal D asserted, "We stayed in constant communication every day; morning, night, and weekends. And we did Zoom meetings. I wanted my teachers to know that I was there for them whenever they needed me.” Likewise, Principal C stated, “No one was working in isolation throughout; we communicated to stay informed. Having time where everyone had the opportunity to go to a colleague and build off another person's strength within the building elevated our collaboration." Principal A also explained, "I don't make decisions for this school by myself. I have leadership team members in all the representative areas. We meet once a month, discuss what needs to happen, and make significant decisions. We have a direct line of communication." Finally, Principal C mentioned:
I tried to communicate to them to work smarter, not harder; they worked as a team to develop virtual lessons instead of teachers developing lessons individually. Teachers created a lesson for a subject, and special education teachers collaborated with the team.

Overall, principals were asked how their leadership impacted their teachers' self-efficacy and collaboration during the remote/hybrid learning process implementation during the COVID-19 pandemic. Principal D stated, "Nothing you learn in your Principal Leadership Program could prepare you for this. I struggled, running a building over a computer and being a mom. On the human level, it built trust and understanding among my staff." Similarly, Principal A explained, "It positively impacted us; there's always room for improvement, especially with teachers as digital instructors, it's new to me also. I have an outstanding team. I trust them to do what's best for kids and their families."

Principal C stated:

Initially, it was a shock to the system. It was unorthodox, transitioning from the traditional setting of schooling, but it gave me new insight into how much more I can be a better leader for my staff, parents, and especially our students.

Principal D said, "In the beginning, I was alarmed! I wish I had known more about digital instructions; I tried to connect my teachers to resources and people who knew the answers. Overall, it made us stronger as teachers and leaders."

**Summary**

Chapter Four presented the results of this qualitative study. The data were collected through an online survey consisting of Likert-scale statements, open-ended responses, and individual interviews. The data collected were organized and presented in relationship to four research questions regarding this study.
Research question one examined what teachers believed were the principal leadership behaviors that impacted their self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. A total of 46 teachers participated in an online survey with Likert-scale and open-ended questions. Four teachers participated in the follow-up interview which allowed the researcher to collect data aligned to research question one. The data responses from the Likert-scale statements and the open-ended responses indicated that teachers had varied perceptions about how principal leadership impacted their self-efficacy.

Research question two examined what leadership behaviors principals believed impacted teacher self-efficacy during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. A total of 10 principals participated in the online survey and nine answered the open-ended questions. The responses from the Likert-scale statements revealed insignificant differences in their perceptions. However, the open-ended responses and the follow-up interviews revealed that most principals believed that their leadership impacted teachers’ self-efficacy due to the support they provided for their teachers.

Research question three gauged what teachers believed were the principal leadership behaviors that impacted their collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. The data from the Likert-scale statements and the opened-ended questions revealed incongruent perceptions about how principals’ leadership impacted teachers’ collaboration during the pandemic. However, the four teachers who participated in the follow-up interviews believed that principals’ leadership positively impacted their ability to collaborate and address compelling issues resulting from the pandemic effectively.
Research question four examined what leadership behaviors principals believed impacted teacher collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. The data indicated that principals overwhelmingly believed that their leadership effectively mitigated issues that impeded teachers' collaboration. Further, principals thought that the various actions they implemented were critical in overcoming the barriers of collaborating with teachers and their community constituents.

The data collected concerning what principal leadership impacted teachers' self-efficacy and collaboration during COVID-19 identified that teachers and principals had conflicting perceptions of what leadership behaviors impacted teachers' self-efficacy and collaboration. The summary of the study, results, and the connections to other research are discussed in Chapter Five.
Chapter Five – Discussion

Summary of the Study

This qualitative study aimed to examine and identify principals' and teachers' perceptions of principals' leadership behaviors that impacted teacher self-efficacy and collaboration during the implementation of remote learning that occurred during the COVID-19 pandemic. This study was guided by four detailed research questions: (1) what do teachers believe are the principal leadership behaviors that impacted their self-efficacy, (2) what leadership behaviors do principals believe impacted teacher self-efficacy, (3) what do teachers believe are the principal leadership behaviors that impacted their collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic, and (4) what leadership behaviors do principals believe impacted teacher collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic.

The perceptions of 46 certified K-5 teachers who provided virtual/hybrid instruction and integrated digital technology during the COVID-19 pandemic and 10 principals of grades K-5 who provided instructional leadership during the same period were included in the study. The setting of the study consisted of five school districts located in southeastern Pennsylvania, comprised of 22 schools that varied significantly in population and demographic characteristics. The methods utilized in the data collection included a researcher-designed survey consisting of four open-ended questions, and an interview protocol to obtain teachers' and principals' responses to seven interview questions.
Summary of the Results

A summary of the results for each specific research question is provided in this section.

Research Question One

The purpose of research question one was to determine what teachers believed were the principal leadership behaviors that impacted their self-efficacy during the implementation of the remote/hybrid learning process during the pandemic.

In responding to the principal leadership behaviors that impacted teachers’ self-efficacy during the implementation of the remote/hybrid learning process during the pandemic, the data indicated that 52% of the teachers believed that principals' knowledge of technology was inadequate to assist teachers in implementing remote learning. As a result, teachers mentioned that they had to learn how to implement remote/hybrid learning independently of their principals. Moreover, 57% of teachers also mentioned that principals did not provide direct support, such as modeling lessons. However, other teachers stated that principals contacted their technology department or teachers knowledgeable in online instruction to assist inexperienced teachers challenged by the various learning platforms. Teachers also mentioned that when principals assigned a distance-learning coach to gather instructional resources and a teacher was assigned to support their online instruction, scheduling time for teachers to meet was helpful.

The differences in teachers' perceptions regarding principals supporting teachers in maintaining discipline during the pandemic may have resulted from the dynamics of multiple discipline behaviors that teachers and principals were unaccustomed to, like wearing a mask and disrupting virtual learning. Teachers were evenly divided on
principals handling discipline issues during synchronous remote instruction and
hybrid/blended learning.

Other essential areas that most teachers indicated that principal leadership
impacted their self-efficacy were principals' openness and transparency, in which 63% of
teachers believed principals created a culture of trust. Additionally, 66% of teachers
mentioned that principals maintained contact with them to determine their well-being,
encouraged them to engage in self-care, and supported the emotional and mental needs of
teachers and their families. Additional principal leadership behaviors that teachers
identified as supporting their self-efficacy were providing professional development on
Google, Canvas, and Zoom and showing compassion. The data revealed that 69% of
teachers mentioned that professional development was helpful, and 73% felt that
principals showed compassion.

The data collected from open-ended question one were discrepant and
incongruent regarding teachers' perceptions of what principal leadership behaviors
promoted teacher self-efficacy when teachers instructed students remotely. Thirty-three
teachers indicated that their principals understood the challenges teachers faced in
providing online instruction. They expressed that the principals supported teachers,
scheduled meetings, encouraged teachers, were available, provided tech support, and
addressed health concerns.

Conversely, 10 teachers also noted that their principals' leadership behaviors
failed to prepare them for transitioning to remote learning adequately. As a result, they
felt abandoned and had to figure things out independently; their principal was unavailable
and did not have the time to assist them. The data showed that teachers had conflicting
perceptions of principal leadership behaviors that impacted teacher self-efficacy.
The second open-ended question related to research question one asked teachers whether their principals’ leadership behaviors prepared teachers to transition from in-class instruction to online education. Teachers' responses were diverse in their perceptions. Thirty-one teachers expressed that their principal provided the necessary support and resources that were essential to transition to online education effectively. In contrast, 12 teachers said they did not have adequate technology to support online education and that their principal did nothing to prepare them for the transition.

Three of the interview questions asked teachers to describe how their principals' leadership enhanced teachers' self-efficacy in delivering remote online instruction, inquired about teachers' well-being, and understood the challenges teachers encountered while learning different remote teaching platforms. Four teachers voiced their appreciation for how principals showed concern for their well-being. In each interview, teachers' responses demonstrated that they lauded their principals' leadership in addressing concerns and issues created during the pandemic. However, an analysis of teachers' interview responses revealed an interesting difference between teachers' open-ended responses. The responses to the open-ended questions demonstrated that 10 teachers' self-efficacy was not heightened, which hindered them from feeling confident in providing remote online instruction.

The data showed that teachers had conflicting perceptions of principal leadership behaviors that impacted teacher self-efficacy. The data also revealed several areas in which most teachers responded affirmatively concerning principals' inability to assist teachers with their technology issues and provide direct support on remote instruction. Consequently, teachers addressed the difficulties of implementing remote/hybrid instruction independently. Some teachers expressed that the district, in general,
inadequately provided support. School districts may consider providing professional
development for principals so that they can develop competencies in virtual instruction
that will adequately prepare them to respond more directly to teachers, ensure the
continuation of remote instruction and enhance teachers' self-efficacy for future crises.

**Research Question Two**

Research question two aimed to determine what leadership behaviors principals
believed impacted teachers' self-efficacy while implementing remote/hybrid learning
during the COVID-19 pandemic. Four principals (100%) strongly agreed or agreed that
(a) their knowledge of technology helped teachers implement online instruction, (b) their
openness and transparency created a culture of trust, (c) their concern for teachers' well-
being enhanced teachers' self-efficacy, and (d) their compassion strengthened teachers'
determination to implement remote instruction. Principals' responses to the Likert-scale
statement concerning if they called teachers to determine their well-being revealed that
they either strongly agreed or agreed that their leadership demonstrated that they were
concerned. Principals were also divided evenly between agreeing and disagreeing that
they provided teachers opportunities to explore remote learning platforms.

Two open-ended questions were related to research question two. The first open-
ended question inquired how principals affected teachers' self-efficacy when instructing
students remotely. Principals' responses showed that they were focused on meeting with
their teachers, encouraging them, and providing professional development on remote
platforms. In addition, an analysis of principals' responses indicated that they believed
that their leadership behaviors supported teachers and provided empowerment which
enhanced their self-efficacy to give students online instruction.
The second open-ended question inquired how principals prepared teachers to transition from in-class instruction to online education. Most principals commonly reported professional development as the primary source for enhancing teachers' self-efficacy to transition to online teaching. Principals also conveyed that they assisted teachers by engaging with parents.

Additionally, principals indicated that they attended training with their teachers to understand and address their challenges, had daily office hours, sent emails, and made frequent classroom visits while students were online. Further, the data from the principals' responses indicated that they understood the paradigm shift in public education from in-class instruction to remote online teaching and the obstacles teachers encountered in providing remote online instruction. Finally, principals' leadership behaviors demonstrated that they provided essential components that assisted teachers in transitioning from in-class instruction to online education.

The data from the three interview questions focused on how principals (a) demonstrated concern about teachers' self-efficacy in providing remote online instruction, (b) promoted teachers' well-being, and (c) understood that learning different remote teaching platforms could impact teachers' self-efficacy. Principals' responses to interview question one indicated that when principals provided teachers with software to use with their students, provided professional development, and paired teachers who were challenged with using technology with teachers knowledgeable on the rudimentary aspects of technology, they heightened teachers' self-efficacy.

In interview question two, how principals promoted teachers' well-being, principals reported that understanding their concerns, being compassionate, visiting them at their homes, and being available to discuss teachers' concerns were critical in
promoting teachers' well-being. Finally, each principal responded affirmatively to interview question three that providing professional development and technical assistance was crucial to promoting teachers' self-efficacy in providing remote online instruction. In essence, principals' leadership behaviors demonstrated that they understood the challenges of preparing teachers to implement remote online instruction, supporting teachers' well-being, and helping teachers to implement and learn different remote learning platforms.

**Research Question Three**

The purpose of research question three was to determine teachers' perceptions of what principal leadership behaviors impacted their collaboration during the implementation of the remote/hybrid learning process during the pandemic.

Fifty-eight percent of teachers disagreed or strongly disagreed that principals maintained regular faculty meetings during the pandemic. Additionally, 58% of the teachers disagreed or strongly disagreed that the principals' supervision increased collaboration among teachers. Collaborating effectively during the pandemic was critical in responding to the multiple challenges teachers encountered. The increased dependency on technology, and intense mental and physical burdens, may have impacted teachers' ability to collaborate amongst themselves.

Two open-ended questions were related to research question three. Open-ended question three asked teachers how their principal's leadership promoted teacher collaboration during remote online/hybrid learning. The data collected from 36 teachers' responses showed that principals scheduled daily office hours to discuss teachers' issues, scheduled time for teachers to plan lessons collectively, and provided professional development meetings to allow teachers to discuss mutual concern issues. However,
seven teachers expressed that principals failed to exhibit leadership behaviors that promoted teacher collaboration. Some teachers arranged their own meetings to help each other, and as a result, they developed a closer bond among themselves.

Open-ended question four asked teachers if collaborating with their principal impacted teachers' ability to provide remote/hybrid instruction during the pandemic. Thirty teachers indicated that principals provided support and materials and a person knowledgeable in remote/hybrid instruction to assist teachers. Other responses that resonated with teachers were that principals were available to discuss issues and were empathic, encouraging, and understanding of the teachers' challenges during the pandemic. In contrast, 13 teachers noted that principals were overwhelmed and did not have time to collaborate; consequently, collaboration was sometimes overlooked and was possible only if the teachers initiated it. Some teachers mentioned that they did not collaborate with their principals to support their instruction.

Teachers' open-ended responses revealed diverse perceptions about principals' leadership that impacted teachers' collaboration and their ability to provide remote/hybrid instruction during the pandemic. Collaboration has become a vital factor in principal leadership to help teachers address pressing issues. Therefore, when principals changed their approaches to facilitate teachers' collaboration, devoted time to work collectively, and supported teachers, it enriched teachers' and principals' collaboration ability. The effects of developing effective collaboration with teachers will be beneficial and responsive to future crises. The final interview questions asked teachers how they thought principals' leadership impacted their self-efficacy and collaboration during the remote/hybrid learning process implementation during the COVID-19 pandemic.
Four teachers who volunteered to participate in the personal interview protocol shared their perspectives on three interview questions. The data collected from teachers' interview question four revealed critical factors that promoted collaboration among teachers. The majority of teachers believed that principals who encouraged meetings to discuss teachers’ concerns, provided encouragement, understood the challenges that teachers were facing, and showed empathy enhanced collaboration among teachers. In addition, an analysis of teachers' interview responses revealed that each teacher believed that principals' leadership behaviors heightened teachers' self-efficacy, which enabled them to feel confident in providing remote online instruction.

Interview question five asked teachers how principals promoted collaboration with teachers and their families. The data collected from teachers' interview responses showed that principals provided technology training sessions for parents on Zoom, organized family nights, encouraged teachers, provided office hours for teachers, and allowed parents to pick up laptops, regardless if parents had the money to pay for the insurance for the laptops. The data collected from the four teachers' interview responses to question six, if principals' communication enhanced teachers' collaboration, identified factors that promoted teachers' collaboration. Every teacher believed that when principals provided an open door to discuss their concerns and assisted teachers in resolving issues with parents, principals demonstrated that teachers were not alone in addressing challenges that occurred during the pandemic.

The last teacher interview question asked teachers to evaluate their principal's overall leadership behaviors and how principals impacted their self-efficacy and collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. Similar to teachers' previous interview responses, the data
indicated that teachers expressed deep appreciation for how their principals' leadership behaviors promoted their self-efficacy and collaboration while providing remote/hybrid learning during the pandemic. In addition, each teacher responded affirmatively to the idea that principals' leadership effectively provided activities that promoted collaboration among teachers and their students' families, and principals' communication with teachers enhanced teacher collaboration during the pandemic. Teachers' interview perceptions contrasted with teachers' responses to the Likert-scale statements and open-ended questions, revealing opposing perceptions of principal leadership that teachers believed influenced their collaboration.

Research Question Four

When the COVID-19 pandemic emerged, principals responded differently to how their instructional leadership may support teachers' work and collaboration. Some principals focused primarily on core instructional practices to effectively address implementing remote instruction, which may have caused them to believe that they neglected to provide time in teachers' schedules to collaborate and allow teachers more time for teacher-student interactions. Conversely, some principals directed their attention toward lessening the impact of COVID-19 on their teachers, students, and their families. At the same time, students and their families were struggling with similar issues and other essential needs. As a result, some principals began to prioritize their attention on the socio-emotional well-being of their teachers and coordinate community outreach assistance for their students and families. The implications of this approach caused some principals to focus less on increasing collaboration among their teachers.
Open-ended question three asked principals how they promoted teacher collaboration. Each principal acknowledged the significance of collaboration for teachers to respond to their students and families in addressing issues raised during the pandemic. In addition, all principals coordinated professional learning communities and other activities to promote collaboration among teachers during the pandemic. Effectively establishing collaboration between teachers and principals enabled them to address the complexities that the pandemic had caused in their schools and communities. The responses from open-ended question four examined how principals communicated with their teachers to understand their remote/hybrid instruction needs. Principals exhibited an increased interest in promoting collaboration among teachers. By developing multiple approaches to communicate with their teachers, principals were actively involved with their teachers to ensure the continuation of remote instruction during the pandemic.

Principals' responses to interview question four demonstrated that they understood the benefits of providing time to allow teachers to collaborate. Scheduling time for teachers to collaborate served as a support platform to assist teachers experiencing high demands on their time to ventilate mutual concerns and release pressures they encountered during the pandemic. The pandemic made collaboration among teachers challenging due to school closures and other issues that disrupted education. However, principals addressed the challenges by providing teachers time and space to collectively develop lesson plans, develop team-building activities to heighten their spirits, and visit teachers at home to show their appreciation.

Interview question five asked how principals promoted collaboration with teachers and students' families during the pandemic. Principals' responses revealed that they were aware of their teachers’, students’, and families' mental and physiological
challenges. As a result, principals increased their collaboration with teachers, checked on their well-being, provided laptops and educational materials for their students, and coordinated outreach services for families. Principals who responded to the many demands during the pandemic by delivering necessities to families' homes have established their schools as caring and have developed strong sustaining bonds with families and their community constituents.

Principals’ responses to interview question six regarding how their communication enhanced teacher collaboration demonstrated that principals were empathetic and appreciative of their teachers, communicated frequently, and used different collaboration approaches. It was apparent that each principal understood that they had to differentiate their communications to respond to the conditions presented during the pandemic, which would ensure that teachers were not alone. When principals implemented different collaborative methods, they enhanced their collaboration with teachers.

The final interview question asked principals how they thought their leadership impacted their teachers' self-efficacy and collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic. The data revealed that principals were not adequately prepared to address the educational crisis created during the pandemic. Their college principal leadership programs did not have a course on crisis leadership or a comprehensive course on digital instruction. Principals also indicated that the pandemic was a shock to their school system, and some struggled to try to manage a school on Zoom while being a parent.

However, principals viewed the unapparelled circumstances as an opportunity to develop innovative ways to address their teachers' concerns, and their students' and
families' issues that were exacerbated during school closures. Principals believed that their leadership behaviors lessened the impact of the pandemic on the lives of their teachers, students, and families. The pandemic unleashed unfamiliar administrator dilemmas. However, principals believed that their leadership behaviors positively impacted their teachers' self-efficacy and collaboration during the pandemic. Their leadership behaviors fostered trust and appreciation between principals and their teachers, strengthened their teachers' instructional practices, and developed new collaboration channels to withstand a crisis in their school system’s operations.

**Limitations Found in the Study**

While some limitations were identified in Chapter One, other limitations were discovered through the research process. First, the study might have been impacted by teachers' and principals' responses due to the unprecedented educational challenges of transitioning to remote online instruction and the socio-mental aspects that could hinder their participation in this study. Secondly, the teachers and principals who participated in the interview protocol were not randomly selected; all who volunteered were accepted. This fact resulted from the scarcity of teachers and principals who volunteered to participate in the interviews. Thirdly, participating teachers' experience implementing different types of remote online learning/hybrid platforms to instruct their students using asynchronous or synchronous modalities might not be comparable to other school districts.

Finally, the limited number of participants may have impacted the scope and effect of diversity in the opinions presented in this study. Therefore, the results may not be generalizable to other public school districts.
**Relationship to Other Research**

The findings of the study were similar to the results of other research. Putri et al. (2020) established that teachers faced challenges that included restrictions on teaching methods, inadequate technology skills for remote online instruction, and students who lacked laptops and internet services. Forty-six percent of teachers in this study claimed that teachers were not provided an opportunity to explore remote learning platforms. In addition, some teachers maintained that they were not proficient in remote instruction, needed professional development, and encountered students who did not have access to laptops or internet services.

Sokal et al. (2020) explored various issues that teachers addressed in providing online education to their students, the constraints that impacted them during the pandemic, and how teachers responded. Their findings revealed that teachers took deliberate actions to mitigate the inequities in technology and internet access experienced by their students and families. Teachers drove to students' homes to assist them in getting access to the internet, delivered learning materials, and in some instances, teachers taught students out of their vehicles. Seventy-two percent of teachers in this study claimed that they addressed equity issues and access to technology for students. Three teachers interviewed claimed that they conducted training sessions on remote learning platforms for parents, performed family fun nights on Zoom, and provided office hours for parents to pick up students' laptops.

Anderson et al. (2020) examined how principals confronted the circumstances created by the pandemic that affected their well-being while addressing their teachers, students, and families' socio-mental health. Their findings revealed that principals became the caretakers for the total well-being of teachers and their constituents.
According to the findings of this research, all 10 of the principals in this study claimed that they communicated with their teachers to determine the status of their well-being and demonstrated compassion when addressing teachers' concerns.

Thornton (2021) explored the challenges and the responsibilities principals faced in preparing students and teachers for online instruction and education during the pandemic. Thornton found that principals ensured that students had access to laptops and internet services, emphasized well-being, demonstrated empathy, and promoted a culture of trust. This study revealed that all of the principals were concerned about the inequities of students' having inadequate internet access and laptops. Several principals maintained that they delivered laptops and other materials their students needed at their homes.

This study also revealed that all of the principals reported developing a culture of trust to heighten teacher self-efficacy. The responses in this study support the findings of studies conducted by Anderson et al. (2020) and Thornton (2021) which revealed that principals demonstrated leadership behaviors that effectively responded to the constraints imposed on their teachers’, students’, and their family's well-being and the inequities that were escalated during the pandemic.

Rogers-Haverback (2020) and Richer and Idleman (2017) analyzed the significance of teachers' self-efficacy while implementing remote online instruction during the pandemic and how teachers' self-efficacy was enhanced during this critical period in education. Rogers-Haverback's study established that teachers' self-efficacy increased when they gained experience in teaching virtually, observed other teachers performing the task, were encouraged by a reputable person about their abilities, and when teachers had a positive physiological and emotional well-being while teaching. Richer and Idleman (2017) revealed that teacher self-efficacy increased when teachers
were supported in implementing remote instruction, provided professional development, and given common time to plan.

Based on the findings of this study, 69% of teachers affirmed that principals provided professional development that helped prepare them to implement remote online instruction. Furthermore, in the teachers' open-ended responses, the teachers maintained that principals providing professional development and assigning knowledgeable teachers to assist teachers who struggled with the technology were beneficial in understanding the intricacies of different teaching platforms. Teachers further claimed that their principals encouraged them, gave positive feedback, and provided time to work collectively to develop remote instructions; teachers also mentioned that principals expressed concerns for their emotional and mental needs. These results align with the findings of Rogers-Haverback (2020) and Richer and Idelman (2017).

Datnow (2018) examined the connection of teacher emotions, teacher collaboration, and educational change; specifically concerning time, an essential asset for teachers frequently influenced by changes in school systems. Datnow's findings revealed that teachers benefitted when schools formulated collaborative plans that provided time and space for teachers to be creative, which enhanced their satisfaction in the teaching profession. Professional development mitigated the stress teachers encountered by the demands placed on their time and instruction during the pandemic. In the four teachers' interview responses in this study, teachers declared that they appreciated the time principals provided for collaboration for lesson planning, discussing concerns, and professional development. In addition, allocating time to collaborate was beneficial for strategically planning for the challenging tasks during the pandemic. In the Survey, 58%
of the teachers maintained that their principals created the framework that enabled teachers to co-plan.

Datnow's (2018) findings also revealed that principal leadership was essential in creating a healthy environment that supported teachers' well-being and focused on effective professional collaboration. Principals interviewed for this study maintained that they allocated time for teachers to work collaboratively, visited teachers at home, and created fun, professional development activities. Additionally, 100% of principal participants collaborated with teachers to lessen the pressure from parents on remote online instruction.

Duyar (2012) investigated the impact of principal leadership behaviors and collaboration on teachers' self-efficacy and employment gratification. Duyar's findings showed that certain leadership behaviors influenced teachers' self-efficacy and employment gratification, such as safeguarding teachers from external pressures, providing individual and professional support, and acknowledging teachers' efforts and achievements. Teachers' interview responses for this study claimed that principals were supportive and expressed concern for teachers' well-being; teachers were provided with professional development, and principals recognized the challenges that teachers were facing during the pandemic.

Finally, this study supports the findings of Putri et al. (2020) which noted that teachers encountered challenges that impeded their ability to implement remote online instruction effectively. However, teachers showed resiliency in overcoming the obstacles that impacted teachers, students, and their families during the pandemic. Taking decisive actions minimized the lack of internet access and laptops and parents' inexperience in navigating school platforms (Sokal et al., 2020). In addition, principals were instrumental
in addressing the inequities that teachers and their constituents encountered; their leadership focused on creating a safe working environment while demonstrating compassion and providing the necessary learning materials for their students (Anderson et al., 2020; Thornton, 2020).

The onset of the pandemic resulted in teachers experiencing new pedagogy practices that would empower them to implement remote online teaching (Rogers-Haverback, 2020). Principals' leadership behaviors played a pivotal role in enhancing teachers' self-efficacy during the pandemic (Anderson et al., 2020; Thornton, 2021). The pandemic elevated emphasis on collaboration between teachers and principals, demanding rapid responses to compelling issues (Campbell, 2020). Teachers and principals gained invaluable experience from the professional collaboration initiatives that principals developed to communicate with teachers (Datnow, 2018) which also impacted teachers' self-efficacy (Duyar, 2012).

This study contributes to understanding principals' impact on teachers' self-efficacy and collaboration during a pandemic by underlining the various leadership behaviors that influenced teachers and principals while implementing remote online instruction. In conclusion, this study contributes to the body of literature that articulates various components of principals' leadership behaviors and how they impact teachers' self-efficacy and collaboration.

**Recommendations for Further Research**

This study focused on the impact of principals' leadership on teachers' self-efficacy and collaboration during the COVID-19 by gathering data from teachers' and principals' perceptions of principals' leadership behavior during this critical period in education. Additional research is recommended to enhance and compare the results of
this research. The following recommendations are proposed to further investigate this topic.

1. Replicate the study in other demographic areas in Pennsylvania or other states in the United States to increase the sample size to determine if generalizations exist.

2. Conduct a similar study with four schools with similar student per capita cost and ethnicity. This approach will compare teachers' perceptions and principals' leadership responses, particularly in relation to the school's socio-economic status and ethnic compositions.

3. This study examined the perceptions of teachers in Grades K-5 who provided remote/hybrid instruction and their K-5 principals who provided instructional leadership during the implementation and use of the digital technologies during the COVID-19 pandemic. In addition, it would be interesting to examine the perceptions of middle school teachers and middle school principals; this would allow for a comparison across different grade levels.

**Conclusion**

This qualitative study was designed to investigate the impact of principals' leadership behaviors on teachers' self-efficacy and collaboration during COVID-19. The study’s participants consisted of teachers in Grades K-5 who provided remote/hybrid instruction and integrated digital technology during the COVID-19 pandemic and their K-5 principals who provided instructional leadership during the implementation and use of the digital technologies. The data of the study were collected from 46 teachers and 10 principals from 22 elementary schools in southeastern Pennsylvania. Different themes
manifested from the data collected using Likert-scale statements, open-end responses, and follow-up interview questions.

This study demonstrated teachers' perceptions of how principals' leadership behaviors impacted their self-efficacy and collaboration. The data revealed that most teachers perceived principals' leadership as impactful toward enhancing their self-efficacy. However, a deviation in teachers' perceptions existed regarding principals having knowledge of technology and providing direct support in remote online learning. These are essential components for teachers delivering proficient student instruction and may impact student academic achievement. To increase teachers' self-efficacy, school districts or Intermediate Units can provide professional development for the principals to participate in.

The data noted teachers' concerns regarding how principals supported them in maintaining discipline during classroom instruction. The pandemic had significantly changed teachers' and students' routines, creating unparalleled circumstances that affected how students were being educated; consequently, this heightened student discipline issues during remote instruction and classrooms. Teachers experienced pressure from students who had difficulty readjusting to normalcy. Although these issues caused a disturbance in education, they provided principals the opportunity to provide the resources and mental health training that would prepare teachers to address their students' total development, which will be beneficial for the future.

The data noted how principals reconstructed their leadership behaviors to manage the challenges that impacted their teachers’ self-efficacy and collaboration. In addition, principals were aware of the circumstances that teachers were experiencing and their effects on their ability to address different situations during the pandemic, ultimately
impacting teachers’ self-efficacy and collaboration. Overall, all principals overwhelmingly believed that their leadership behaviors positively impacted teachers’ self-efficacy and collaboration due to their approaches to addressing the issues teachers articulated during their meetings.

However, dealing with detrimental issues to teachers' well-being was sensitive, and the complexities that emerged during the pandemic were compelling to principals. While most teachers believed principals exhibited concern for teachers' well-being which impacted their self-efficacy, some teachers were in disagreement. However, all principals strongly agreed or agreed that they called teachers to determine their well-being. The difference between the principals' perceptions and the 35% of teachers who disagreed or strongly disagreed that their principals did not inquire about their well-being, illustrate the need to develop a working environment that supports teachers personally and inclusively.

Understanding how teachers as adult learners perceive information differently and identifying teachers’ different ways of knowing will require principals to implement various supports that will meet teachers where they are developmentally. Implementing a leadership approach that provides developmentally appropriate feedback that supports teachers will strengthen teachers’ and principals’ relationships and ensure that principals’ leadership effectively responds to teachers’ well-being.

The unprecedented circumstances that occurred during the COVID-19 pandemic created a plethora of factors that could be expected to impact principals' leadership on teachers' self-efficacy and collaboration in implementing remote online instruction. The issues at their schools were magnified, creating a sense of urgency in providing prudent and expedient responses from teachers and principals. The impact of the pandemic
undoubtedly demonstrated that to overcome critical circumstances that affect educational systems, teachers and principals must work together to enhance teachers' self-efficacy and collaboration and effectively address the inequities in education to create successful schools.

This study revealed the differences in teachers' and principals' perceptions of various elements embedded in school operations that influenced teachers' self-efficacy and collaboration during the pandemic. Principals can mitigate the disparities presented in the data by developing leadership approaches that acknowledge their teachers' concerns and collaborate with each teacher through their lens to create an enduring understanding that will foster strong relationships and an enriched school culture. In addition, establishing clear channels of collaboration that are informative and listening to the voices of teachers will deeply connect teachers to the strategies that principals are developing to address school issues and enhance teachers' resiliency. Finally, implementing innovative collaboration that facilitates check-ups on teachers’ well-being will help increase teacher morale and increase teachers' self-efficacy and collaboration during challenging times, especially during a crisis.
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Appendix A

Teacher Survey

Informed Consent for Survey

You are invited to participate in this qualitative study to identify principals’ leadership behaviors that impacted teacher self-efficacy and collaboration during the virtual/hybrid learning, which took place during the COVID-19 pandemic. If you were a teacher in an online learning environment either hybrid, or full time for at least part of the 2020-2021 school year, I am inviting you to complete a survey of one demographic question, 18 Likert-scale questions, and four open-ended questions. In addition, if you volunteer to participate in an Interview, there will be seven interview questions. The survey will take approximately 15 minutes to complete and the interview questions will take approximately 15 minutes.

Participation in this study is voluntary. You may decline to answer any question and withdraw participation at any time. All data will remain anonymous and confidential. Your response will be used collectively with all other responses. You will not be asked to provide personally identifiable information. There are no anticipated or known risks in this study.

Please indicate below that you have read and understood this consent statement and that you agree to take part in this study. Either response will not waive any of your legal rights.

○ YES
○ NO
Teacher Demographics

1. In what type of online teaching were you involved in during the 2020-21 school year?
   ○ Fully remote online
   ○ Remote and hybrid

Please respond to the following statements regarding principal leadership behaviors and their impact on teacher self-efficacy and collaboration.

1. My principal’s knowledge of technology assisted me during the implementation of online/hybrid instruction.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

2. My principal provided direct support during the pandemic (e.g., modeled a lesson, did virtual walkthroughs), enabling me to feel confident in providing online learning.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

3. My principal’s openness and transparency created a culture of trust which enhanced my self-efficacy.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

4. My principal provided resources to enable teachers to implement online instruction during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree
5. My principal kept in contact with teachers to determine our well-being during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

6. My principal provided us with opportunities to explore remote learning platforms before we were expected to prepare students to meet K-5 curriculum standards
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

7. My principal provided professional development on using technology to prepare teachers for remote online instruction.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

8. My principal supported teachers in maintaining discipline during classroom instruction.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

9. My principal was readily available to discuss teachers’ concerns during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

10. My principal showed compassion when guiding teachers through the circumstances that were created during the pandemic.
    ○ Strongly Agree
    ○ Agree
    ○ Disagree
    ○ Strongly Disagree

11. My principal collaborated with me to address issues of equity and access to technology for my students.
    ○ Strongly Agree
    ○ Agree
    ○ Disagree
    ○ Strongly Disagree
12. My principal created structures that enabled more collaboration time among teachers and more teacher-student interactions.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

13. My principal provided time for us to co-plan with other teachers.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

14. My principal maintained regular faculty meetings during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

15. My principal’s supervision of instruction resulted in increased collaboration among teachers.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

16. Daily interactions with my principal created a culture of trust which enhanced collaboration among teachers.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

17. My principal encouraged teachers to discuss and share best strategies for online teaching.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree
18. My principal interacted and collaborated with me to ease the pressures that I experienced from parents on remote online instructional practices.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Teachers’ Open-Ended Survey Questions**

*Please write your responses to the following open-ended questions.*

1. What did your principal do to promote your self-efficacy when you instructed students remotely during the pandemic?

2. What principal leadership behaviors prepared you to transition from in-class instruction to online education?

3. What principal leadership behaviors promoted teacher collaboration during the time of remote online/hybrid learning?

4. How did collaborating with your principal impact your ability to provide remote/hybrid instruction during the pandemic?
Appendix B

Principal Survey

Informed Consent for Survey

You are invited to participate in this qualitative study is to identify principals’ leadership behaviors that impacted teacher self-efficacy and collaboration during the virtual/hybrid learning, which took place during the COVID-19 pandemic. If you were a principal or assistant principal in an online learning environment, either hybrid or full time for at least part of the 2020-2021 school year, I am inviting you to complete a survey of one demographic question, 18 Likert-scale questions, and four open-ended questions. In addition, if you volunteer to participate in an interview, there will be seven interview questions. The survey questions will take approximately 15 minutes to complete and the interview questions will take approximately 15 minutes.

Participation in this study is voluntary. You may decline to answer any question and withdraw participation at any time. All data will remain anonymous and confidential. Your response will be used collectively with all other responses. You will not be asked to provide personally identifiable information. There are no anticipated or known risks in this study.

Please indicate below that you have read and understood this content statement and that you agree to take part in this study. Either response will not waive any of your legal rights.

○ YES
○ NO
Principal Demographics

1. In what type of online learning was your school involved during the 2020-21 school year?
   ○ Fully remote online
   ○ Remote and hybrid

Please respond to the following statements regarding principal leadership behaviors and their impact on teacher self-efficacy and collaboration.

1. My knowledge of technology helped me to assist our teachers during the implementation of online/hybrid instruction.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

2. I provided direct support during the pandemic (e.g., modeled a lesson, did virtual walkthroughs), enabling teachers to feel confident in providing online learning.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

3. My openness and transparency created a culture of trust which enhanced teachers’ self-efficacy.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

4. I provided resources which enabled teachers to implement remote online instruction during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

5. I called teachers to determine their well-being during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree
I provided teachers opportunities to explore remote learning platforms before they were expected to prepare students to meet K-5 curriculum standards.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

6. I provided professional development on using technology to prepare teachers for remote online instruction.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

7. I supported teachers in maintaining discipline during classroom instruction.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

8. I was readily available to discuss teachers’ concerns during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

9. I showed compassion when guiding teachers through the circumstances that were created during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

10. I collaborated with my teachers to address issues of equity and access of technology for our students.
    ○ Strongly Agree
    ○ Agree
    ○ Disagree
    ○ Strongly Disagree

11. I created structures that enabled more collaboration time among teachers and more teacher-student interactions.
    ○ Strongly Agree
    ○ Agree
    ○ Disagree
    ○ Strongly Disagree
12. I provided the teachers time to co-plan with others.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

13. I maintained regular faculty meetings during the pandemic.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

14. My supervision of instruction resulted in increased collaboration among teachers.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

15. Daily interactions with my teachers created a culture of trust which enhanced their collaboration.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

16. I encouraged teachers to discuss and share best strategies for online teaching.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree

17. I interacted and collaborated with teachers to ease the pressures that they experienced from parents on remote online instructional practices.
   ○ Strongly Agree
   ○ Agree
   ○ Disagree
   ○ Strongly Disagree
**Principal Open-Ended Survey Questions**

1. What did you do to affect teachers’ self-efficacy when they instructed students remotely during the pandemic?

2. What actions did you take to enhance your teachers’ self-efficacy in transitioning from classroom instruction to remote online instruction?

3. What activities did you use to promote teacher collaboration during remote online/hybrid instruction?

4. How did you communicate with your teachers to understand their needs for remote/hybrid instruction during the pandemic?
Appendix C

Teacher Interview Questions

1. What did your principal do to promote your self-efficacy in providing remote online instruction during the pandemic?

2. What did your principal do to promote teachers’ wellbeing during the pandemic since it can impact your self-efficacy?

3. What supports did your principal provide to help you develop an understanding of different remote teaching platforms to enhance your self-efficacy?

4. What activities did your principal provide to promote collaboration among teachers during the pandemic?

5. What actions did your principal take to promote collaboration among teachers and their students’ families during the pandemic?

6. How did your principal’s communication enhance teacher collaboration?

7. Overall, how do you think that your principal’s leadership impacted your self-efficacy and collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?
Appendix D

Principal Interview Questions

1. What did you do to promote your teachers’ self-efficacy in providing remote online instruction during the pandemic?

2. What did you do to promote teachers’ wellbeing during the pandemic since it can impact their self-efficacy?

3. What supports did you provide to help your teachers develop an understanding of different remote teaching platforms to enhance their self-efficacy?

4. What activities did you provide to promote collaboration among teachers during the pandemic?

5. What actions did you take to promote collaboration with teachers and students’ families during the pandemic?

6. How did your communication enhance teacher collaboration?

7. Overall, how do you think that your leadership impacted your teachers’ self-efficacy and collaboration during the implementation of the remote/hybrid learning process during the COVID-19 pandemic?
Name of Researcher: Wayne Wallace

Project Title: The Impact of Principals’ Leadership on Teachers’ Self-Efficacy and Collaboration During COVID-19

Reviewer's Comments:

Your proposal is Approved. You may begin your research or collect your data.

PLEASE NOTE THAT THIS APPROVAL IS VALID FOR ONE YEAR (365 days) FROM DATE OF SIGNING.

Reviewer's Recommendations:

Exempt
Expedited
Full Review Do Not Approve

X Approve
Conditionally Approve

Marcia Parris, Ed.D., Date
Chair, Research Ethics Review Board

October 27, 2021