

When Complexity and Uncertainty Became Life: Delaware School Principals Roles and Leadership Practices During COVID-19 Crisis - A Mixed Method Case Study

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This study explores and explains crisis leadership through surveys and experiential narratives of school principals in the State of Delaware. The study focuses on the lived experiences of school principals for decision-making and responding to the impact that the pandemic (i.e., COVID-19) has had on the educational concerns of students, schools, and communities. The aim is to understand deeply what and how building leaders view their experience leading schools during the Crisis, mainly related to COVID-19. Finally, the study aims to contribute to academic literature on improving leadership practice amid the global Crisis.

Keywords: School Leadership, COVID-19, Leadership during crisis

This study aims to better understand leading schools during significant crises, such as global pandemics. Efforts are made to inform school leaders, policymakers, and leadership preparation programs and improve school leadership decision-making and response in future crises that may arise due to other imminent major world crises (Azorín, 2020; Netolicky, 2020; Sahlberg, 2020). There are several existing studies on crisis response by school leaders (Bishop et al., 2015; Connolly-Wilson & Reeves, 2013; Howat et al., 2012; Kennedy-Paine et al., 2013; Kitamura, 2019; Simmons & Douglas, 2018; Zenere, 2013). These studies document past crises, such as school shootings, hurricanes, wildfires, and terrorist attacks, to name a few. However, in modern times, the COVID-19 pandemic generated Crisis is unprecedented. The COVID-19 pandemic affected society and human life at a scale that arguably never occurred before. Including social, governmental, and financial sectors, as well as the education system (d’Orville, 2020; Harris, 2020; Harris & Jones, 2020; Müller & Goldenberg, 2020; Sahlberg, 2020; Zhao, 2020) felt the highest burn. Educational leaders in general and school principals faced a social and moral concern related to equitable and ethical decision making not typically encountered (Escotet, 2020; Harris, 2020; Netolicky, 2020). These specific phenomena and principals’ responses have been studied worldwide; however, adding deeper contextual texts to the research literature and contributing to a greater understanding of school building level leadership during the pandemic is still desirable. Therefore, this study aims to examine the nature of the leaders’ experiences, perceptions, and practices of school building leadership inductively during this period and how school principals confronted and contended with educational discontinuity and the crisis introduced by the COVID-19 pandemic in Delaware, one of the U.S. states in the northeast.

Research Questions

The study has one major question: How did principals experience or perceive their crisis leadership competencies and practice as educational agents for their students, schools, and communities during the COVID-19 pandemic?

The following sub-questions support the following central question:

Quantitative Research Question

- How do principals rate their crisis leadership preparedness, competencies, and responses of dealing with the effect of the Covid-19 pandemic?

Qualitative and Quantitative Questions

- How do principals perceive the impact of the pandemic on their leadership practice during the COVID-19 crisis?
- What processes did principals use to maintain instructional leadership during a time of school disruption and educational discontinuity caused by COVID-19?

Qualitative Only Questions

- How did principals re-imagine decision making for allocation of resources during the pandemic?
- What lessons did principals learn regarding serving students, schools, and communities during the COVID-19 pandemic?

- How do principals perceive educational equity was impacted by the COVID-19 pandemic?

Relevant Foundational Literature

Emerging Issues for Schools/Education Due to COVID-19

In a very short time, much has been written about COVID-19 and its impact on education. According to Education Next (2020), the novel coronavirus “upended the world of education just as it has radically changed the rest of our economy and our day-to-day lives” (para. 1). As such, educators have had to deal with pandemic-related school closings, unprepared transitions to distanced learning, disruptions with homeschooling and online education, and the effects on standardized testing and school budgets (Greenberg, 2020; Hanushek & Woessmann, 2020; Horn, 2020; Peterson, 2020). In short, the preponderance of literature has dealt with learning loss (aka “Covid Slide”) due to school closings and the disruptions from transitions (from stay-at-home to back-to-school, to mixed environments) (Allensworth & Swartz, 2020; Borman, 2020; Kuhfeld et al., 2020; Kuhfeld & Tarasawa, 2020).

Predominantly, this scholarship has confronted and contended with conceptual concerns regarding educational discontinuity and the Crisis introduced by the COVID-19 pandemic (d’Orville, 2020; Harris, 2020; Müller & Goldenberg, 2020; Sahlberg, 2020; Zhao, 2020). With very little empirical data focusing on school leader perceptions or decision-making processes during this time, it is difficult to discuss the long-term effects of these closings and transitions on education from an educational leadership perspective. Some literature has considered how the impact of COVID-19 might change the nature or structure of education and the educational system (Azorín, 2020; International Commission on the Futures of Education, 2020; Luthra & Mackenzie, 2020; Strauss, 2020).

Additionally, some literature has dealt with the exacerbated educational inequities for specific demographics, primarily minorities and lower socio-economic classes, due again to closings (Education Trust, 2020a, 2020b; Herold, 2020). Several other studies have dealt with students’ mental health during the pandemic (Arat & Karatas, 2020; Horowitz, 2020; Pfefferbaum & North, 2020). At this juncture, except for very few studies from the United Kingdom, little investigation or inquiry has focused on school leadership and the response and decision-making of these key social actors during the pandemic (Comanducci, 2020; Harris & Jones, 2020; Netolicky, 2020).

School Leadership in the US During Crisis

A recent theoretical analysis by Grissom and Condon (2021) demands researchers look into crisis management in schools: “The widespread nature of the COVID-19 school closures, in contrast, offers an opportunity to understand crisis leadership in schools on a large scale” (p. 321). They suggested education researchers seize upon the time and begin to “build a more systematic understanding of the crisis responses of schools and districts” (p. 321). Hence, it is necessary to understand the roles of principals as leaders during an unprecedented universal crisis. Numerous studies (Boin et al., 2014; Crayne & Medeiros, 2020; Harris, 2020; Mutch, 2015) discussed school leadership in times of crisis. However, as mentioned above, to take a comprehensive picture of

the pandemic leadership of school leaders, more such studies are still required since these studies are still not able to fully explain the impact caused and how school's crisis leadership practices evolved in the United States.

Research Context

Delaware, situated in the northeastern region of the United States, is the context of this scholarly inquiry. Despite its relatively small geographical size, Delaware boasts a considerable educational infrastructure encompassing over 200 schools distributed across 19 districts and 23 charter schools. The state has identified eight communities as Promise Communities, encompassing all counties, 17 zip codes, and multiple school districts and charter schools.

Demographic analysis, as per the U.S. Census 2020 (Census, 2023), children under 18 years are most affected by poverty, with subsequent impacts noted among the working-age population (18-64 years) and then among seniors (65 years and older). There are pronounced disparities in poverty rates when dissected by race and ethnicity; Black individuals are more than twice as likely to experience poverty relative to their White counterparts, and Hispanics are nearly three times more likely to be impoverished compared to non-Hispanic Whites. Geographical disparities are also evident, with higher poverty rates in southern counties and urban areas, notably the capital city with a poverty rate of 18.5% and the most densely populated urban area at 23.9%, double the state's overall poverty rate.

Delaware's population of 1,031,890 has increased by 4.2% since the 2020 census. The state's demographic composition is predominantly White (68%), with significant Black or African American (23.8%) and an expanding Hispanic or Latino (10.3%) community. Educational attainment is high, with over 91% holding at least a high school diploma and 34.5% with a bachelor's degree or higher. The housing market is primarily owner-occupied (72%), and the median household income stands at \$79,325, reflecting economic resilience (Census, 2023)

However, challenges persist in the educational domain. A 2023 study by the American Institutes for Research (AIR) (Atchison et al., 2023) found a significant decline in Delaware's fourth and eighth-grade math and reading scores on the National Assessment over the past decade, more pronounced than in neighboring states. The report criticizes the inequitable allocation of public-school funding, adversely affecting low-income, Black, and ELL students, as well as students with disabilities. This inequity necessitates targeted interventions and policy reforms. COVID-19 made schools utilize a hands-on approach, and how schools responded to the most vulnerable populations of their school community needs to be clarified. Were the school leaders prepared? Did they have plans in place?

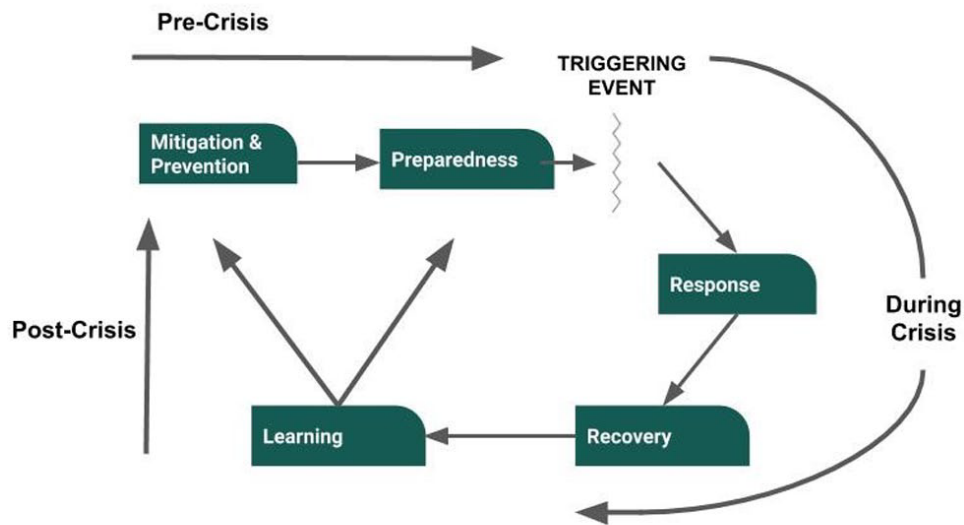
A report by CRESA in December 2021 suggests that there has been a decline in student enrollment in Delaware's educational landscape, despite an increasing population trend due to the COVID-19 pandemic (CRESA, 2021). Although discussions have taken place in Delaware on "Crisis Preparation" and leadership during crises, there is a lack of comprehensive documentation about how Delaware school leaders managed the COVID-19 crisis, the lessons learned, and recommendations for future preparedness. The implications of the pandemic on educational equity and outcomes remain unclear. This study is pioneering in exploring Delaware schools' crisis management strategies, practices, and learnings using a crisis management framework by Wooten & James (2008).

Crisis Management Framework

This study utilized Wooten and James's (2008) Crisis Management Life Cycle in schools and districts as a theoretical basis for further exploration of principals' perceptions. The framework extensively addresses the role of various elements such as mitigation and prevention, preparedness, response, recovery, and learning in the lifecycle of a crisis. The crisis generally can be understood in terms of four stages, pre-crisis, triggering events, during crisis, and post crisis.

Figure 1

Crisis management life cycle in schools and districts



Adapted from Wooten and James (2008).

The COVID-19 Pandemic is being more understood, researched, and managed in the United States after the development of vaccines, and after mutation of virus, the disease receded. However, the impact of the pandemic on school leadership was a very relevant topic of study. School leaders are in the Post-Crisis Stage of the crisis management lifecycle. Further exploration and deeper insights into principals' roles and leadership practices are essential for developing the existing framework or creating a greater understanding of the impact of multifaceted global crises. This framework will equally help analyze the COVID-19 stories of the local context of Delaware.

Methods

Research Design

The purpose of the mixed-methods case study is to identify the experiences of K12 school leaders (i.e., principals) in Delaware, a state in the Northeast region of the United States. The study adopted a convergent parallel design in which the researcher concurrently conducts the

quantitative and qualitative data collection and analysis in the same phase, which gives equal weight to both qualitative and quantitative components, analyzes the two components independently, and interprets the results together (Creswell & Plano-Clark, 2011). The study attempted to address the central question and the sub-questions listed in the previous section. The researchers believe that convergent parallel mixed methods are a good fit to address the research problem at hand. The quantitative data was collected using a researcher-developed survey tool. Qualitative data is collected through virtual interviews. The study is supported to explain and/or support the results of the qualitative and quantitative components (Creswell & Guetterman, 2019).

Sample Selection

The study was planned to be conducted in Delaware, one of the states in the Mid-Atlantic region. Since the state is very small, such in-depth studies in Delaware have not been performed before. A representative sample of at least 100 principals was to take the survey. Some 50 principals responded; however, only 34 responses are included due to incomplete responses from the remaining. A representative sampling of principals, Suburban and Rural locations, along with various racial background and genders, was selected purposively for a one-on-one interview to illuminate the circumstances of the phenomena studied (Patton, 2015). For this study, principals of K12 schools in a state participated in interviews (indicating their willingness on the survey) that was conducted by video, audio-recorded, and transcribed for analysis.

Data Collection

The quantitative data was collected from the researcher-created crisis leadership preparedness, competencies, and practice survey (PRCPS). It examines principals' satisfaction level on their preparedness, competencies, and responses based on their demographic variables like gender, year of experience, educational background, typology of schools, race, etc. The survey tool also included some open-ended questions for narrative responses. This data was analyzed along with the data obtained from interviews. The larger part of the qualitative data was collected from the one-on-one semi-structured interviews to explain experiences from a deeper personal level and collective experience. Concurrent data collection and analysis enabled researchers to remove their personal biases.

Population and Sample Description

A 100 randomly selected population sample frame, that was about 45% of all building principals of the schools in the state, received an email invitation for the survey. All the completed surveys were considered as quantitative data. Researchers sent survey reminders at certain times to increase response rate. One-on-one interviews of 4 principals was conducted. The study sample is purposeful.

Data Analysis Plan

Table 1*Data Analysis Framework*

Research Question	Data Collection	Analysis Matrix
Central: Question	Survey/Interviews	SPSS Software NVivo for Thematic Coding
Quantitative Sub-Question	Survey (Quantitative Section)	SPSS software to complete descriptive statistics and correlations
Qualitative Sub-Question	Survey (Qualitative Section)/ Interviews	NVivo for open coding, followed by selective coding

Quantitative Data. Researchers analyzed survey data using SPSS software to provide descriptive statistics (mean, median, and range, standard deviation) to examine the overall experience. Cross tabulation is used to summarize the experiences.

Qualitative Data. Individual interviews were transcribed and open coded for initial codes (Saldana, 2015) using NVivo. Subsequently, the open codes were combined to themes using a process called selective coding (Saldana, 2015). The quantitative results were compared with qualitative responses of the survey data to identify further insights and explain the themes.

Research Quality

In the study, the researcher meticulously followed rigorous standards to ensure the quality of research, achieving credibility through data triangulation and member checks, and ensuring transferability with a detailed mixed-methods approach that allows findings to be applicable in other contexts. The research process was transparent and methodically documented to establish dependability, while confirmability was secured through member checking and validation of survey tools to link results directly to the data. Ethical considerations were at the forefront, with IRB approval, informed consent, and stringent data security measures, ensuring ethical compliance and participant confidentiality throughout the research.

Delaware Principal Quantitative Results

Cronbach’s Alpha. A Cronbach alpha coefficient was calculated for all numeric variables. The Cronbach’s alpha coefficient was evaluated using the guidelines suggested by George and Mallery (2018) where $> .9$ excellent, $> .8$ good, $> .7$ acceptable, $> .6$ questionable, $> .5$ poor, and $\leq .5$ unacceptable. The items of the tool, Crisis Leadership Survey, had a Cronbach’s alpha coefficient of .90, indicating excellent reliability.

Descriptive Statistics. Frequencies and percentages were calculated for Demographic variables High Need Schools, Gender, Race, Education, School Typology, Leadership Experience, and Total Educator Experience. Frequencies and percentages are presented in Table 2.

Table 2*Frequency Table for Nominal Variables*

Variable	<i>n</i>	%
Highneed		
75% - 100% Economically Disadvantaged Students	9	26.47
50% - 74% Economically Disadvantaged Students	13	38.24
25% - 49% Economically Disadvantaged Students	7	20.59
0 - 24% Economically Disadvantaged Students	5	14.71
Gender		
Male	9	26.47
Female	25	73.53
Race		
White	21	61.76
Black or African American	12	35.29
Education		
Master's Degree	26	76.47
Doctoral Degree	8	23.53
Typology: Rural, Urban, Suburban		
Suburban	19	55.88
Urban	10	29.41
Rural	5	14.71
Missing	0	0.00
Total Years of Leadership Experience		
15+ years	10	29.41
6-10 Years	11	32.35
2-5 Years	5	14.71
11-15 years	8	23.53
Total Years of Educator Experience		
20+ years	24	70.59
16-20 years	6	17.65
11-15 Years	3	8.82
Missing	1	2.94

Note. Due to rounding errors, percentages may not equal 100%.

Descriptive Statistics. Summary statistics were calculated for all numeric variables.

Table 3*Summary Statistics Table for Interval and Ratio Variables*

Variable	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max
Functional Crisis Management Plan	3.97	0.83	34	0.14	2.00	5.00

Regular Participation Crisis Management	3.24	1.13	34	0.19	1.00	5.00
Adequate Preparation Crisis Management	3.32	0.98	34	0.17	1.00	5.00
Resources Crisis Management	3.18	1.00	34	0.17	1.00	5.00
Always prepared for COVID-19 & Other	3.50	1.05	34	0.18	1.00	5.00
Functional Communication Plan	3.94	0.98	34	0.17	1.00	5.00
Systems Of Communication COVID-19	4.09	0.87	34	0.15	1.00	5.00
Leadership Team CMS	4.38	0.55	34	0.09	3.00	5.00
Comprehensive Distance Virtual Learning	3.91	0.90	34	0.15	2.00	5.00
Adequate Training On Alternative Technologies	3.74	0.99	34	0.17	1.00	5.00
Adequate Resources	3.97	0.76	34	0.13	2.00	5.00
Adequate Instructional Materials And Practices	3.94	0.74	34	0.13	2.00	5.00
Ability High Student Engagement	3.35	1.01	34	0.17	2.00	5.00
Meet Each Student Learning Needs	3.18	1.03	34	0.18	2.00	5.00
Continue Necessary Services	4.21	0.59	34	0.10	2.00	5.00
Student Safe	4.03	0.72	34	0.12	2.00	5.00
Comfort Students	3.88	0.73	34	0.12	2.00	5.00
Disseminate Trustworthy Information	4.18	0.72	34	0.12	2.00	5.00
Professional Standards Include Crisis Management	4.06	0.79	33	0.14	1.00	5.00
Crisis Management Educational Leaders Preparation	4.32	0.53	34	0.09	3.00	5.00
Crisis Management Schools Ongoing PD	4.15	0.70	34	0.12	2.00	5.00
Crisis Management Professional Development for School Leaders	4.32	0.53	34	0.09	3.00	5.00
Principals Leaders Require Crisis Leadership Support Services	4.35	0.54	34	0.09	3.00	5.00
<i>Note.</i> '-' indicates the statistic is undefined due to constant data or an insufficient sample size.						

Pearson Correlation Analysis. A Pearson correlation analysis was conducted among Crisis Management Plan, Communication Plan, Instructional Leadership, Schools Responses, and Learning Opportunities. Cohen’s standard was used to evaluate the strength of the relationships, where coefficients between .10 and .29 represent a small effect size, coefficients between .30 and .49 represent a moderate effect size, and coefficients above .50 indicate a large effect size (Cohen, 1988).

Table 4
Pearson Correlation Results Among CMPlan, CommunicationPlan, InstructionalLeadership, SchoolsResponses, and Learning Opportunities

Combined Variables	<i>r</i>	95.00% CI	<i>n</i>	<i>p</i>
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Crisis Management Plan-Communication Plan	.42	[-.10, .67]	33	.082
Crisis Management Plan-Instructional Leadership	.52	[.22, .74]	33	.016* *
Crisis Management Plan-Schools Responses	.61	[.34, .79]	33	.002* *
Crisis Management Plan-Learning Opportunities	.31	[-.03, .59]	33	.183
Communication Plan-Instructional Leadership	.33	[-.02, .60]	33	.183
Communication Plan-Schools Responses	.41	[.08, .66]	33	.088
Communication Plan-Learning Opportunities	.38	[.04, .64]	33	.117
Instructional Leadership-Schools Responses	.50	[.18, .72]	33	.023* *
Instructional Leadership-Learning Opportunities	.31	[-.03, .59]	33	.183
Schools Responses-Learning Opportunities	.52	[.21, .73]	33	.016* *
<i>Note.</i> <i>p</i> -values adjusted using the Holm correction.				

The results of the correlations were analyzed with the Holm correction, which adjusts for multiple comparisons based on an alpha value of .05. The analysis showed a significant positive correlation between Crisis Management Plan and Instructional Leadership, with a correlation coefficient of .52. This indicates a large effect size ($p = .016$, 95.00% CI = [.22, .74]). In other words, when Crisis Management Plan increases, Instructional Leadership tends to increase as well.

Furthermore, there was a significant positive correlation between Crisis Management Plan and Schools Responses, with a correlation coefficient of .61. This also suggests a large effect size ($p = .002$, 95.00% CI = [.34, .79]). When Crisis Management Plan increases, Schools Responses also tend to increase.

A moderate positive correlation was observed between Instructional Leadership and Schools Responses (correlation coefficient of .50, $p = .023$, 95.00% CI = [.18, .72]). This suggests that when Instructional Leadership increases, Schools Responses tend to increase.

Another significant positive correlation was observed between Schools Responses and Learning Opportunities, with a correlation coefficient of .52, indicating a large effect size ($p = .016$, 95.00% CI = [.21, .73]). This suggests that as Schools Responses increases, Learning Opportunities also tend to increase.

No other significant correlations were found. You can refer to Table 4 for a detailed presentation of the results of the correlations.

Qualitative Data Analysis

The Participants. The four school principals interviewed shared their unique experiences and challenges during the COVID-19 pandemic. The first, a newcomer to the role, faced difficulties in transitioning to virtual and hybrid learning, managing COVID-19 protocols, and dealing with increased stress and changing staff dynamics. An experienced principal from Delaware described this period as her career's most challenging, dealing with the shift to online learning and adapting to constantly changing guidelines while transitioning from instructional

leadership to crisis management. The third principal, with a background in the Department of Education and as a consultant, focused on the unprecedented challenges of the pandemic, particularly in adapting to online platforms, addressing equity issues, and coping with stress and burnout. Finally, the fourth principal, leading a middle school, emphasized mental health, resilience, and empathy, focusing on counseling, community building, and addressing educational equity and resource allocation issues exacerbated by the pandemic.

Thematic Analysis: The Enormous and Unprecedented Crisis

The COVID-19 pandemic presented unprecedented challenges for educational leaders, forcing them to adapt quickly and effectively to a rapidly changing landscape. Many principals felt inadequately prepared for the scale and nature of the COVID-19 pandemic. This theme examines the preparedness of principals during the pandemic, drawing upon the findings of various studies and reports. Participating principals expressed a strong sense of unpreparedness when faced with a crisis of the scale and nature of the COVID-19 pandemic. Although they possessed some skills applicable to such an outbreak, its unique challenges exceeded any previously-learned capabilities or experiences they might possess.

One principal was confident due to their experience in communication and administrative roles; for instance, one stated, “I felt prepared since I have been sending weekly newsletters out to our staff as well as communicating with our community for years.” While this indicates some degree of confidence when handling routine administrative tasks or communicating, it doesn’t guarantee preparation for pandemic challenges. Principals noted a shift from instructional leadership to crisis management: “We’ve all become managers, with instruction being one area people had to let go of at some point... You now find yourself managing information that changes daily.” This represents a pivot in their responsibilities, which they were not initially equipped for. One school leader expressed that no one was prepared for such an unprecedented pandemic to hit educational institutions. As one participant shared, “This [first] year has been one of the hardest on my soul. It has been awful. However, this made my second year harder.” Here, the principal highlights the profound personal and professional challenges they have experienced throughout their tenure at the school.

Finally, one principal declared their unpreparedness by noting, “I just wasn’t prepared for that... but ultimately we survived.” This statement displays an admirable sense of resilience despite not having anticipated this particular crisis. While principals possessed relevant experience in education and administration, the scale and specific challenges associated with COVID-19 presented unique difficulties, which forced them to adjust and evolve their leadership roles accordingly.

Crisis Response. This theme signified that the initial response to the crisis demanded school leaders to adapt to the constantly emerging and shifting challenges and do so in ways that were not typified in their preparation or routine practice. Crisis response was primarily discussed in terms of communication, adaptability, keeping up with state and federal guideline revisions and redactions, collaborative efforts and networking, and insurance of technology as a service, support, and resource.

Communication during the crisis emerged as a cornerstone of effective leadership. Participants represented varying levels of confidence in communication and administrative skills,

a significant disparity that emerged when it came to pandemic preparedness. Although some principals expressed confidence in their communication and administrative skills, this did not fully translate to pandemic preparedness. As a result, a significant shift from instructional leadership to crisis management was experienced by many principals. Nevertheless, during the pandemic, all four principals discussed engaging in effective and consistent communication strategies. Adaptability to changing circumstances and policies was crucial, such as when mask mandates were lifted. Moreover, the crisis response required school leaders to successfully repurpose existing resources to facilitate a swift transition to remote learning. The uncertainty faced by participants during the transition to crisis management during the pandemic was a shared experience for all. Throughout the pandemic, principals discussed adept communication strategies, including tackling misinformation, keeping stakeholders well-informed, and utilizing diverse communication channels. Principals employed diverse strategies to combat misinformation and update stakeholders. This was primarily by utilizing technology more effectively and efficiently. But it also included scheduling Zoom meetings for digital “townhalls” and online “open houses.” Additionally, one principal emphasized the development of policies to ensure safety, highlighting the role of active participation in disseminating crucial safety information. As another participant stated, “We did whatever we could.” The ability to adapt quickly to changing circumstances, exemplified by the back-and-forth shift of mask mandates and politicization of pandemic guidelines, became a pivotal aspect of their communication-driven crisis response.

Several principals underscored the necessity for adaptability, coining the term “survival policies” to encapsulate the ever-evolving nature of their roles. One leader reflected on the managerial shift, noting, “We have all become managers. Instruction was the first thing people had to relinquish, yet you still manage an ever-evolving stream of data each day.” In response to the crisis, they believed they had to prioritize crisis management over traditional instructional leadership practices became evident.

Effective crisis management requires school leaders to repurpose existing resources, facilitating a rapid transition to remote learning. Resource allocation and collaboration took center stage, with principals recognizing the importance of relying on each other to restructure roles, reallocate resources, and discern where investments were needed. This resulted in innovative strategies for resource allocation that effectively leveraged professional networks. As one participant put it, “We realized that we [as principals] needed to rely on each other . . . to restructure jobs, reallocate resources, and figure out where we need to invest money.” Consequently, creative resource allocation strategies that leveraged professional networks effectively had to be found. School leaders often gathered for support among each other: “We commiserate, we sit, and I find myself laughing as both the charter school world and the district roll are intertwined with my life because of my Principals Association membership.” They also had to quickly adapt to changing guidelines, like when one participant stated that they “received a press release informing me that the governor decided to lift the mass mandate in schools altogether.” Regular learning and reflection among school leaders was a staple for these participants. They shared strategies, such as enforcing safety measures like wearing masks, and contemplated ways to navigate evolving circumstances.

Technology played a crucial role in maintaining educational continuity, as exemplified by a principal expressing gratitude for access to computers and iPads. Additionally, initiatives like

providing internet services beyond school premises underscored a commitment to facilitating remote learning access for all students. In the quest for a swift transition to remote learning, the reuse of existing resources, like one-to-one computer initiatives and pre-existing Zoom licenses, exemplified proactive measures taken by schools. These instances illustrate how leveraging available resources contributed to a seamless adaptation to the challenges posed by the pandemic. One principal highlighted the significance of technology: “We were fortunate that every child had his or her own computer, and then in between, Delaware State University gave us iPads for them.” Another stated, “We committed resources to ensure we provided an internet service outside our school where children could come anytime with their parents in the parking lot.” These exemplar quotes highlight the view that the participants shared on how effectively technology can maintain continuity in education.

Recovery. During the ongoing crisis and after, the challenges faced highlighted a noticeable shift in focus towards mental health/social-emotional learning (SEL) concerns, trauma consciousness, and the need for critical spiritual leadership. As one administrator noted, the process of readjusting students to communal living led to an increase in discipline infractions, heightened mental health anxiety, and concerns for general overall well-being of staff, students, and stakeholders. Consequently, the principals in this study agreed that the pandemic led to an increase in the emphasis on Social-Emotional Learning as a crucial aspect of education in response to emerging challenges and/or critical events. As a participant confided, “It has been difficult getting the students back used to living together again, so you have seen an uptick in discipline infractions... mental health anxiety . . . has been very difficult for many, so the SEL piece has recently come in.” Principals have recognized the strain on educators and the significance of providing ample support for teachers and frontline staff. Efforts to show love and assistance have manifested through coaching programs and therapeutic approaches, aiming to equip educators with the tools needed to navigate the evolving educational landscape. One participant referenced the need “to ensure we give our teachers and frontline staff as much love and support as possible.” Principals emphasized providing teachers with necessary assistance through coaching programs or therapy approaches. This included an increase in the focus on adult-related trauma.

The impact of trauma on the school system had been acknowledged, according to participants. But most of the efforts had been in educating teachers about student trauma. There was an evident and urgent need to implement solutions for coping with and mitigating educator trauma. One principal shared, “We have discussed trauma within the school system and taught teachers about trauma; however, what’s difficult is dealing with their experiences of it ourselves. We definitely recognize there’s an urgent need.” One leader clarified that they had spent time discussing and learning more about student trauma and adverse childhood experiences (ACEs), which was crucially imperative, but the COVID-19 crisis led them to the recognition that educator trauma was important as well. This leader emphatically noted, “There needs to be solutions put in place to deal with it.” However, the challenge lies in effectively addressing the personal experiences of trauma among educators.

In response to the crisis, innovative approaches had to be adopted, particularly in the realm of Special Education services and scheduling. Principals described the creation of tailored schedules grouping children with similar needs, allowing Special Education teachers to provide personalized one-on-one support. One of the four confirmed,

We created a schedule where children of similar needs were combined so special education teachers could work directly with them one-on-one. We then had to reconstruct the school day in terms of extra help sessions on Fridays; adapting schedules and educational strategies in response to varied learning requirements became critical.

Adapting educational strategies and reconstructing the school day has become imperative to meet the varied learning requirements imposed by the crisis.

The crisis forced educators to confront their limits, both personally and professionally. This newfound awareness has prompted educators to acknowledge the toll the crisis has taken on them, with some making the difficult decision to leave. The importance of self-care and recognizing personal boundaries has become paramount, underscoring the need for educators to prioritize their well-being amidst the challenges they face.

Recognition of Limits and the Need for Self-Care: The crisis led educators to recognize their personal and professional boundaries: “We learned we could adapt and survive, while some made decisions to leave.” This acknowledgement highlights both its toll on them as educators as well as the necessity of taking proper care of themselves during times of trouble.

Learning. Following the height of the crisis, school principals engaged in reflective practices to distill valuable lessons, underscoring the importance of collaboration, adaptability, resilience, and the acknowledgment of personal limitations. This introspective period prompted a shift in professional development priorities, redirecting focus towards leading instruction during times of distress, exploring innovative learning approaches, and prioritizing mental health.

The recognition of the critical need for mental health and social-emotional learning support emerged prominently among principals. Understanding the impact of the crisis on the well-being of both students and staff, educators prioritized fostering an environment that addressed not only academic needs but also the emotional and psychological aspects of the educational community. Self-care and work-life balance were identified as essential components to navigate the challenges posed by these trying times.

Participants delved into the spiritual and reflective experiences of principals during the pandemic, revealing a profound engagement with soul-searching, the emergence of new leadership styles, and an increased focus on equity. During this time of deep learning, principals felt intensely engaged with their humanity and limitations as leaders. Although this could be easily interpreted as a vulnerability, this did not seem in line with their view on learning from the pandemic. There was simply an understanding among the participants that immediate solutions are not always required. As one of the participants suggested, the pandemic taught them “to manage problem-solving and manage people in such a way that doesn’t require you to give an instantaneous answer.” This reflected a more measured and reflective approach to leadership and decision-making.

Equity work and diversity became focal points for reflective practice, with one principal expressing the difficulty of discussions around diversity and equity yet acknowledging the necessity of introspection to address these issues within the school community. One principal in the study asserted, “This was by far the hardest equity work we have done. These were difficult meetings at times when discussing diversity and equity. But then again, what does that look like for students?” Another principal shared, “The pandemic really exposed inequities... as a new leader and trying to navigate my way through that. That was very challenging, but now I think I have become stronger.”

Adversity served as a source of developing her strength, sharing how navigating through the challenges of the pandemic led to personal and professional growth. This demonstrated a collective internal journey that led these four principals to personal and professional advancement.

Adversity, disappointment, and sustainability were also minor subthemes that emerged during the participants reflections on personal and professional growth and spiritual development. One participant disclosed, “I was very dismayed to hear that some students did not receive at least equal levels of instruction. This has prompted us to build more sustainable programs. This has always been key for us, but the pandemic really drove the need home for us.”

The principals emphasized the need for sustainable solutions while expressing dismay at disparities in educational delivery. This acknowledgment reinforced the commitment to building enduring programs that ensure equal levels of instruction for all students. The intersection of legislation and cultural considerations was also highlighted during this reflective period. Principals recognized the opportunity presented by the crisis to evaluate curriculum and teaching methods in alignment with new state laws promoting equity. This dual commitment to legislative compliance and cultural responsiveness showcased a comprehensive approach to addressing the evolving educational landscape.

Need for New Policies. One of the subthemes related to recovery and learning was the realization that new or emerging policies had to be developed or adjusted to address the pandemic’s unique challenges and ensure schools’ effective functioning. This important subtheme illustrates that principals navigated a crisis by creating new policies, using technology effectively, maintaining regular and open communication channels with their schools’ staff and stakeholders, and adapting quickly changing situations to ensure the effective operation of schools. Principals overall reflected on the crisis as an opportunity for learning in this area and framed policy lessons they learned through the crisis with themes of collaboration, adaptability, resilience, and acknowledgment of one’s limits being central themes of discussion. One major area they recognized was in the domain of policymaking. They addressed needed policies in the area of engaging stakeholders, providing for developed crisis management, allowing for more adaptability in decision making, addressing inequities, and framing professional development and preparation programs in a new or enhanced light. Professional development and preparation policies, in their collective opinion, should address mental health and social emotional well-being, dealing with trauma, and support for teachers and other frontline staff.

In terms of stakeholder engagement, they saw a need to explore ways that collaboration and support. As one principal stated, “We learned a great deal by leaning on each other.” Here “each other” referred to everyone—other principals, teachers, support staff, and community members, including parents. This highlighted how much collaboration is required during a crisis situation. Similarly, their experiences revealed to them that they needed more effective crisis management policies in place. Another principal shared, “Now I understand more things related to this crisis, so I feel confident about leading in others.” The participants in this study felt that stakeholder engagement played an essential role in working to influence policy in communication and crisis management further, acknowledging their dependence on outside sources for support and advocating for themselves.

Policy development also occurred in terms of equity awareness. The pandemic exposed the inequalities between communities in a way, unlike planned efforts. As one principal noted,

“The pandemic really exposed disparities. I think, overall, I have gained strength from my increased awareness.” Overall, principals stated that they all emerged from the pandemic with a stronger understanding of the various challenges students faced during this crisis. School leaders often had to respond in nimble and creative ways to address these disparities during the pandemic. For example, school districts implemented tailored programs addressing disparities in technology availability, ensuring all students had access to remote learning capabilities. Moreover, collaborative efforts were forged with community organizations to provide additional resources and support for marginalized students, reflecting a concerted commitment to creating a more inclusive and equitable educational landscape. Given the financial limitations that many households experienced during lockdowns, schools had to, as one principal quoted, “become all things to all.”

Throughout the crisis, principals worked diligently to actively engage in professional development (PD) efforts both formally and informally, focus on areas of concern, including leading instruction during times of stress and distress, explore novel learning and leadership approaches, and prioritize the mental health of stakeholders. They also emphasized that PD and preparation of leader in regard to crisis leadership and management should be an integral part of the professional community of the schools and perhaps even university preparation programs. These principals also learned how to cope better under pressure and make wiser decisions. At least three of the four participants referred to having developed personal resilience or ability to cope with stressful situations due to their pandemic leadership experience.

Discussion

The experiences of school principals during the COVID-19 pandemic elucidate the intricate interplay between leadership adaptation and educational challenges. In response to the pandemic, principals were compelled to pivot from a primary focus on instructional leadership to encompassing crisis management, as delineated by the Wooten and James (2008) Crisis Management Life Cycle. Initially, principals exercised signal detection, acknowledging the looming crisis, which necessitated a pre-emptive transition to remote instruction coupled with the enactment of health directives to mitigate inequities.

These leaders adjusted their approaches to meet the demands of crisis containment and damage control, endeavoring to preserve community ties, bolster mental health, and uphold decisive resilience. Their stories reflect the crisis’s singular demands, emphasizing the need for leadership that is both adaptable and compassionate—qualities pivotal to the Wooten and James model’s prevention and preparation phase. Each principal’s distinct narrative enriches our comprehension of the pandemic’s ramifications on educational systems, paralleling the business recovery stage as they aimed to maintain academic continuity amid obstacles.

The pandemic has underscored the essence of all-encompassing readiness in school leaders, a principle that permeates the Crisis Management Life Cycle. The combination of technical understanding and skilled crisis navigation exhibited may guide future strategic planning, as suggested in the learning phase of the Wooten and James framework. Principals’ responses illuminated their improved crisis navigation capabilities, community rapport, and communication strategies; the narratives stressed the virtues of agility and the cultivation of

resilience, insights that are congruent with the full breadth of the crisis management paradigm as outlined by Green (2020).

Impact of Pandemic on Leadership Practice

The COVID-19 pandemic necessitated a dramatic transformation of leadership practice. Principals reported moderate levels of preparedness prior to the crisis. The preparedness contrasted totally with real-time challenges presented by unfolding crises; consequently, established instructional practices shifted into adaptive crisis management strategies as leaders grappled with unfolding challenges as soon as they arose (Smith & Riley 2021). This shift echoes extant literature that holds crisis as an impetus for change (Smith & Riley 2021). This evolution in practice corresponds with literature that describes the crisis as an impetus for change (Smith & Riley 2021).

Instructional Leadership during COVID-19

During the pandemic, instructional leadership took on new dimensions. Quantitative findings indicated an expansion in methods used by principals to deliver instruction: traditional face-to-face engagement gave way to virtual platforms, and increased allocations were made for digital infrastructure compared with face-to-face contact – further evidence of adaptive nature of leadership (Martin & Bolliger, 2021). This shift illustrated adaptive nature of instructional leadership during crisis periods while echoing research that highlights online learning environments (Martin & Bolliger, 2021).

Reimagining Decision Making for Resource Allocation

Principals were forced to reconsider their approach to decision-making during crises, especially regarding resource allocation. Quantitative data indicated an upsurge in decision-making activities during this period, and qualitative insights pointed to more democratic and consultative processes as a response. This adaptation allowed schools to meet urgent needs such as providing technology access for remote learning or supporting students with special needs, further contributing to discussions surrounding leadership adaptability during crises (Johnson & Jones 2021).

Educational Equity and COVID-19 Pandemic

One key finding from both quantitative and qualitative data was its impact on educational equity. Principals reported an increase in preexisting inequities due to pandemic infection and identified specific strategies needed to support marginalized groups (Lopez & Donovan 2020). This finding aligns with advocacy and discussions around the pandemic's disproportionate effect on vulnerable populations (Lopez & Donovan 2020). Vulnerable were more impacted.

In summary, the COVID-19 Crisis has been an eye-opening experience for educational leadership. It demonstrated the need and value of flexible decision-making that prioritized equity. Furthermore, these findings contribute to our growing body of knowledge regarding crisis

leadership as a basis for creating robust leadership strategies in response to future crises, especially in school leadership. The crisis exposed a reality of lack of preparedness as discussed in Crisis Management Life Cycle.

Significance and Conclusion

Therefore, this study aimed to better understand how principals confronted and contended with educational discontinuity and Crisis introduced by the COVID19 pandemic (d'Orville, 2020; Harris, 2020; Harris & Jones, 2020; Müller & Goldenberg, 2020; Sahlberg, 2020; Zhao, 2020). Researchers used Wooten and James (2008) framework to understand this phenomenon in Delaware. The study explored school principals' social, managerial, and moral concern in equitable and ethical decision making not typically encountered in the past (Escotet, 2020; Harris, 2020; Netolicky, 2020). The study centers to explain school principals' leadership behavior and guide practitioners in practical applications in controlling or managing situations such as those created by a global pandemic, or guide scholars and practitioners alike in providing a perspective or stance to be taken toward data relating to such a pandemic.

Given the critical changes to instructional practices and numerous disruptions due to the COVID19 Crisis, school leaders had to reconsider their praxis as they interact with students and stakeholders. Not only have these disruptions caused fundamental shifts in the meaning of school culture and climate, but the interruptions also present new concerns for leaders of schools and districts for student success and achievement. No longer being regularly present in the classroom or in the school setting many students became disconnected from needed resources—e.g., free and reduced lunches, internet access, technology, one-on-one interventions, IEP accommodations, socio-emotional development, mental health counseling, school as a safe place, etc. However, this discontinuity also provided school leaders an opportunity to reflect on existing inequities and inconsistencies that have existed in their schools. Working toward a theory of equitable and ethical praxis in times of disruption holds the potential to inform these concerns.

Conflict of Interest

We hereby declare that we have no financial or personal relationships with other people or organizations that could inappropriately influence or bias our work submitted to this journal. This manuscript is composed of original content that has not been published elsewhere, and all sources used are properly disclosed. No external funding was received for the research presented in this manuscript.

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Appendix A

Crisis Leadership Study Tools

Crisis Leadership Preparedness, Competencies, and Practice Survey (PRCPS)

Section A. Demographics Questions

Please provide us with the following demographic information.

Select the typology that best describes your school:

Rural Suburban Urban

Select the socio-economic status percentage that best describes your school:

0 - 24% Economically Disadvantaged Students

25% - 49% Economically Disadvantaged Students

50% - 74% Economically Disadvantaged Students

75% - 100% Economically Disadvantaged Students

Gender

Please Identify Your Gender

Male

Female

Other

Race

Please Identify Your Race

White Non-Hispanic

White Hispanic

Black or African American

Asian

American Indian or Alaska Native

Native Hawaiian or Other Pacific Islander

Education Level

Bachelor's Degree,

Master's Degree

Doctoral Degree

Other (Please specify)

Years of Experience as School Leader/Principal

1 Year or Less

2-5 Years

6-10 Years

11-15 years

15+ years

Years of Experience in Education

5 or Less

6-10 Years

11-15 Years

15-20 years

21+ years

Competencies and Practice Survey Questions

Please rate your level of agreement with the following statements (Strongly agree=5, Somewhat agree =4, Neither agree nor disagree =3, Somewhat disagree =2, Strongly disagree=1)

Crisis Analysis/Preparedness and COVID-19

1. My school always has a functional crisis management plan that can be immediately activated in crisis situations.
2. We regularly participate in professional development opportunities for leaders, teachers and staff on crisis management.
3. I believe that we had adequate academic and/or professional preparation to lead during the Crisis.
4. We always have recourses allotted for crisis situations.
5. My school is always prepared for a crisis including one caused by COVID-19.

Communication

1. We had a functional communication plan and guidelines that helped/is helping us remain connected to all our stakeholders during COVID-19 Crisis.
2. We were/are able to establish systems of communication with a mix of strategies to reach different constituencies, especially during response and recovery from COVID-19.
3. My leadership team, including me, developed/demonstrated skills like emotional control and empathy prior to and during the Crisis.

Instructional Leadership

1. Comprehensive distance/virtual learning plans in place
2. Adequate training of alternative technologies
3. Adequate material, human, and technological resources for students, teachers, and other stakeholders.
4. Overall, we were able to provide adequate instructional materials and practices in place
5. We were/are able to achieve highest possible student learning during the COVID-19 Crisis.

Responses

1. We were/can meet each student's learning needs during the Crisis.

2. We were/can continue necessary schooling related services including counseling, food, and access to digital technology.
3. We were/can keep our students and their families safe.
4. We were/are able to comfort the students/families/staff who experienced COVID-19 related tragedies in their family/community.
5. We were/can disseminate trustworthy information about the COVID-19 Crisis.

Learning/Opportunities

- A. I believe that professional standards for educational leaders should include a distinct section for “crisis management cycle” which includes assessment or mitigation, prevention, preparedness, response, recovery, and learning
- B. Crisis management should be more explicitly incorporated into educational leaders’ preparation experiences.
- C. Crisis management should be a core part of schools ongoing professional development program.
- D. There should be professional development opportunities or forums for school leaders where principals/leaders can share their crisis management experiences.
- E. Principals and leaders require crisis leadership support services.

Additional Comments (open-ended section to elaborate on any of the questions from the survey)

Interview Participation

Are you willing to participate in a 30-minute one-on-one interview to elaborate on your responses?

Interview Questions

Crisis Leadership Preparedness, Competencies, and Practice Interview Questions

1. Please introduce yourself.
2. In one word to a sentence, how do you recall or name the crisis faced by you as a school leader?
3. What is your present state of feeling about COVID-19 related crisis? Where are you now?
4. Were you prepared for this? In what ways were you prepared and in what ways were you not?
5. Briefly explain how did you initially respond to this crisis?
6. How do you see yourself as a school leader today as a result of leading your school through this crisis? What impact did (is) the COVID-19 pandemic have in your leadership practice?
7. How do you evaluate your role as an instructional leader today?
8. What processes/approaches have you utilized in leading instruction during this crisis?
9. How did you mitigate the multiple facets of disruptions on student learning?
10. What did you do to allocate equitable school resources during pandemic?
11. Please share some of the crucial decisions that you made on redistribution of resources due to the crisis.
12. What lessons did you learn regarding serving students, schools, and communities during the COVID-19 pandemic?
13. How did/did not the pandemic impact your understanding of the principalship (i.e., “role of the principal”)?
14. How is your perception about educational equity influenced by COVID-19 pandemic?
15. What suggestions do you have for principal preparation in academic/professional programs and professional development to prepare leaders for unprecedented crises like COVID-19?