K-12 school leadership perspectives from the COVID-19 pandemic

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Abstract
The 2020 global pandemic ushered in an unparalleled call to dramatically shift the focus of how school administrators responded to the COVID-19 pandemic. The transition needed to ensure the continuity of instruction in a distance learning environment demanded a new level of urgency. The long-term impact of COVID-19 presents new leadership challenges and continues to amplify the need for change during the global health crisis. This study aimed to understand the preparedness of school administrators in the United States of America as they responded to the worldwide pandemic and their perceived opportunities and challenges during the COVID-19 pandemic. This case study collected data from a survey and interviews to investigate how school leaders rose to the occasion while working through unprecedented challenges. The findings revealed several new opportunities: visionary leadership, resources to address disparities, increased community partnerships, and innovative instructional models. The challenges faced by school leaders encompassed the digital divide, staffing shortages, online instructional practices, communication with families, and staff professional development. This study offers specific implications for school leaders and educational leadership preparation programs.

Keywords
school leadership, COVID-19 pandemic, digital equity, leadership preparedness

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K-12 school leadership challenges and COVID-19

The global pandemic of COVID-19 tested the leadership traits and behaviors of school administrators in K-12 settings. Although K-12 school leaders are no strangers to managing crises (Allen et al., 2020; Mutch, 2015), dealing with government shutdowns and repeated school closures on a global scale in modern history presented unprecedented hurdles in school governance and leadership (United Nations, 2020). Recent studies indicated that K-12 school leaders faced a multitude of impediments, including but not limited to staff burnout, safe school reopening, transition to online learning, widening equity gap, and emotional health of students. (Medwetz et al., 2021; Parveen et al., 2022; Stone-Johnson and Miles Weiner, 2020). Ensuring equitable distribution of resources and support became the top priority of many schools. On the other hand, the crises have also led school leaders and stakeholders to introduce innovative educational practices such as hybrid learning, take-home care packages, and family Wi-Fi services (Harris and Jones, 2020). Furthermore, many school leaders continued school functions through effective collaboration and communication over the networks (Azorin et al., 2020; Harris, 2016, 2022).

With a high percentage of school leaders expressing a gap in their knowledge and preparedness for school reopening, they need to understand further the issues and challenges they face (NAESP, 2020). Examining school leaders’ perceptions can help us understand factors leading to the successes or failures of school management during the COVID-19 pandemic. Their insights can also help all stakeholders develop effective strategies to navigate the complexity of post-pandemic school governance.

According to Collins dictionary, “An opportunity is a situation in which it is possible for you to do something that you want to do” (Collins Dictionary, 2022). On the other hand, a challenge is “something new and difficult which requires great effort and determination” (Collins Dictionary, 2022). The purpose of this study was to examine how school leaders in K-12 schools responded to the opportunities (e.g., favorable circumstances, new opening, a chance for progress or advancement) and challenges (e.g., barriers, problems, obstacles, difficulties, or hurdles) to a global health crisis. Additionally, the study aimed to provide recommendations for leadership preparation programs. To examine leadership preparedness, the primary research questions were:

- What is the school leaders’ perceived preparedness for providing equitable resources to students during the pandemic?
- What are the opportunities and challenges for schools as a result of the pandemic?

Given the unpredictable nature of this pandemic, these investigative questions recommend the beginning of a myriad of concerns related to the new leadership dispositions in the 21st century.

Literature review

The pandemic hit K-12 schools hard in many countries and forced teachers to adopt online instruction to minimize the negative impact of school closures on student learning (Wang, 2020). According to McLeod and Dulsky (2021), “most school systems were caught flatfooted, although many locations had several months warning. School boards and administrators dithered about what to do. Government support for schools and families was ambiguous” (p. 1). The literature review focuses on challenges faced by K-12 schools and leaders.
K-12 schools challenges

Recent studies on the challenges of COVID-19 faced by K-12 schools in the United States and around the globe have shown some common themes: Massive transition to online learning (Ferdig et al., 2020; Shamir-Inbal and Blau, 2021), unequal access to technological resources for learning (Liu, 2021; NCES, 2021), and rapid responses to constant changes and crises (Babbar and Gupta, 2021; Beauchamp et al., 2021; Harris and Jones, 2020). The pandemic upended the status quo in all aspects of K-12 education. Many governments issued lockdowns in their cities or countries during the pandemic (Babbar and Gupta, 2021). School leaders and educators were expected to pivot to online instruction to minimize the disruption of student learning. While many educators found innovative ways to connect with students (Ferdig et al., 2020), the majority of schools with fewer resources were under-prepared during the rapid transition to online learning. They lacked sufficient pedagogical and technological knowledge to function well (Hubbard et al., 2020; Shamir-Inbal and Blau, 2021).

Unequal access to the Internet and digital devices at home has been a long-existing issue in K-12 education (Liu, 2021; NCES, 2021). Although the pandemic accelerated the acquisition of hardware and software for students in schools, many K-12 students, especially English Language Learners and special education students, did not have access to broadband services (Gao and Hayes, 2021) or effective online instruction (García and Weiss, 2020). Numerous teachers felt ill-prepared to teach online (Pekel et al., 2020), and most students suffered emotionally, socially, and academically from the fallout (Duckworth et al., 2021). Furthermore, school administrators faced the constant challenges of ever-changing school policies, supporting staff shortages and mental health, and managing daily crises related to students, families, staff, and the communities (Beauchamp et al., 2021; Harris and Jones, 2020). The following section reviews specific issues faced by school leaders in the United States and International schools.

Additional studies on the impact and effects of the global pandemic cited an interruption of formal education for students (Chang-Bacon, 2021). For example, Chang-Bacon’s (2021) study focused on Students with Interrupted Formal Education (SIFE) and noted that academic and social disparities existed long before the COVID-19 pandemic. However, the return to routine educational practices remained challenging for educational leaders.

Specific leadership challenges

In the United States, decisions about disseminating federal dollars threatened to impact school budgets and special education funding. Joining forces to survey school superintendents, the School Superintendents Association (AASA) and the Association of Educational Service Agencies (AESA) found that one of the most concerning issues centered on the ability of school districts to meet the needs of students receiving special education services during the current global pandemic (AASA, 2020). According to the study, “almost four out of ten ESAs and three out of 10 school districts anticipated at least one due process complaint related to the inability to meet requirements in students with disabilities’ individualized education programs (IEPs) during the pandemic” (AASA, 2020: p. 9). Additionally, the AASA (2020) survey revealed that 54% predicted complaints based on the child not receiving the same quantity of specialized instructional support services as indicated in the child’s Individual Education Plan (IEP); 34% felt their level of concern was growing, 30% predicted they would have to find the resources to respond to at least five due process complaints; 29% reported they felt very worried special education litigation would consume much of their time and resources in the 2020–2021 school year, and lastly, 24% planned to budget $50,000 or more for
each special education litigation (AASA, 2020). Although this survey focused on special education issues, all school administrators are responsible for implementing a child’s IEP with fidelity and integrity. These data points underscored the additional leadership concerns school administrators needed to address during unprecedented and unpredictable times.

Furthermore, school leaders needed to recognize staff needs and allocate resources to meet their rising concerns. In a survey of 13,077 Minnesota teachers, support professionals, and administrators, Pekel et al. (2020) identified the four key findings of the educators’ experiences during the early stage of the COVID-19 pandemic: Relationships matter, technology (e.g., connectivity, access, staff development, etc.) is essential, emotional health of teachers needs attention, and teachers embrace new learning opportunities. Educators recognized both challenges and promises in the K-12 learning environments. The primary concern was the ability to socially connect with students during online learning and ensure equity in the distribution of resources.

A study conducted before the opening of the 2020–2021 school year by the National Association of Elementary School Principals (NAESP, 2020) indicated a dramatic shift in how school principals viewed their ability to reopen schools safely, worked with key stakeholders in the decision-making process, and decided how to allocate the federal funds equitably. A total of 798 school administrators from all 50 states responded to critical questions focusing on school safety for students and teachers, funding for necessary resources, a voice in decision-making, learning loss among students, and common concerns among educators. Alarming trends from the NAESP data revealed that only 22% of the respondents were somewhat likely to prepare to protect students and staff from the transmission of the coronavirus if in-person classes resume, 62% have a reopening plan for the forthcoming semester, 17% were not part of the decision-making process regarding school reopening, and only 33% were knowledgeable about school reopening (NAESP, 2020). This national survey data signaled a fundamental change in how principals view their leadership in a pandemic.

**Theoretical framework**

Recent research on leadership during disruptive times underscored critical areas that require special attention, including student mental health, staff morale, leadership capability, and the digital divide (Harris and Jones, 2020; Parveen et al., 2022). To understand how school leaders build capacities to effect changes during the COVID-19 pandemic, the theoretical frameworks applied to this research study consist of four essential concepts: (a) Trauma-informed approaches to leadership, (b) transformative learning theory, (c) leadership through crisis management, and (d) digital equity. According to Sherman (2021), leaders in a pandemic and post-pandemic world must adopt a trauma-informed approach in their leadership journey. Therefore, we used a trauma-informed leadership lens to understand the underlying issues related to leadership. According to Goldsmith (2007), leaders must rely on a four-prong trauma-informed approach to develop practical interventions designed to address the consequences of trauma and facilitate healing. In the U.S., the Centers for Disease Control and Prevention (CDC) is the federal agency created to protect the public’s health by using science-based and data-driven practices to monitor pervasive and chronic health problems in the U.S. The four components include a leader who can realize the trauma’s impact, recognize the trauma’s symptoms, respond appropriately to CDC, federal, state, and local policies, and finally, a leader who seeks to reduce the possibility of re-traumatization (Sherman, 2021). Although the trauma-informed approach is grounded in a healthcare model, it can be easily related to school leaders.

Transformative theories serve as the second framework for this study. According to Mezirow (2003), “transformative learning is learning that transforms problematic frames of reference—sets
of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets)—to make them more inclusive, discriminating, open, reflective, and emotionally able to change” (p. 58–59). School administrators may use Mezirow’s (2000) term, “disorienting dilemma” to describe the current pandemic. This dilemma disrupted the routine and balance of the academic experiences for students and staff. Managing new responsibilities related to the global pandemic caused school leaders to reflect and reevaluate their decisions in a new context. Northouse (2019) recognized the leadership paradigm, which focused on transformational leadership. Transformational leaders influence, inspire and motivate followers to exceed the organization’s expectations. In an era of unwritten rules, ambiguous implementation of policies, and new guidelines from the CDC, school administrators must recognize the importance of motivating and inspiring followers to implement safety guidelines.

An examination of school leadership after the 2010/2011 earthquakes in New Zealand led Mutch (2015) to develop a conceptual framework to identify the following three key factors influencing leaders in a crisis: dispositional, relational, and situational. Dispositional factors refer to “what behaviors leaders bring to the event from their background, personal qualities, experiences, values, beliefs, personality traits, areas expertise, and conceptions of leadership” (p. 190). Additionally, Mutch (2015) defined relational factors as “the ways in which leaders offer a unifying vision and develop a sense of community within the organization” (p. 190). Building trust, loyalty, and fostering collaboration also serve as defining features of relational factors which influence leadership. Situational factors can influence school leaders to make timely decisions, demonstrate flexibility, navigate, assess, and respond in a culturally sensitive manner in times of crisis (Mutch, 2015).

Furthermore, Smith and Riley (2012), in a review of crisis management literature, attempted to understand the nature of the leadership necessary for schools to deal with successfully—and learn from—the crises they inevitably will encounter. Additionally, leadership in times of crisis depends on leaders who are empathetic, can manage events, and are perceptive to the concerns of the members of their school community (Smith and Riley, 2012). The abrupt shift to online teaching and learning and the uncertainties related to the pandemic dramatically impacted the resources available to leaders and their ability to establish positive accountability while recognizing the impact of stress on employees. Flexibility and effective crisis communication are key leadership competencies as leaders manage and support employees (Dirani et al., 2020; McGuinness, 2020; Ramos-Pla et al., 2021).

The 2020 pandemic also uncovered an undeniable digital divide in schools (Liu, 2021). One of the most compelling areas of concern centered on equity in digital access for all students. The digital equity framework (Fulton and Sibley, 2003:15) sheds light on the need for novice and veteran school administrators to mitigate the institutional causes of disparities in equitable access to students’ learning in the global pandemic. For learners to fully participate in a fair digital learning environment, Fulton and Sibley suggested four critical components as explained below:

- Access to up-to-date hardware, software, and connectivity;
- Access to meaningful high-quality, and culturally responsive content along with the opportunity to contribute to the knowledge base represented in online content;
- Access to educators who know how to use digital tools and resources effectively;
- Access to systems sustained by leaders with vision and support for change through technology (p. 15).
Learners were at a significant disadvantage when faced with barriers to equitable learning opportunities. To promote quality distance learning, school leaders needed to do more than just provide access to hardware and software. School leaders must also have the vision to provide the infrastructure and support for teaching staff to deliver culturally relevant instruction. Removing barriers to access of all four components was important for students to gain full and equitable participation in educational opportunities. The methodology in this study targeted school leaders from across the United States. We outlined our approach to data collection below.

**Methodology**

This mixed-methods research collected quantitative data from a survey and qualitative data from interviews and responses to the open-ended questions in the survey. Patton (2015) supported using mixed methods to capture statistics and stories. This dynamic approach enabled us to understand the complex nature of leadership in a global pandemic. Specifically, we employed the exploratory case study method to examine leader perceptions of the challenges and opportunities of managing schools during the COVID-19 pandemic. According to Hancock and Algozzine (2017), an exploratory case study “seeks to define research questions of a subsequent study or to determine the feasibility of research procedures. These designs are often a prelude to additional research efforts and involve fieldwork and information collection prior to the definition of the research question” (p. 39). The exploratory case study lays the context for this study so researchers can further refine the research questions and hypotheses for continuing consecutive studies. This approach can provide a holistic account of the phenomenon under investigation (Yin, 2003).

Due to the constraints of contacting participants during the global pandemic, we selected the qualitative method of convenient sampling for selecting participants for the interviews (Creswell and Poth, 2018). Convenience sampling is a collection method based on the accessibility of individuals who met the criteria of this study (Patton, 2015). The criteria for the participants are licensed and practicing school administrators who worked during the COVID-19 pandemic. We conducted this study during the height of the pandemic. Travel to collect data was prohibitive to the researchers according to IRB mandates. This sampling technique provided the researchers with both practical and cost-saving measures.

**Procedures**

First, researchers administered an online survey to school administrators in the United States through professional networks and social media (e.g., American Educational Research Association [AERA], AERA Special Interest Groups [SIG] on Facebook and Twitter, Minnesota Board of School Administrators [BOSA], etc.) between June and August 2020. The target participants represented licensed superintendents, principals, central office leaders, and university faculty in leadership preparation programs. The survey consisted of standard demographic questions (e.g., gender, ethnicity, licensure areas, etc.), 13 closed-ended, and five open-ended questions (see Table 1). Based on the research questions and the digital equity framework, we designed the closed-ended questions to focus on issues related to leadership preparedness in providing access to digital learning content, hardware and software, and competent teachers. The respondents answered the closed-ended questions using a five-point Likert scale, with one as strongly agree and five as strongly disagree.

Additionally, we asked leaders to reflect on the opportunities, challenges, and recommendations for the transition to distance learning during COVID-19 through open-ended questions. From the
Table 1. COVID-19 administrator survey and results from closed-ended questions.

| Survey questions                                                                 | Strongly agree (%) | Agree (%) | Neutral (%) | Disagree (%) | Strongly disagree (%) |
|----------------------------------------------------------------------------------|--------------------|-----------|-------------|--------------|----------------------|
| **Leadership**                                                                  |                    |           |             |              |                      |
| 1. I received adequate technology integration training in my graduate/licensing program. | 9.5%               | 25.3      | 22.1        | 36.8         | 6.3%                 |
| 2. I am confident in my ability to support my teachers in the employment of instructional strategies that support student learning. | 19.1%              | 59.6      | 17          | 4.3          | 0.00%                |
| 3. I am well-prepared to provide leadership during a pandemic.                   | 14.0%              | 50.5      | 23.7        | 10.8         | 1.1%                 |
| 4. My district is well-equipped to serve vulnerable students during COVID-19.     | 5.3%               | 23.4      | 17.0        | 47.9         | 6.4%                 |
| **Teacher professional development**                                            |                    |           |             |              |                      |
| 5. My district provides technology integration professional development for staff. | 29.5%              | 44.2      | 11.6        | 11.6         | 3.2%                 |
| 6. My district provides adequate distance learning professional development for staff. | 9.5%               | 35.8      | 23.2        | 24.2         | 7.4%                 |
| 7. My district expects the teachers to use distant learning during extended breaks/ absences from school (spring break, winter break, illness, snow days, natural disasters, pandemics). | 21.3%              | 29.8      | 21.3        | 19.1         | 8.5%                 |
| 8. My district expects the teachers to provide instruction to students using distance learning during COVID-19. | 60.6%              | 36.2      | 1.1         | 1.1          | 1.1%                 |
| **Hardware/software access**                                                     |                    |           |             |              |                      |
| 9. My district has adequate hardware and software for staff.                     | 31.9%              | 42.6      | 7.4         | 14.9         | 3.2%                 |
| 10. My district has adequate hardware and software for students.                 | 17%                | 42.6      | 11.7        | 26.6         | 2.1%                 |
| 11. My district utilizes adequate learning management System(s) (LMS) to deliver distance learning. | 11.7%              | 40.4      | 24.5        | 19.1         | 4.3%                 |
| **Content access**                                                              |                    |           |             |              |                      |
| 12. My district provides sufficient digital learning content for students.       | 7.4%               | 43.6      | 21.3        | 25.5         | 2.1%                 |
| 13. My district provides sufficient professional development for using culturally relevant digital learning content. | 3.2%               | 17        | 14.9        | 53.2         | 11.7%                |
| **Open-ended questions**                                                        |                    |           |             |              |                      |
| 1. What are the opportunities or what is working well for the district?          |                    |           |             |              |                      |
| 2. What are the challenges faced by the district?                                |                    |           |             |              |                      |
| 3. How does your district reach out to vulnerable students or students with limited access to hardware and software? |                    |           |             |              |                      |
| 4. What advice would you give licensing programs to further develop leadership to leading during a pandemic? |                    |           |             |              |                      |
| 5. Other comments that are not included in the questions.                        |                    |           |             |              |                      |
survey respondents, we conducted one-on-one interviews with nine participants between September and December 2020 using the interview questions in Table 2. Finally, guided by the four theoretical frameworks, we asked school leaders to contemplate their guiding principles to address the needs of vulnerable students, lead changes, manage crises, and improve equity.

Due to the pandemic, we utilized the Zoom videoconferencing system to record all interviews and have them professionally transcribed. The participants reviewed the transcripts for accuracy. The data were analyzed using NVivo, a qualitative data analysis software. Following the constant comparative method (Glaser and Strauss, 1967), we systematically identified the themes by combining coding with analysis. Specifically, we employed the following steps: (1) Analyzed the themes that emerged from each interview, (2) compared the themes from each interview, and (3) compared all themes from all interviews and placed them into meaningful thematic categories.

### Participants

As indicated in Table 3, of the 95 surveyed participants (70.5% women, 27.4% men, 2.1% unspecified), they represented different ethnic backgrounds (69.5% Caucasian, 15.8% African American, 3.2% Hispanic/Latinx, 3.2% Asian/Asian American, 8.5% other), age groups (9.5% younger than 35, 29.5% between 36 and 45, 41.1%, between 46 and 55, 20% older than 56), work experiences (30.1% less than 3 years, 35.5% between 4 and 10 years, 26.9% between 11 and 20, 7.5% more than 21 years), and positions (9.1% superintendent or assistant superintendents, 32.9% principals or assistant principals, 22.7% directors of special education, 35.2% other leaders in the district’s central office or university faculty with admin licensure). Due to the researchers’ affiliations to several professional networks in Minnesota, 60% of the respondents worked in Minnesota, and the rest were from 17 other states, as listed in Figure 1.

For recruiting participants for interviews (see Table 4), we strived to have a balanced representation of school level, position, gender, region, and ethnicity. For the interviews, we recruited

| Table 2. Questions for one-to-one interviews. |
|-----------------------------------------------|
| **Interview questions**                       |
| 1. What are some unintended consequences that you discovered as you started to develop a hybrid model for your students? |
| 2. What staffing concerns do you have as you prepare for the new school year? |
| 3. How do you address equitable practices related to cultural competency? |
| 4. How do you accommodate students who are receiving special education services? |
| 5. What do you do to ensure sufficient professional development opportunities are provided for staff? |
| 6. What do you do to provide equitable access to culturally relevant digital contents to students and staff? |
| 7. What do you do to provide equitable access to hardware and software? |
| 8. What are your guiding principles in managing the change or leading the change in your district, or school during the pandemic? |
| 9. What are your approaches for self-care and life-work balance? |
| 10. What are the major challenges you have seen as a result of this pandemic? |
| 11. How does your district reach out to vulnerable students or students with limited access to hardware and software? |
| 12. What advice would you give licensing programs to further develop leadership to leading during a pandemic? |
| 13. How has your approach to leadership changed as a result of this pandemic? |
nine school leaders (four women and five men) representing different ethnic backgrounds (four African American, one Latinx, and four White) and positions (four principals, two assistant principals, two special education directors, and one associate superintendent). We used aliases to protect the privacy of the interviewees. All interviewees but one was from Minnesota. Each interview lasted between one and 2 h.

Findings

This section discusses the findings from the survey and interviews. To answer the first research question on the perceived preparedness to lead in a pandemic, we examined the responses using the quantitative data from the survey based on the digital equity framework on how ready leaders are to

Table 3. COVID-19 school administrator survey results: Demographic data (N = 95).

| Demographic data          | Woman (70.5%) | Man (27.4%) | Other (2.1%) |
|---------------------------|---------------|-------------|--------------|
| Gender                    |               |             |              |
| Race                      |               |             |              |
| Caucasian                 | 69.5%         | 15.8%       | 3.2%         |
| Black or African American | 15.8%         | 3.2%        | 3.2%         |
| Hispanic or Latinx        | 3.2%          | 3.2%        | 8.5%         |
| Asian                     | 3.2%          | 4.1%        | 20.0%        |
| Experience (in years)     |               |             |              |
| < 3                       | 30.1%         | 35.5%       | 26.9%        |
| 4–10                      | 30.1%         | 35.5%       | 26.9%        |
| 11–20                     | 30.1%         | 35.5%       | 26.9%        |
| > 21+                     | 30.1%         | 35.5%       | 26.9%        |
| Positions                 |               |             |              |
| Superintendents and       | 9.1%          | 32.9%       | 22.7%        |
| assistant                |               |             |              |
| superintendents           |               |             |              |
| Principals and            |               |             |              |
| assistant                 |               |             |              |
| principals                |               |             |              |
| Directors of special      |               |             |              |
| education                 |               |             |              |
| Others                    |               |             |              |
| Others                    |               |             |              |

Figure 1. States of survey respondents (in yellow color).
provide students access to digital content, well-prepared teachers, and hardware/software, as shown in Table 1. The first set of questions in the survey addressed leadership readiness. A slight majority (43.1%) of the respondents disagreed or strongly disagreed that they received adequate technology training in their respective leadership preparation programs. Nevertheless, 78.7% of the leaders felt confident in their ability to prepare staff to support students, and 64.5% felt well-prepared to provide leadership during a pandemic. Noticeably, 54.3% of the leaders did not consider their districts well-equipped to support vulnerable students.

The second category reviewed teacher preparations at the district level. Again, most leaders emphasized the importance of professional development, 73.7% agreed that professional development opportunities on technology integration were provided, 45.3% agreed that distance learning professional development was adequate, and 51.1% agreed that distance learning for extended breaks or emergencies (e.g., snow days) were utilized. The majority (96.8%) of participants also indicated that teachers were expected to provide instruction to students using distance learning during COVID-19.

The third category analyzed hardware and software access. Among the leaders, 74.5% agreed that their districts provided adequate technology for staff, and 59.6% agreed that the technology for students was sufficient. Yet, 28.7% of the leaders did not think their districts provided adequate technology for students. For access to learning management systems (LMS), 52.1% of the leaders agreed, 22.4% disagreed, and 24.5% remained neutral that their districts utilized adequate LMSs to deliver distance learning.

The fourth category examined content access. Half of the respondents (51%) agreed that their district provided sufficient digital learning content for students, yet 27.6% did not agree. Strikingly, 64.9% disagreed that their districts provided adequate professional development for using culturally relevant digital learning content.

The overall means of the survey responses to the closed-ended questions (see Figure 2) confirmed the findings mentioned above. Notably, the top three statements revealed that most
respondents were more confident in their ability to support teachers in deploying instructional strategies to help students, offering technology integration professional development for staff, and providing hardware/software for staff. However, the respondents were less confident in the following areas: Providing sufficient professional development for using culturally relevant digital learning content, having the ability to serve vulnerable students, and receiving adequate training in technology training during their leadership preparation programs. The findings from the survey
indicated a need for school leadership preparation programs to provide more training in utilizing technology and culturally relevant digital resources to support student learning and staff development in online learning.

To answer the second question on the opportunities and challenges faced by the leaders, we examined the responses using qualitative data from the interviews and open-ended questions in the survey to introduce the themes in the following two sections.

### Challenges

Key findings from the qualitative data identified five significant challenges facing school administrators. These challenges include the digital divide, staffing shortages, online instructional practices, communication with significant adults in the lives of children, and staff professional development related to the pandemic (see Table 5). We discuss each significant challenge below.

**Digital divide.** As the Coronavirus Aid, Relief, and Economic Security (CARES) Act (U.S. Department of the Treasury, 2022) found its way to school districts, and district administrators promptly began the arduous and necessary task of distributing the provision of internet services to students, funds received under the CARES Act to facilitate remote student learning and purchasing technology. For example, Ivy, an African American principal of a suburban school, noted:

We still have about 115 students who still do not have their updated technology and that is because it has been hard for us to get information from them or the devices to them. We are trying to give as much opportunity as possible to have families come in and exchange or return broken devices, but people are working two and three jobs, and it has been hard for the last 115 students and their families to get that information.

| Themes of challenges | Description | Interviewees (%) * |
|----------------------|-------------|-------------------|
| 1. Digital divide    | School’s ability to distribute technological resources to all students, connect with parents, and increase the knowledge base for parents who may have limited experience with cloud-based and streaming services. | 6 (67%) |
| 2. Staffing shortages | Managing staff shortages and absences became a new challenge as the pandemic numbers increased. Attrition in special education staff posed a challenge that demanded their immediate attention. | 7 (78%) |
| 3. Online instructional practices | Distinct phases of distance learning: Face-to-face instruction, hybrid model, and the implementation of block schedules | 5 (56%) |
| 4. Communication with family | Decreased and irregular attendance patterns forced administrators to examine new ways to communicate with families. | 5 (56%) |
| 5. Professional development | Introducing new digital platforms to educators and providing training in mental health required a structured approach to staff development. | 6 (65%) |

Common themes shared by number and percentage of interviewees.
Participants overwhelmingly voiced concerns about the inequity in technology distribution. Aida, an associate superintendent, reiterated, “Again, the crisis exposed inequities, and it exposed gaps in the system. So, what are we doing to address those gaps, to address not only learning delays but also, again, the social, emotional aspect?” Throughout this study, the issue of exposing, identifying, and remediating systemic issues of disparities became central to the work of administrators.

**Staffing shortages.** Another theme faced by administrators came under the umbrella of addressing staffing shortages. Managing staff absences is a routine task for school principals. Several principals grappled with the unpredictable nature of the COVID-19 outbreaks. Attendance issues became everyday tasks for school administrators, such as filling daily teacher absences and staff shortages due to COVID-19–related illnesses. Additionally, the attrition of special education teachers and adherence to daily guidelines from the CDC and state health guidelines added to the responsibilities of school leaders. Imez, a special education director, stated:

> We waited very late in the summer before we determined who needed where because we didn’t know where kids were going to be right, and we didn’t know where that staffing level was, so we have some positions that we still have not filled.

As teachers and staff return to school, the probable rise in COVID-19 cases, mask and vaccine mandates, and competition from emerging online programs may continue to be unavoidable factors in confronting staff shortages.

**Online instructional practices.** Once administrators found viable solutions to address staffing shortages, online instructional practices proved to be the next hurdle for them to overcome. They implemented research-based online instructional strategies. Another administrator, Raymond, an elementary school administrator, voiced his frustration by adding:

> So, there are unintended structural things that happened in the design and in the model. But even most of those are just factors you couldn’t control like; we allow families to make a selection to move between models. So, they decided to start in hybrid, and now I want to go to distance learning. Well, those permutations can create some really big unintended consequences in the schedule. But I don’t know if there’s any way around that because the executive order says we were supposed to honor families that want to move from hybrid to distance learning.

The general sentiment from the participants also pointed out the challenges in the quality assurance of online teaching and the hurdles to providing effective online teaching strategies for all staff. In time, the administrators who participated in this present study recognized effective teachers were crucial factors in the success of students.

**Communication with families.** School leaders recognized the steep learning curves of families in the transition to distance learning. Adam, a K-5 principal, shared his concerns by stating:

> It is very difficult because, not only do we have to deal with, you know, reminding teachers too, but we also have to deal with a type of parent and people live in our area that in some cases do not agree with our approach to how we’re dealing with a pandemic.
Although communication with families was challenging, teachers and administrators eventually found ways to connect with families. In addition, participants reported that teachers sought other means to communicate with students through emails, chat, and videoconferencing. These acts of intentional outreach efforts served as the catalyst for improving the lines of communication between the school and families.

**Leveraging staff development trainings.** Teachers struggled with learning how to learn new online instructional strategies. School administrators spent countless hours determining how to design classrooms to meet the appropriate measurements for social distancing. The implementation of distance learning platforms required an innovative approach to learning. Our disaggregated data summed up the following statement by Aida, a district administrator:

> It’s really trying to embed additional time to give them the support and those of us at the district level coming in and helping in the development of the lesson plans, so they have the scope and sequence and a template of a lesson plan that either (a) they can use or (b) they can adapt and put their own flavor as you will, or spin on to that lesson because you don’t want to take away their autonomy. So, it’s really just trying to navigate through that.

Administrators reported they engaged teachers and staff in time-sensitive discussions such as adjusting to the different phases of the implementation of distance learning, determining how to transition from face-to-face instruction to a hybrid model, providing block scheduling, offering student choices of other modalities through instructional models, and delivering multiple ways to engage students in remote settings. In addition, it is vital to sustain positive environments while paying close attention to the mental health needs of school personnel and students. Being transparent and reassuring about the uncertainty of school closures and conditions for returning to school took center stage for administrators.

**Opportunities**

Key findings from the qualitative data identified four key areas: leadership, opportunities to address disparities in access to technology, increasing community-based partnerships, and innovative instructional models (Table 6).

**Redefining leadership.** The importance of being innovative and transformative, taking quick action, predicting obstacles, implementing viable solutions, and forward-thinking became unexpected existential discoveries for school administrators. Supporting school board members in times of high stress as they grappled with time-sensitive issues became an essential leadership skill during the pandemic. Overwhelmed by the change in leadership roles, Pierce, a middle school principal, shared:

> It’s also the distributed leadership … power is not like a piece of the pie. When you take a piece out and give it to someone, you don’t lose that piece; you’re actually amplifying the amount of power that’s out there. And so, by giving our staff members the opportunities to have those leadership experiences, we’re not only getting people what they need. But we’re also developing leaders within our building.
The ability to leverage their capacity to serve as high-profile agents of change served as a catalyst for school administrators to examine their leadership roles and to assess the importance of relevant professional development for teachers and ancillary staff.

Addressing disparities in access to technology. Another critical theme illustrated the need to address equitable technology access for K-12 students. Although many school districts have one-to-one computing policies, many students still lack access to adequate access at home. Through federal and state funding, many districts aggressively ramped up technology distribution and WI-FI access to students in need. As one district administrator Aida commented:

What we started doing was it goes back to those engagement recordings and having them call a hotline. So, we have a hotline established, and we do zoom with them. But if you call me on my cell phone and you’re telling me whether English or Spanish, you know that the iPads are not working. I’m going to talk you through it. And guess what, if it’s still not working. I’m going to send somebody to your house, and we’re going to show you how to access it.

Overall, school administrators quickly pivoted to respond to the unique needs of their school community. This singular act of transformational leadership opened a new chapter in closing the digital divide. Fulton and Sibley (2003) acknowledged the importance of ensuring equitable distribution of digital resources. Adhering to this mandate enables school districts to make permanent policy changes in their school to advance digital equity for all students.

Increasing community-based partnerships. Increased school district relationships with the community served as another strength for participants. Many districts sought new opportunities to collaborate
with internet service providers to provide Wi-Fi access (e.g., hot spots). They worked with community partners to supply food and other essential supplies to families in need. This statement by Imez captured the consensus among participants in this present study:

We worked with our community Wi-Fi providers, and we were able to add hotspots throughout our community working together, putting them on top of water towers or water pump stations or wherever it might be or in our buses and moving them and providing that equity in that way.

Distance learning forced school districts to examine existing communication practices with families and students. As a result, central office teams and building leaders implemented multiple communication channels, including social media, websites, text messages, automated calls, etc.

Innovating instructional models. The urgency and agency of technology integration and digital resource utilization became central agents of switching to distance learning delivery mode. Participants overwhelmingly cited the increase of staff willing to assist students in achieving the goal of leveling access to technology for all students. These bold measures created a space for innovative instructional models. One special education director, Cecilia, a special education director, commented:

So, we’re doing, we’re doing a lot of professional development in the same way that we’re doing instruction for students. So, we’re doing both the asynchronous and synchronous sessions, but where we test everything, and then we make everything available on a digital platform so that staff is kind of able to access that on their own time, and then they have it as a reference. So, in the same way, it’s nice for kids. So, like, again, there are a few positive things about this pandemic, and one of them is kids who are missing school now have access to the instruction that they miss.

Increasing staff capacity and motivating staff during periods of uncertainty became crucial factors for school administrators to address. In addition, as remote learning became the primary mode of instruction, many districts found it necessary to increase the capacity and collaboration among the teaching staff.

Based on the reality of the challenges and opportunities that came with the pandemic, school leaders weighed the risks and benefits of how to respond to this global crisis. Overwhelmingly, the participants recognized oblique fault lines in the system. As a result, administrators leaned into new opportunities to address the digital gap and embraced innovative practices to improve professional development for teachers.

Analysis

Using the theoretical frameworks of trauma-informed approaches to leadership (Sherman, 2021), transformative learning (Mezirow, 2003), leadership through crisis management (Smith and Riley, 2012), and the digital equity framework (Fulton and Sibley, 2003), we coded significant interview data. School leaders used trauma-informed practices as they redefined the school day, adjusted to student needs in an online learning environment, responded to the interruption of time-honored rituals and routines, and the social-emotional needs of faculty, staff, and students. The crisis management lens allowed us to examine how school administrators responded to staffing shortages and address the urgent call to revamp staff development opportunities. The transformative frame required principals and central office leaders to find effective ways to communicate with families,
foster new relationships with the community, and skillfully implement CDC guidelines which may have been difficult for staff members to comply with. Finally, the digital equity framework examined equitable access to learning resources (e.g., hardware and software) and competent teachers who could pivot to hybrid teaching successfully.

These findings suggested that the role and responsibilities of school administrators continue to be shaped by the current healthcare crisis. There may be several possible explanations for the findings. First, as new variants of the virus are revealed to the public, school leaders must interpret the impact of new guidelines and make critical decisions based on the needs of their school communities. Second, reimagining a new normal creates unique challenges as well as opportunities to implement innovative policies (Supovitz and D’Auria, 2020).

As principals and central office staff attempt to solve daily staff shortages, they discovered the power of empathetic leadership and trauma-informed practices to allow staff members to assume additional job duties outside their traditional roles (Goldsmith, 2007; Sherman, 2021). Leading in times of crisis calls for a leader who exemplifies the benefits of transformational leadership. According to Northouse (2019), transformational leadership emphasizes that leaders be attentive to the concerns of their followers, empathize with them, and help them to develop their full personal capacities. Effective leadership skills and a flexible approach to school personnel management are essential tools for school administrators to possess in turbulent and unpredictable times in light of a global pandemic. The attention to crisis management as a critical function of the school day dramatically altered the perception of what it means to be a school leader (Hubbard et al., 2020; Kaul et al., 2020; Riley and Smith, 2012). A new awareness of the depth and complex nature of school leadership forced administrative staff to collaborate and forge a sustainable partnership with community stakeholders.

A fundamental paradigm shift and a new emphasis on developing transformative leaders are catalysts for administrative preparation programs. The “disorienting dilemma” (Mezirow, 2000) of leading during unpredictable times caused administrators to critically examine outdated practices such as the unequal distribution of resources, the fixed structure of the school day, and traditional modes of communication with families. Implementing innovative instructional practices paved the way for teachers to learn and embrace new learning management systems, hybrid delivery models, and personalized digital learning content. The pandemic exposed longstanding inequities across all areas related to the education of students (Liu, 2021). Therefore, school leaders became adept and creative at removing barriers to access to high-quality digital content, hardware, and software (Fulton and Sibley, 2003). New opportunities to engage learners through effective professional staff development reframed the importance of meeting the needs of adult learners.

Implications and recommendations

The findings of this study have three important implications for school administration preparation programs. First, participants in this study identified the need for school leadership preparation programs to focus on strengthening communication and collaboration to effectively gather input from key stakeholders for efficient decision-making processes (Peurach et al., 2021; Supovitz and D’Auria, 2020). Second, restructuring and refining staff development needs to address the disparities in digital learning, focusing on equitable access to technology, revamping instructional continuity, and training in crisis management and problem-solving must be a priority for all school districts (Hubbard et al., 2020; Kaul et al., 2020). Third, leading with humanity by considering one’s privilege and position, resisting the urge to make assumptions
about other people’s capacities to handle stress and manage families, and being transparent are optimal goals to aim toward (Anderson et al., 2020).

Based on these findings, the following recommendations should serve as a framework for school administrators and leadership preparation programs. First, it is imperative that the core curriculum in programs include crisis management, trauma-informed practices, implementation, and assessment of online learning (Hubbard et al., 2020; Kaul et al., 2020). Traditionally, educators referred to the three Rs’ as reading, writing, and arithmetic. Respond, resolve, and reflect represent the new “three Rs” for the 21st century. Field experiences should assess how interns manage real-time crises in school. Second, an opportunity exists to create meaningful and sustainable community relationships that may foster long-term benefits between school personnel and families (Robey et al., 2019). This value-added investment promises to pay dividends for a new generation. The adage “it takes a village” rings true in this context.

Third, developing the capability to leverage technology to manage hybrid instructional models, ensure digital equity practices, implement digital curriculum, support a remote workforce, and keep abreast with emerging trends (Babbar and Gupta, 2021; Shamir-Inbal and Blau, 2021). Fourth, democratizing staff input could reduce the leadership hierarchy (Peurach et al., 2021). Finally, an inclusive approach to leadership opens the door to enhancing the collective wisdom of the school culture (Tulshyan, 2020). Overall, these recommendations can serve as a fundamental platform for systemic change.

**Conclusion**

This study aimed to examine school leaders’ perceived preparedness to support student learning, their views on the opportunities and challenges of the transition, and the recommendations for leadership licensing programs and school districts during the COVID-19 pandemic. Our survey results revealed that administrators identified the following areas where they felt under-prepared: (1) Reaching out to vulnerable students, (2) providing culturally relevant digital content, and (3) ensuring full access to hardware and software for all students. However, leaders also acknowledged that COVID-19 presented unique opportunities for improving technology access, community relationships, family communication, and staff technology capabilities. Parenthetically, leaders faced additional challenges, which included establishing new norms for student behaviors for online learning, redefining staff roles, reaching out to vulnerable students, improving communication, and solving families’ unequal access to resources and technology.

As the pandemic continues, many districts continue to confront difficult policy decisions about whether and how to offer instruction in person or remotely (Duckworth et al., 2021). These policy issues center on mental health, social and emotional well-being, and trauma-informed practices (Pekel et al., 2020). The limitations of this study include a small sample size for the interview, response bias, and strong Minnesota perspectives. Since 60% of the survey respondents and 89% of the interview participants were from Minnesota, the findings reflected the mainstream views of Minnesota school administrators. However, the findings remain consistent with recent publications on schools and COVID-19 (Babbar and Gupta, 2021; Beauchamp et al., 2021; Ferdig et al., 2020; Harris and Jones, 2020; Liu, 2021; McLeod and Dulsky, 2021; Shamir-Inbal and Blau, 2021). A validated survey instrument may address the response bias in future studies. Seeking additional participants who serve as central office staff and from more states could strengthen this research.
Significance of the study

This study contributes to understanding the complex nature of working with all stakeholders. At the same time, school leaders prepare for the arduous task of transitioning to online teaching during a global health crisis, managing unexpected personnel issues, and adjusting to the new leadership challenges in a post-pandemic world. As licensing programs emerge from the pandemic, close attention must be paid to preparing licensure candidates to lead in a post-pandemic world. At the time of this publication, new variants of COVID-19 pose a new challenge for school leaders. The intense politicization of mask mandates and vaccine compliance are additional factors for school administrators to manage. Innovative and courageous approaches to preparing school leaders to assume leadership roles must be the new normal. The theoretical frameworks used in this study must serve as drivers of change for school administrators.

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