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# THE PURSUIT OF EQUITABLE VIRTUAL LEARNING:

# DISTRICT LEADERS' UNDERSTANDING OF THE INFLUENCES ON DESIGNING 100% VIRTUAL LEARNING EXPERIENCES DURING THE COVID-19 PANDEMIC

by

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A Dissertation Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirements for the Degree of

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## ABSTRACT

THE PURSUIT OF EQUITABLE VIRTUAL LEARNING:
DISTRICT LEADERS' UNDERSTANDING OF THE INFLUENCES ON DESIGNING 100% VIRTUAL LEARNING EXPERIENCES DURING THE COVID-19 PANDEMIC

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Old Dominion University, 2021
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During the COVID-19 pandemic, Virginia Governor Ralph Northam required all schools to close their doors from March 13, 2020, through the remainder of the school year, causing districts in the Commonwealth to create distance learning plans for PreK-12 education within a matter of weeks. The continued fluctuation of COVID-19 positive case numbers throughout the spring and summer led to several school districts choosing to open the 2020-2021 school year using a 100% virtual model for all students. This qualitative, grounded theory study sought to determine how superintendents understood the influences on the design of their district's 100% virtual learning plans. Fifteen superintendents were interviewed using semi-structured interviews that each lasted 30-60 minutes. Data was iteratively collected, analyzed, and coded to reveal major categories regarding superintendents' understanding of influences. Findings showed that districts sought to plan equitable virtual learning experiences for all students based on unintentional influences and the district's intentional responses. The Influence and Response Complex Emergence (IRCE) Theory explains that, during an educational crisis, learning plans emerge as a result of the feedback between unintentional influences (politics, availability of resources, and needs of stakeholders) and district leaders' intentional responses (leveraging relationships, communicating purposefully, and reinforcing the educational mission). A major

implication of this study is a better understanding of how learning designs are developed during long-term crisis.

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This dissertation is to all those who never gave up on me when I gave up on myself, most especially to James, Eamon, and Esme for all their compassion and support during my many evening and weekend writing sessions, and to my parents, who have always believed in and been there for me.

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# CHAPTER I:

# INTRODUCTION

On March 13, 2020, Virginia Governor Ralph Northam announced that all schools in the Commonwealth would be closed for a minimum of two weeks in an attempt to decrease the spread of COVID-19 (Virginia Governor, 2020a; Lane, 2020a). Governor Northam then announced on March 23 that all Virginia schools would remain closed through the end of the academic year (Virginia Governor, 2020b). The Virginia Department of Education (VDOE) required that schools provide "continuity of learning" plans that "should be done with careful consideration of providing equitable access and support for a variety of students," and schools scrambled to figure out how to continue to educate students with no one allowed in school buildings (Lane, 2020a; Lane 2020b). These worries about equitable access to learning led the VDOE submitted requests to the federal government to be exempted from standardized testing for the year while also issuing exemptions to previous requirements for graduation, verified credits, and the school year length (Lane, 2020c; Lane, 2020).

The VDOE took several steps to help school districts with virtual learning over the following few months. Firstly, the VDOE made Virtual Virginia, their virtual learning management system, available to all school districts.(Lane, 2020d). This system was expanded to include middle and elementary school curricula in addition to the high school curricula already available. Teachers were given access to these courses to use however they saw fit to design online instruction (Lane, 2020d). On May 1, 2020, Superintendent's Memo 110-20 described the Coronavirus Aid, Relief, and Economic Security (CARES) Act and Secondary School Emergency Relief Act (ESSER) funds that would be released to all school districts to support

remote learning, including the ability to buy new computer hardware and software, train personnel, and hold summer learning classes for students (Lane, 2020f).

Governor Northam released a phased reopening plan for Virginia on June 9 and by July 6, the VDOE released their guidance regarding how schools should gradually reopen based on the Governor's phases (Virginia Department of Education, 2020a). When a district was classified as being in Phase I, according to criteria outlined by the Governor, all school buildings were required to remain fully closed and students participated only in distance learning (Virginia Department of Education, 2020a). The VDOE recommended that in Phase II schools offer modified in-person instruction to students in grades PreK-3 and English Language Learners. By Phase III, all learners should have the option of returning to in-person learning with physical distancing and other measures in place, but school districts still had to offer virtual instruction for families who wanted it and staff members who qualified as "high-risk," according to the CDC measures (Virginia Department of Education, 2020a). Before any schools could reopen, however, school districts had to submit their plans detailing how they would gradually reopen schools and help students gain knowledge and skills potentially lost during the school closures that began on March 13 (Virginia Department of Education, 2020a).

The majority of Virginia was declared to be in Phase III of Governor Northam's phased reopenings on July 1, though some regions continued to see COVID-19 infection numbers grow and therefore had additional measures enacted to decrease transmission (Virginia Governor, 2020d). These included, but were not limited to, requirements to wear masks in public places and a limit to the number of people who could gather in a common place at one time. Through the summer, school districts debated whether and how to open in the fall and, in some regions there was a sharp divide between parent groups and teacher unions, with the parents frequently

wanting schools to fully reopen and teachers unions urging schools to consider 100% virtual learning or a hybrid model in which students would participate in part time virtual learning and part time in-person learning (Natanson, 2020). Many district technology departments placed large orders for devices that students could use in the event of an all-virtual or hybrid opening, while district leaders also created plans for in-person learning that would include increased sanitization, classroom layouts that with three to six feet of space between students, plexiglass, and all individuals being masked to cut down on potential transmission. As transmission numbers fluctuated, some districts made announcements regarding a plan to return in-person, only to rescind that plan a few days later in favor of 100% virtual learning. This resulted in those districts having to create or adopt a virtual learning system mere weeks before the proposed start of school (Jones, 2020).

While virtual learning platforms, such as Edgenuity and Virtual Virginia, exist and had been implemented by some school districts before the pandemic, such platforms had never been used for an entire school district. Moreover, independent companies or state contractors tended to run these programs, but school districts had dozens or hundreds of teachers who needed to lead the virtual learning for the 2020-2021 school year, and would require training to use these programs. District leaders had to make multiple shifts in planning for the 2020-2021 school year, frequently on short notice, as statistics and public opinion regarding COVID-19 changed (Jones, 2020). Districts found themselves trying to create plans that would meet the many requirements or recommendations from the Virginia Department of Education, the General Assembly, district families and communities, and district faculty and staff. The dilemma that faced superintendents was one unlike any other time in American history. District leaders needed to balance competing interests such as staff and student safety with the need for parents to return to work outside the

home (Natanson, 2020). Circumstances changed frequently as the COVID-19 numbers in districts fluctuated, and districts superintendents with high numbers of COVID cases had to determine how to design a virtual learning program for all students (Jones, 2020).

## Purpose of the Study

Developing a learning system that works for a variety of stakeholders can be difficult even during non-crisis times; developing such a learning system during a pandemic makes the task even more complicated. Superintendents and their leadership teams had to navigate multiple stakeholder needs while also considering effective leadership strategies. The purpose of this study is to explore superintendents' understanding of the various influences on how their districts implemented a 100% virtual learning experience for students. Understanding these influences may be used to help develop a framework for leading redesigns of learning systems in long-term crisis situations.

## Research Questions

This study was originally guided by the following research questions:

1. What was the relationship between internal and external influencers on the 100% virtual learning design choices made by superintendents during the COVID-19 pandemic crisis?
2. What role, if any, did feedback between the various actors play in the emergence of the 100% virtual learning plan?

These questions were open-ended, as is frequently the case in grounded theory methodology (Corbin & Strauss, 2015). The limited number of questions follows the advice of Charmaz (2014), who stated that beginning with too many research questions may end up narrowing the themes that will be created during the study. The grounded theory methodology allows for questions to be tweaked or added as data collection and analysis occurs and more

themes emerge. No new questions were added to this study, but as the study progressed, the first question was changed to: What was the relationship between unintentional influences and intentional district responses on the 100% virtual learning design choices made by superintendents during the COVID-19 pandemic crisis? Given the newness of the topic, studying the influences on the virtual learning designs during a pandemic proved easier with broad, open-ended questions.

## Background of the Study

Many Virginia districts preparing for the 2020-2021 school year faced an unprecedented crisis: transforming an educational system that was built for in-person instruction into a 100% virtual learning environment. A crisis can be defined as "a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat" (Coombs, 2007, p. 164). Minor crises tend to pose minor threats to an organization, whereas larger crises have the potential to have a dramatic impact, positive or negative, on an organization (Coombs, 2012). The steps taken by organizational leaders frequently determine the impact of the crisis on the organization.

### Effective Crisis Leadership

Scholars of crisis research have identified several common themes related to leaders who navigate their organizations effectively through a crisis. One of the most crucial elements needed by leadership is signal detection, which includes the ability to recognize a potential threat and that action will need to be taken (Pearson & Mitroff, 1993; Wooten & James, 2008; Liu et al., 2020; Rodin et al., 2019). Once the threat of crisis has been identified, the ability of the organization to weather the situation may rely on the organizational management, including the current organizational structure and how the leaders leverage that organizational structure

(Wooten & James, 2008). It may become necessary for leaders to engage in reorganization in order to successfully persist or even thrive through the crisis (Arora and Suri, 2020).

Additionally, leaders need to be aware of and take steps to protect the organization's reputation during a crisis. Their organizational reputation can be positively or negatively impacted by crisis depending on how they are perceived to handle the crisis (Benoit, 1998; Coombs, 2007; Coombs, 2012). Whether the organization is seen as responsible for or a victim of the crisis tends to impact how stakeholders interpret actions taken by the organization (Coombs, 2007), though organizations can potentially influence how stakeholders perceive the responsibility for the crisis using narrative control (Sellnow et al., 2017; Sellnow et al., 2019). Narrative control requires that the organization: (1) helps stakeholders to internalize the message, which may require overcoming competing narratives; (2) effectively distributes the narrative via appropriate media for the stakeholders; (3) provide an adequate explanation regarding the role of the organization in the crisis; and (4) describe what actions the stakeholders need to take based on the crisis (Sellnow et al., 2017; Sellnow et al., 2019).

Controlling the narrative can also help organizations build relationships with external partners; in fact, crises frequently tend to present more opportunities for partnerships (Gray & Prudy, 2018). If an organization does not successfully work with these external groups, the organization may find that the external groups attempt to coerce the organization into responding to the crisis in a particular way (James & Wooten, 2006). Similarly, organizations need to ensure that they effectively manage internal conflicts, leveraging conflict in a way that allows it to lead to more perspectives and stronger consensus (Coser, 1962). Lastly, leaders need to ensure that they can engage in quality decision-making under pressure, avoiding what Wooten & James

(2006) refer to as "threat rigidity," in which leaders' decision-making becomes less flexible as a result of the crisis.

## Influences on How a District Designs Learning

Schools are special types of organizations. They provide educational services to residents living within their borders, and therefore are primarily concerned with designing teaching and learning experiences. Because of the wide variety of stakeholder needs within communities, there may be many influences on designing virtual learning in addition to the COVID-19 crisis. One of the biggest influences may be public policy, which is defined as "the dynamic and value-laden process through which a political system handles a public problem" (Fowler, 2013, p. 5). There are many policies that may impact the decisions made by a school district in Virginia, but one of the most prevalent is policy related to the Virginia Standards of Learning (SOL) and State Accreditation System that is based on tests of those standards of learning (Ruff, 2019). Although the accreditation system has seen recent changes that allow districts to count students who increase scores in addition to students who outright pass the standardized assessment (Code of Virginia, 2018), SOLs and their tests continue to significantly influence the actions taken by school districts, even during a crisis.

Additionally, organizational constructs play an important role in how leaders design learning for their districts. Enabling structures are one such organizational construct (Hoy & Sweetland, 2001). These may include providing a time and place for professional learning communities and are typically associated with higher levels of collective efficacy, trust in leadership, and academic optimism in schools (Wu et al., 2013; Gray & Summers, 2015; Gray & Summers, 2016; Gray et al., 2016). Other organizational structures may be more implicit, such as institutional logics and isomorphism. Institutional logics are implicit frameworks that people use

to know how they should act and think in their type of organization (Thornton et al., 2012). Institutional logics frequently influence how leaders engage in problem solving (Nath, 2019; Ngoye et al., 2019). Lastly, isomorphism is the tendency of an organization to behave similarly to other organizations of the same type (DiMaggio & Powell, 1993). Organizations may engage in isomorphism because they have been forced by outside influences to do so (coercive isomorphism), because they believe that acting like other organizations will help them solve problems (mimetic isomorphism), or because they are seeking legitimacy within the sector they inhabit (normative isomorphism; Seyfried et al., 2019).

In summary, during times of crisis, there are many potential factors that contribute to an organization's success in surviving the crisis. Leaders themselves can impact that success by engaging in certain productive actions, such as properly planning for a crisis, controlling the narrative, and making effective decisions under pressure. These are not enough, however; leaders also need to examine whether the structures within their purview are enabling or hindering employees as they attempt to fulfill their duties. Furthermore, leaders should be aware of how institutional logics may impact the solutions they choose during a crisis. Lastly, they should understand that while they may look to other similar organizations for ideas during a crisis, this isomorphism should be carefully considered to ensure such changes will work in their own districts.

## Significance of the Study

COVID-19 continues to spread across the United States (Scudellari, 2020), and now with new variants (Murray & Piot, 2021). Experts also worry that with the world's current population and ease of travel, more pandemics could occur, even simultaneously (Yong, 2020). There are other potential disasters, such as hurricanes, the occurrence of which has steadily risen since

1851 (Watts, 2020). In fact, the 2020 hurricane season saw the most hurricane activity since 2005, the worst year for hurricanes in recorded meteorological history (McLaughlin et al., 2020). The purpose of a grounded theory study is to propose "substantive theories addressing delimited problems in specific substantive areas" (Charmaz, 2014, p. 49). Having a framework for how leaders understand the influences on designing learning during long-term, unprecedented crises may help school districts make such decisions more effectively during future crises.

## Theoretical Underpinnings of the Study

The second research question in this study uses two critical features of complexity theory, cybernetics and emergence, to investigate the relationships of various influences as superintendents led their school districts to create 100% virtual learning programs. Complexity theory can be used in qualitative research for understanding multi-faceted, or "wicked," problems that have a myriad of influences, variables, and actors (Gear et al., 2018; Termeer et al., 2015; Thompson et al., 2016). The concepts of cybernetics and emergence can be blended into a framework to help illustrate the feedback relationships that occur in complex systems between the individual parts and between the parts and the whole (Shoup & Studer, 2010; Siemens et al., 2018). This section will explain the nature of complexity theory, define cybernetics, define emergence, and then explain how these two features can be utilized as a framework for understanding how leaders make decisions in unprecedented times of crisis.

### Defining Complexity Theory

Complexity theory originated in the mathematical and computational disciplines in the 1940s and was popularized by Edward Lorenz's experiments with weather predictions in 1963. It began to be adopted by the field of business management in the 1990s because of its usefulness in understanding processes that are governed less by linear explanation and rules and more by

patterns (Ditlea, 1997; Shoup & Studer, 2010; Hazy, 2018). This is especially significant for "wicked" problems, which are defined as problems that are "ill-defined, ambiguous, and contested, and feature multilayered interdependencies and complex social dynamics" (Termeer et al., p. 680). Many of the problems faced by organizations today can be described this way, especially when facing an unprecedented crisis (Gray & Purdy, 2018). Instead of focusing on mathematical models, however, Ditlea (1997) explained that when complexity theory is applied to aspects of business or organizations, it becomes more of a "philosophy and art of management" (para. 6).

There is debate between scholars regarding whether an overarching definition of complexity theory should exist and, if it does, what it should be (Israel, 2005; Wallis, 2009; Thompson et al., 2016; Nunn, 2017; Siemens et al., 2018). Israel (2005) argues there may be no coherent, widely accepted definition for one of two reasons: (1) because the study into complexity theory is as of yet too new and further investigation must be done; or (2) because the word itself does and should defy a singular, specific definition. Building upon the second possibility, Nunn (2017) explained that the reason complexity theory works so well to explain many dissimilar phenomena is because of its flexibility in definition; to define complexity theory would ruin the adaptability that makes it useful. Similarly, Mazzocchi (2016) warns that applying a reductionist perspective to complexity theory undermines the ability to use it as a methodology or framework for understanding complex systems. One reason for this debate may also be that scholars frequently use definitions that are best suited to their particular disciplines (Nunn, 2017; Thompson et al., 2016).

Nevertheless, some scholars have tried to create a general definition of complexity theory, usually as a response to the belief that what is not defined cannot be falsified and

therefore cannot be truly studied (Alexrod & Cohen, 2000; Wallis, 2009). Gear et al. (2018) defined complexity theory in the health care realm as "understanding the patterns of interaction between system elements at different levels and times, rather than analyzing individual elements in isolation" (p. 2). Siemens et al. (2018) used an academic perspective to explore change in higher education and defined complexity as "a theory of change and adaptation that details how change occurs within systems as well as the principles and mindsets needed to flourish in turbulent environments" (para. 4). In both of these definitions, patterns and change occur in dynamic environments. Regardless of the debate about the definition of complexity theory, scholars tend to come to agreement on one point: it is the opposite of linear cause-and-effect descriptions of events (Ditlea, 1997; Israel, 2005; Shoup & Studer, 2010; Thompson et al., 2016; Nunn, 2017; Hazy, 2018).

Furthermore, complexity theory does not believe the whole is merely the sum of its parts; rather, the interactions, reactions, and connections between the parts create patterns and outcomes that are greater than the original parts of which they are composed (Israel, 2005; Shoup & Studer, 2010). Lastly, though complexity theory's many interacting parts may appear to be "chaotic," complexity is not "chaos," which refers to turbulent, uncontrollable situations. Complexity theory argues that while researchers may never be able to understand all the parts and their interactions in a situation, there is still an underlying, if undetected, order (Axelrod & Cohen, 2000). Moreover, while it may not be possible to anticipate all the various interactions ("fine-grained details"), frequently larger patterns can be determined by looking at the whole system ("course-graining"; Hazy, 2018, p. 62).

Scholars also debate the elements of complexity theory, frequently due to differences in situations, disciplines, and personal preferences (Thompson et al., 2016; Nunn, 2017). These

elements frequently embed one another in their own definitions, interacting with each other in such a way that it can be difficult to separate them neatly into categories; this concept is often called “indeterminate boundaries” (Shoup & Studer, 2010; Nunn, 2007; Thompson et al., 2016; Gear et al., 2018). One frequently cited element of complexity theory is the idea of variables (or agents) being self-organizing rather than a deliberate, centrally chosen, or mandated design (Axlerod & Cohen, 2000; Nunn, 2017; Shoup & Studer, 2010; Gear et al., 2018; Hazy, 2018). Shoup & Studer (2010) took this concept further by adding the concept of “criticality” to self-organization, explaining that some changes to variables will have no impact on the whole, whereas the same change to the same variable, at a different time, may have a large impact on the whole.

Another frequently used element of complexity theory is the concept of homeostasis; Shoup & Studer (2010) define this as the tendency of a system to try to maintain status quo. Gear et al. (2018) labeled this process instead as “Far from Equilibrium” which they describe as “a dynamic state in which complex systems maintain a stable appearance by balancing multiple interactions between diverse agents and feedback loops” (p. 2). Embedded in this idea of homeostasis, or equilibrium, is the element of self-organized criticality and that idea that small changes can sometimes have large impacts on the system as a whole, despite the effort of the whole to maintain homeostasis (Nunn, 2007; Shoup & Studer, 2010; Gear et al., 2018).

While each of these elements are present in complexity theory, the next section will discuss the two elements that will be primarily used as lenses for this study: cybernetics and emergence.

**Cybernetics**

"Cybernetics" is a term used by Shoup & Studer (2010) that encompasses two complexity theory elements: networks and feedback. Frequently, however, these elements are listed separately by other complexity theory scholars (Nunn, 2007; Siemens et al., 2018). For instance, Siemens et al. (2018) discuss the idea of networks as one element and feedback sensitivity as another. Nunn (2007) named networks as one element of complexity theory, describing them as being made up of individual variables that have pathways leading between them all; feedback, however, does not appear explicitly in Nunn's framework. Conversely, Gear et al. (2018) included feedback loops as an element in their framework but omitted any mention of networks. Shoup & Studer (2010) combined both the ideas of networks and feedback by explaining that in addition to variables being linked, they each provide each other with feedback that, in turn, has some kind of impact on those linked variables.

In 1975, Delobelle wrote that the main purpose of feedback was to ensure processes occurred according to an efficient norm. More recently, though, complexity theory scholars have noted that in addition to homeostasis, feedback can also be leveraged to bring about learning, growth, and/or change (Shoup & Studer, 2010; Siemens et al., 2018). Feedback can be positive, and therefore support the interaction from which the feedback arose, or negative, which seeks to impede the particular connection (Gear et al., 2018). Moreover, not all feedback carries the same weight on the overall system (Shoup & Studer, 2020).

Feedback will come regardless of whether organizational leaders plan for it. Siemens et al. (2018) therefore recommended that "As much effort should be placed into feedback planning as in the original planning of a goal or outcome" (para. 27). Leaders also need to ensure that they are soliciting the necessary feedback at the appropriate times (Shoup & Studer, 2010) and that

feedback is focused on the specific objective (Siemens et al., 2018). Importantly, however, leaders also need to collect feedback that will help to determine whether the set objective is still the necessary objective (Morgan, 2006). When leaders only collect feedback in order to determine if the objective is being met, it is called single-loop learning (Kaplan & Owings, 2017). When they also collect feedback to determine the appropriateness of the objective, it is called double-loop learning (Argryis, 1996).

**Emergence**

Axelrod & Cohen (2000) explained the concept of emergence through the metaphor of neurons in the brain: while no single neuron has consciousness, taken together, they do. As Shoup & Studer (2010) explained, emergence occurs when "Systems emerge as the sum of the parts becomes greater than the individual parts by themselves" (p. 16). Grumadaite (2020) described four characteristics of a situation that must be present in order for emergence to occur. They include: (1) actors capable of starting and sustaining relationships; (2) interactions between these actors; (3) appropriate resources for the relationships to develop and thrive; and (4) a value system and organizational process that support collaboration in a self-organizing system. Additionally, the leadership strategies in an organization should meet certain criteria in order for emergence to occur (Uhl-Bien & Marion, 2009; Mendes et al., 2016). Frequently in organizations, two types of leadership structure exist: administrative and adaptive (Uhl-Bien & Marion, 2009). The administrative function is a top-down approach to leadership that clearly delineates roles, procedures, and objectives; the adaptive approach works conversely in that it encourages actors to generate ideas organically from the bottom-up (Mendes et al., 2016).

Uhl-Bien & Marion (2009) discussed the importance of balancing both of these approaches in order for an organization to thrive and be innovative. A leadership style too

focused on administrative functions frequently limits the creativity of its people, who typically work in silos (Uhl-Bien & Marion, 2009). Unfortunately, organizations typically reward independent agents for their actions, therefore encouraging this kind of non-emergent thinking (Ditlea, 1997). Conversely, organizations that are too adaptive tend to have pockets of innovation, but without the formal administrative structures, this innovation will not be systematized across the whole organization (Uhl-Bien & Marion, 2009). While the right combination of administrative and adaptive leadership will depend on the situation, achieving balance leads to leadership that enables emergence and innovation to occur (Mendes et al., 2016).

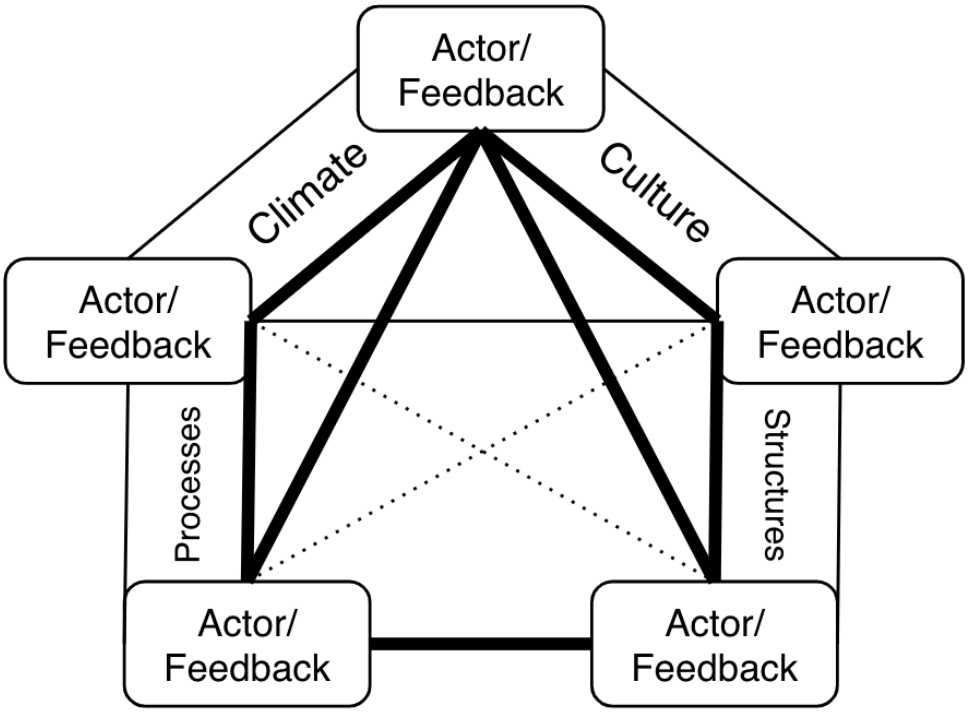
It is important to note, however, that complexity theorists do not envision emergence leadership as merely a function of those closest to the top of the bureaucratic hierarchy (Lichtenstein & Plowman, 2009; Uhl-Bien & Marion, 2009; Mendes et al., 2016; Grumadaite, 2020). Lichtenstein and Plowman (2009) explained that "Emergence in this sense occurs through the interactions across a group of agents—individual members and managers, networks, and organizations" (p. 618). This "meso model" of leadership works under the assumption that macro leadership strategies cannot be understood without looking at micro-level phenomena and contexts, and that micro- leadership strategies also cannot be properly understood without simultaneously examining macro-level phenomena and contexts (Gardner & Cogliser, 2009; Uhl-Bien & Marion, 2009). Hazy (2018) explained the importance of all individuals in the organization having the "knowledge, skills, and capacity to build his or her particular piece" of the organization, but to be successful, all these pieces must fit together within the context of the organization's mission and goals (p. 66).

**Emergence as a Result of Cybernetics**

Emergence, defined as the whole being more than the sum of its parts, is a result of the interactions between the various actors and the positive and negative feedback they give each other (Lichtenstein & Plowman, 2009; Uhl-Bien & Marion, 2009; Mendes et al., 2016; Grumadaite, 2020). Figure 1 shows a graphical representation of this concept. The actors can be considered to be in a hierarchy because the pyramidal shape comes to a point, and they can also be interpreted as each having an equal part in creating the pyramid. In other words, emergence does not occur as a result of top-down leadership; it requires individual actors to also understand their roles (Lichtenstein & Plowman, 2009; Uhl-Bien & Marion, 2009; Mendes et al., 2016; Grumadaite, 2020). The actors also each have an impact on one another by providing positive or negative feedback (Shoup & Studer, 2010). This concept of feedback is represented by the lines connecting each actor to one another, which can be understood as the micropolitics that exist within an organization (Lichtenstein & Plowman, 2009). Just as the impact of some feedback will be stronger than others, the lines vary in their weight. Meanwhile, the interactions also need to be understood within the context of the macro-level features, such as climate, culture, processes, and structures (Lichtenstein & Plowman, 2009).

**Figure 1**

***The Relationship Between Actors, Feedback, and Emergence***




**Limitations of Complexity Theory**

While complexity theory can help researchers better understand complex organizations, like any theory, it has limitations. Complexity theory is very closely related to systems theory (Phelan, 1999), and for that reason, Richardson (2016) argued that complexity theorists must understand the darkness principle, which he relates strongly to the concept of "incompressibility." The darkness principle states that no single actor can know more about the whole system than that actor's own role and relationships; it is impossible for any actor to understand the entire whole. This leads to the idea of incompressibility—that the best representation of the system is the system itself. In other words, a system cannot be reduced (or compressed) into a less complex model. The darkness principle and incompressibility are two of the reasons that Morrison (2008) warns that "whilst complexity theory may offer suggestions for

practice, it gives no guarantees; it is a theory without responsibility or accountability" (p. 29). In other words, while complexity theory can describe phenomena that have or are occurring, it cannot be used to prescribe actions or determine morality of what has, is, or should occur.

## Overview of Methodology

This study used qualitative grounded theory methods to build a theory regarding superintendents' perceived influences and responses on the design of 100% virtual learning systems during the COVID-19 pandemic. The main data source was interviews with chosen superintendents. Literature exists on crisis leadership and factors that influence the designs of learning in schools, but there is a dearth of literature that examines the building of a new learning system in a short period of time while facing a long-term crisis. Therefore, this study was designed to create a framework representing how superintendents understand the influences on creating new systems of learning during crises.

This study used a small sample of Virginia superintendents as participants. These superintendents must have been a district leader of the same Virginia school district from March 13, 2020, when all Virginia public schools closed, through December 1, 2020. Chosen superintendents must have led school districts in which virtual learning took place during both the spring of the 2019-2020 school year and at least a portion of the first marking period during the fall of the 2020-2021 school year. Using a sample of superintendents who met these qualifications allowed richer reflection during interviews as the participants were able to compare what they learned during the spring with what their school districts implemented in the fall. Participants for this study were first chosen by leveraging already-established connections between myself and superintendents. Subsequent participants were chosen by randomly emailing

superintendents whose districts the VDOE reported as having done virtual learning for at least a portion of the first semester.

The goal was to include 12-15 superintendents who met the above criteria to ensure category saturation of themes (Charmaz, 2014). Interviews were conducted using a semi-structured interview format to provide flexibility to participants in what they decided to discuss (Corbin & Strauss, 2014). Analysis of these interviews was "integrated and conducted simultaneously/iteratively/abductively" as the researcher "move[d] back and forth between levels of analysis and between analysis and further data collection" (Belgrave & Seide, 2019, p. 168).

The coding methods were recommended for constructivist grounded theory research in Charmaz's Constructing Grounded Theory (2nd ed., 2014). These included initial line-by-line coding, with a focus on in vivo codes in order to understand implicit meanings in the data. Next, focus coding was completed to determine which codes seemed most frequent or most important. The last part of coding was axial coding, in which the collected codes were sorted into categories and subcategories to develop a theory based on the data. A diagram was used throughout the process to better understand the relationships between themes, and this diagram was continually updated as new information became available (Corbin & Strauss, 2015).

Throughout the study, I engaged in memo writing. Charmaz (2014) explained that writing memos helps connect the researcher to the data, encouraging the development of ideas and the ability to review the idea development at a later date. Furthermore, memo writing "helps concepts become more analytic and less context dependent" (Urquhart, 2019, p. 103). Glaser and Strauss' (1967) original technique involved neither recording nor transcribing interviews but instead relying solely on memos; however, I transcribed interviews so that I could review them multiple times during the memo writing process. Additionally, I recorded and analyzed my own

feelings and perceptions during interviews (Gilgun, 2019; Charmaz, 2014). The processes of memoing and coding can occur simultaneously in the grounded theory process because the emphasis is on emergence of the themes rather than on strictly adhering to a specific process (Charmaz, 2014). Transcripts and memos were kept in a reflection journal file on Google Drive to allow cross-referencing of memos and themes.

It is important to note that neither transcripts nor memos will be included as appendices in this dissertation. Several superintendents only agreed to participate if their anonymity was assured. While I removed as much of the identifying information as possible from the transcripts, some superintendents still worried that they could be identified if transcripts were included as a whole. For that reason, transcripts and memos will not be shared. I had two other researchers, one who had completed the PhD program and another in the dissertation-writing phase, review each transcript, my data analysis, and my proposed theory. The member checking process ensured the accuracy of the data analysis and validity of the conclusions drawn and theory created.

## Delimitations

The following delimitations were established for this study:

- Only superintendents who were employed by their district in leadership roles superintendents from March 13 through December 1 will be used.
- The period being studied was March 13 through December 1.
- School districts must have engaged in virtual or distance learning from March 13 until the end of their school year. They must have engaged in 100% virtual learning during at least some part of the first marking period of the 2020-2021 school year.

- The study focused on 100% virtual learning. Several school districts implemented a "hybrid" model in which students attended in-person schooling for one or more days a week and engaged in distance learning one or more days a week. These school districts were not studied, given that the students most likely did not engage in live virtual learning sessions.
- This study sought to describe the influences on designing 100% virtual learning experiences for students; it did not seek to prescribe best practices or pass judgment on any of the information that participants supply.

## Assumptions of the Study

One of the major assumptions of the study was that "social reality is multiple, processual, and constructed" (Charmaz, 2014, p. 53). The assumed constructivist approach to understanding reality focuses on superintendents' understanding of the factors that impacted the design of their 100% virtual learning programs. This study also assumed that using a grounded theory approach helped in the creation of a substantive theory to a specific, delimited problem. Another assumption of this study was that superintendents were involved in the creation of their virtual learning programs and had an understanding of the factors that influenced its creation. Lastly, another assumption of a constructivist grounded theory approach was that the researcher cannot be free of bias because every researcher interprets findings through the lens of their own experiences (Charmaz, 2014). Because of this, it was important that the researcher not claim objectivity, but rather closely examine their own values, beliefs, and experiences (Corbin & Strauss (2015).

## Definitions of Key Terms

Asynchronous Learning: Assignments that learners complete at a learner-chosen time, though usually within a timeframe specified by the teacher. This work may be done using traditional paper and pencil methods or completed using online tools.

Crisis: "A sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat" (p. 164).

Distance Learning: Any learning that takes place outside of the traditional brick and mortar school setting in which teachers and students do not interact face-to-face. This may include, but is not limited to: paper-based packets of work for students to complete on their own, live virtual learning sessions, or work posted in a learning management system (such as Google Classroom, Schoology, or Canvas). Also called "Remote Learning."

Superintendent: The Chief Executive Officer of a school district, appointed by and answerable to a School Board.

Synchronous Learning: Learning or assignments that all learners complete at the same time. This is frequently, though not always, done via an online live video conferencing platform such as Zoom, Google Meet, or Microsoft Teams.

Virtual Learning: A type of distance learning in which all or almost all of the teaching and learning takes place online. This typically includes synchronous online live learning sessions over a platform such as Zoom, Google Meet, or Microsoft Teams, as well as supplemental asynchronous instructional time, generally conducted on a learning management system such as Google Classroom, Schoology, or Canvas.

## Summary of the Chapters

This study and its results continue in the upcoming chapters. First, there is a review of the extant literature in order to better understand the content of the problem being studied. Chapter II examines potential reasons why leaders make the decisions they do during an unprecedented, long-term crisis. The list cannot be exhaustive, and other factors may be discovered during the research process. Chapter III outlines the methodologies used, including specifics about how and why the grounded theory method was applied, the interview process, and the coding process. Chapter IV shares the results of the study, and chapter V presents the theory and draws conclusions about how the study contributes to the overall understanding of leaders' decision-making processes during a crisis. This study may have limited generalizability to school districts in other states, due to different state policies regarding learning and COVID-19 measures. Readers will need to determine how generalizable the results are to their own situations.

# CHAPTER II:

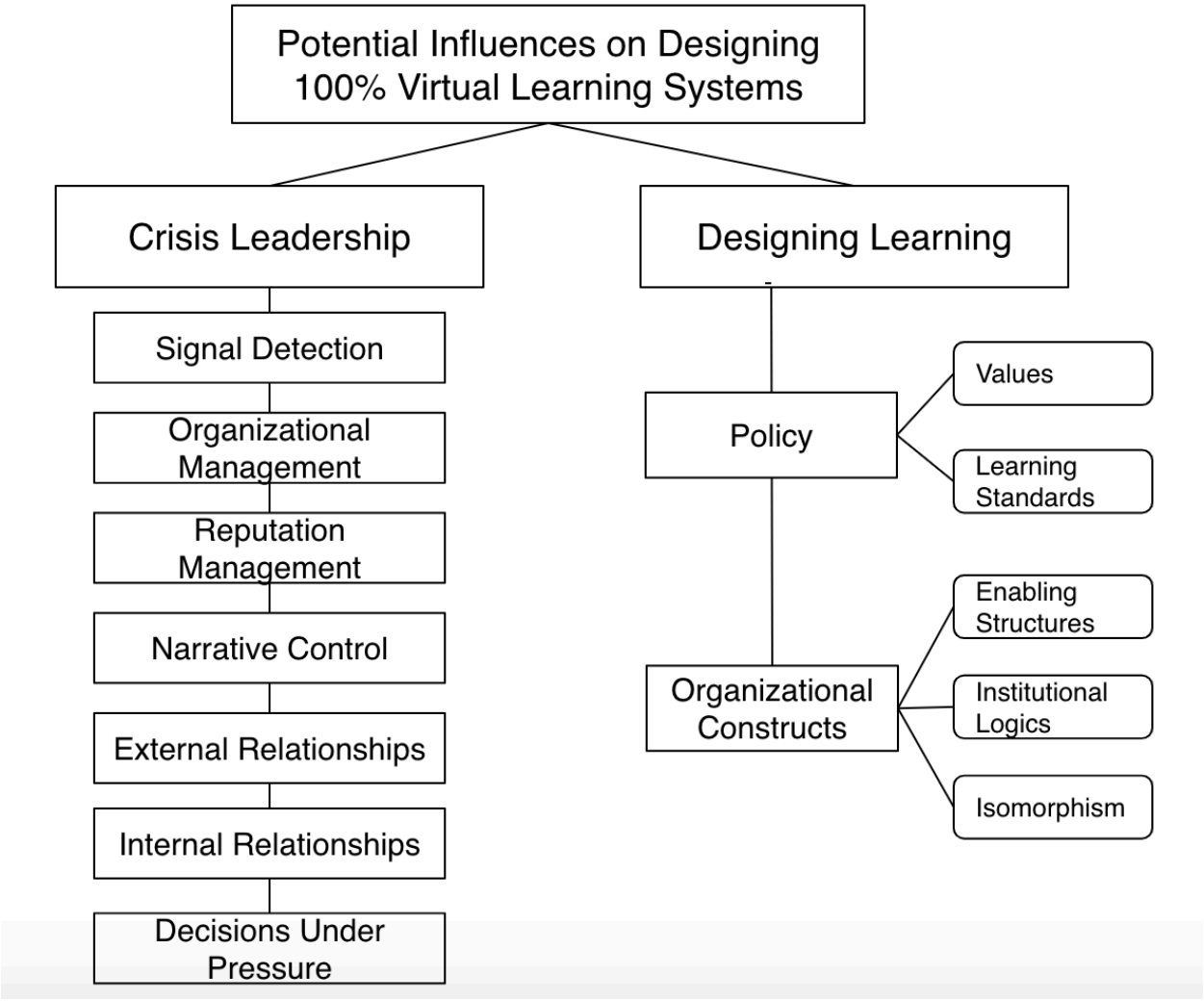
# BACKGROUND OF THE STUDY

It is impossible to know all the potential themes that will emerge during a grounded theory study, and is therefore difficult to create a truly comprehensive literature review beforehand (Corbin & Strauss, 2015). Nevertheless, Charmaz (2014) believed that it is important to examine theoretical concepts from the relevant disciplines in order to identify how to start looking at data, even though they may or may not end up as codes in the final results. Urquhart (2019) suggested something similar when he asserted that "the grounded theorist has to be sufficiently aware of theories, and how they are constructed, in order to be able to construct their own" (p. 94).

This literature review will first define "crisis" and what researchers have found to be effective methods for leaders who deal with crises in their organizations. The next section will cover potential influences that superintendents may cite as their reasons for making various decisions. These include political factors, such as policy from the national and state level, and how districts interpret those policies to fit implementation into their own value systems, as well as politics regarding internal and external stakeholder groups, such as staff, families, and community members. The literature review will then consider organizational constructs that potentially enable some decisions and not others and the role played by institutional logics and isomorphism in the decision-making process. Figure 2 provides a visual representation of these concepts.

**Figure 2**

***Organizational Structure of Background of the Study Chapter***




## Understanding Crisis Leadership

"Crisis" must be defined in order to understand the role of leaders during these crises. The following sections will unpack the term "crisis," including various phases of a crisis and the different challenges faced during a long-term and a short-term crisis. Next, this section will consider effective leadership strategies during a crisis, including signal detection, organizational

management, reputation management, controlling the narrative, building relationships with external stakeholders, and managing internal conflict.

**Defining Crisis**

Coombs (2007) defined a crisis as "a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat" (p. 164). McCoy (2014) pointed to three chronological phases to a crisis: precrisis, crisis, and postcrisis. Pearson and Mitroff (1993), however, divided a crisis into five stages that explain chronological order of the crisis as well as the role of the organization in each stage: (1) signal detection; (2) preparation/prevention; (3) damage containment; (4) recovery; (5) and learning.

Crises can be caused by internal or external events (Badhuri, 2019), and strategies for dealing with crises frequently depend on the cause of the crisis itself (Coombs, 2007). Actions taken by organizational leaders in any of these phases will ultimately determine how the crisis impacts both the financial and reputational aspects of the organization. The more minor the crisis, the less likely the organization is to incur intolerable financial losses or have its reputation tarnished, whereas in a severe crisis, the organization faces the potential of unsurvivable losses in either category (Coombs, 2012).

Coombs (2012) further delineated the difference between a "crisis" and a "problem;" a problem is something that provides only a minor threat to either the overall financial and reputational aspects of an organization. Leonard and Howitt (2009) also explained the differences between a routine emergency and a crisis: A crisis is a novel situation in which uncertainty is a major factor and there is no routine script for how to ameliorate the situation.

### *Types of Crises*

Prior to 2008, the majority of the work organizations did around crisis management was purely reactive (Kitterman, 2020). When the financial crisis of 2008 occurred, however, followed closely by another in the 2010s, organizations realized that they needed to plan proactively for crises (Kitterman, 2020). The way that an organization prepares for and reacts to a crisis depends on the type of crisis. Herman and Dayton (2009) discussed the differences between short-time crises, which typically revolve around a specific event, and extended-time crises, such as a sustained financial crisis or a global pandemic. Short-time crises can continue to have long-term effects, however, and sometimes an organization must make decisions that will allow them to survive in the short-term but may hinder their long-term survival (Marko, 2020). Another type of crisis that is occurring more frequently in recent decades is the transboundary crisis, or a crisis that spans multiple countries (Herman & Dayton, 2009).

## Effective Leadership During Crisis

Both expected and unexpected crises require strong leadership in order for an organization to survive or even thrive during a crisis (Segal, 2020). There are several elements of leadership that, while they cannot guarantee successful resolution to the crisis, can aid in mitigating the crisis. This next section looks at several of these. First, this section will consider signal detection and whether leaders are able to anticipate an upcoming crisis. Next, this section will look at successful organization and reputation management through the crisis. These can be achieved through narrative control, building relationships with external stakeholders, and managing internal conflicts. Lastly, this section will consider how leaders make effective decisions while under the pressure of a crisis.

### *Signal Detection*

One of the most important stages in a crisis is signal detection (Pearson & Mitroff, 1993). In order to adequately prepare for a crisis, leaders must be open to receiving facts, be able to make sense of the facts, and not ignore warning signs (Wooten & James, 2008). Leaders who accept the reality of an impending crisis are better equipped to implement organizational management procedures that can begin to contain or ameliorate the crisis (Liu et al., 2020; Rodin et al., 2019).

### *Organizational Management*

If an organization is to successfully weather a crisis, leaders must also be strong managers. Wooten and James (2008) explained that "Crisis leaders who are competent in organizational agility have a thorough knowledge of all aspects of the business and can work across organizational functions, departments, or silos to accomplish a task" (p. 366). One example of organizational management includes building redundancy into processes. Nowell et al. (2017) discussed how redundancy, including the concepts of back-ups, cross-functionality, duplication, and cross-checking, can either be an enabling or a disabling structure during an organizational crisis, depending on how the leader manages it. If, as a result of the crisis, one part of the organization cannot fulfill its duties, having the appropriate built-in redundancy will allow the work to continue. On the other hand, if not managed successfully, this type of redundancy can also lead to confusion and frustration (Nowell et al., 2017).

During crises, especially long-term ones, leaders will find that previous management structures may no longer work effectively, and those leaders will need to redesign the way that the company functions. Arora and Suri (2020) hypothesized that this can be done through a four-stage process in which leaders: (a) Redefine the organization within the new context of the crisis

and the mindsets it creates; (b) Relook at the organization's infrastructure and ability to retrain employees as necessary; (c) Redesign organizational models to be more productive during the new context of the crisis; and (d) Reincorporate the new models and infrastructures into the organization.

***Reputation Management***

One important component of communication with external stakeholders is reputation management. An organization's reputation, or image, can be understood as "the perception of a[n organization]... held by others" (Benoit, 1999). Crises provide opportunities for organizations to either enhance or damage their reputations (Benoit, 1998; Coombs, 2007; Coombs, 2012). Coombs' (2007) Situational Crisis Communication Theory (SCCT) purported that the higher the culpability level of the organisation in the crisis, the more likely that the crisis will have a negative effect on the company's reputation. These levels range from victim (such as a natural disaster, in which the organization had no culpability at all) to accident (an error that could not have been foreseen) to preventable (which includes errors that should have been foreseen and other careless or nefarious human actions; Coombs, 2007; Coombs, 2012). McCoy (2014) countered, however, that this theory has two major limitations: (a) it does not consider the ability of the organization to sway public perception of responsibility; and (b) it fails to consider that even if the organization is also initially the victim, the organization may still suffer negative reputational impact if the public perceives the organization as mishandling the crisis.

One potential mediating factor on organizational reputation during a crisis, even in those crises in the accident and preventable categories, is the prior reputation of an organization. Trust is especially crucial during a crisis, and leaders who are known to act with integrity in their organizations before the crisis often find it easier to inspire trust in the efforts of themselves and

the organization during the crisis (Wooten & James, 2008). A study by Jamal and Baker (2017) found that there are two main factors that determine whether stakeholders view the events in a crisis as the fault of the organization or the circumstances: (a) when the organization itself has a strongly positive precrisis reputation; and (b) when a leader has a charismatic leadership communication style that includes "task-orientated communication, enthusiasm, and empathy" (p. 387). No matter how charismatic the leadership communication style, however, these communications must also be meaningful for diverse stakeholders and must be delivered before stakeholders fill the vacuum with their own, potentially inaccurate, interpretations regarding crisis responsibility (Fortunato et al., 2017). Given that it may not be possible to address all stakeholders, organizations also must prioritize communication to stakeholder groups; furthermore, they must determine the best way to communicate the message with those stakeholders (Benoit, 1997).

Showing empathy to stakeholders during a crisis is another way to mediate the impact on an organization's reputation. When leaders appear defensive or as if they are trying to shift blame away from the organization (whether the organization is responsible for causing the crisis or not), it can considerably hamper the ability of the organization to survive the crisis (Wooten & James, 2008). Leaders who show empathy are more likely to have their ideas and leadership accepted by stakeholders during the crisis (Jamal & Baker, 2017). Additionally, leaders who focus more on the health and safety of those affected by the crisis, rather than "promoting their [own] efforts," tend to experience more success in navigating the crisis (Lui et al., 2020, p. 141; Jamal & Baker, 2017)

### *Narrative Control*

The majority of information that stakeholders receive about an organization will be through the news media (Coombs, 2007) and social media (Rodin et al., 2019). It is imperative that the organization in crisis maintain control of the story for the sake of their reputation; otherwise, the media will make its own judgments (Rim & Ferguson, 2020). During precrisis, it is crucial that leaders have the ability to see, believe, and take seriously the warning signs of a looming crisis in order to prepare an appropriate media and social media strategy (Liu et al., 2020; Rodin et al., 2019). A study by Rodin et al. (2019) of the 2014-2015 Ebola outbreak crisis found that news media are more likely to be alarming rather than reassuring during a crisis, making it all the more important that leaders control the storyline of their organization. Moreover, this study also found that when coverage of the crisis moves from the news media to social media, it is likely to take on a more humanistic and often sensationalistic approach, potentially linking in other current events or policy debates.

One effective way to control communication for reputation management during a crisis is to use the Internalization, Distribution, Explanation, and Action (IDEA) framework (Sellnow et al., 2017; Sellnow et al., 2019). In this model, the organization increases its ability to control the narrative by first helping stakeholders to internalize the message through explaining how the current crisis affects individual stakeholders, showing empathy for those affected by the crisis, and overcoming any competing messages about the crisis. Next, the message must be distributed via the channels that are most likely to reach stakeholders, preferably helping to converge on a single, organizationally-controlled message. This message must also provide an explanation for the organization's response to the events, including both how the organization is responding and why. Lastly, the organization will want to describe actions that the public should take in order to

weather the crisis or to help with the crisis (Sellnow et al., 2017; Sellnow et al., 2019). Doing so ensures that stakeholders do not try to provide assistance that actually hinders rather than helps the organization (Lui et al., 2020; Moyer, 2017).

### *Relationships with External Stakeholders*

Effective leaders ensure that the organization engenders beneficial relationships with external groups during a crisis. In fact, crises frequently offer an incentive to create partnerships, especially "when continuing an impasse is judged worse than searching for an agreement" (Gray & Prudy, 2018, p. 71). Furthermore, organizations that better understand their external stakeholders' behavior patterns are more likely to weather a crisis successfully (Alpaslan, 2009). In addition to other organizations, leaders should also look to build or sustain relationships with community leaders, including: (a) institutional leaders or those who have formal positions of leadership within the community; (b) the power elite, or those who exercise power due to their economic or social status; (c) and the grassroots leaders, or those who volunteer, frequently without pay, for the good of the community (Boehm et al., 2010).

Odlund (2010) proposed that there are three types of relationships between organizations during a crisis. Collaboration occurs when two organizations work together to achieve a common goal. Coordination involves two organizations working separately, but ensuring that their efforts either help or do not hinder the work of other organizations. Lastly, cooperation occurs when organizations must work together but neither can overrule the other in terms of objectives or how to reach them (Odlund, 2010). If these external relationships are not successfully leveraged, external groups may instead use coercive pressures to prompt the organization to act in a specific way (James & Wooten, 2006).

### *Internal Conflict Management*

One potential barrier to effective decision-making is internal conflict between organization members. The use of the word "potential" is intentional because healthy conflicts can lead to stronger overall understandings and decisions (Coser, 1962). Jehn et al. (1997) identified two different types of conflict—affective (relationship) conflict and cognitive (task-focused) conflict—and found that holding similar values tends to decrease the amount of both types of conflict in organizations, while working on unprecedented problems tends to increase both types. Therefore, leaders of an organization during a crisis will want to ensure that they emphasize and align decisions with the company's stated values.

Building upon this work, De Dreu and Weingart (2003) found that while affective conflict typically decreases job satisfaction and is more likely to lead to unfavorable project outcomes, a moderate amount of cognitive conflict actually can lead to greater job satisfaction and better overall outcomes. Hurt and Abebe (2015) extended this research by studying affective and cognitive conflict that occurred specifically during organizational crises, and found that as the severity of the crisis increased, the amount of both types of conflict decreased while the satisfaction in decisions made by leaders increased. The authors posited that during crises, "Intrateam conflict dynamics among top management teams to some extent could be superseded by the urgent need for prompt decision making and collaboration" (p. 350). Another mediating influence on the amount of conflict is information-sharing. As the amount of shared information increases, the amount of both affective and cognitive conflict tends to decrease, suggesting that leaders can also help to limit the amount of conflict by being successful communicators during a crisis (Moye & Langford, 2004).

### *Decisions Under Pressure*

During a crisis, leaders experience cognitive, affective, and physiological stress, all of which can impair decision-making (Wooten & James, 2008). Leaders who are able to continue to make coherent decisions while under these kinds of pressures are more likely to shepherd their organization successfully through a crisis. One way to strengthen decisions during a crisis is to already have crisis management plans in place (Lockwood, 2005) because having already outlined who will take which actions during a crisis relieves some of the cognitive burdens required to make many decisions in a short time period. This type of crisis planning requires a certain amount of creativity in order to determine possible crises and innovative solutions, making it all the more critical that such planning take place before the crisis occurs.

Wooten and James (2008) explained that leaders may find their decision-making abilities impeded as those leaders are likely to "to narrow the scope of organizational activity and rely increasingly on well-learned or habitual behavior," which inhibits their ability to seek out the innovative solutions that are often required for unprecedented problems (p. 369). Furthermore, leaders are less likely to seek employee input and more likely to make authoritarian-type decisions, which can impact employee morale (Prouska & Psychogios, 2018). James and Wooten (2006) referred to this as "threat rigidity," a phenomenon in which decision-making becomes less flexible when a leader or organization feels threatened. They further asserted that this type of threat rigidity can stem from isomorphism, or the decision (whether implicit or explicit) to behave like other institutions who have faced similar situations, regardless of whether those institutions handled the crisis effectively.

## Influences on How a District Designs Learning

The previous section discussed what is already known about effective leadership during a crisis, and this next section dives into themes that may be discovered during the research. It specifically considers the potential factors that influence how a district designs learning systems. These themes are by no means exhaustive. First, this section will look at the role of public policy, including how values influence both the writing and implementation of policy, especially as it relates to education. Next, this section will consider specific policies that may have impacted the design of virtual learning, such as the Virginia Standards of Learning. Lastly, this section will look at the role of organizational constructs, such as enabling structures, institutional logics, and isomorphism.

### Public Policy

Fowler (2013) defined public policy as "the dynamic and value-laden process through which a political system handles a public problem" (p. 5). Dye (2013) offered an even simpler definition of public policy: "Public policy is whatever governments choose to do or not to do" (p. 3). Not all public problems, however, become policy issues, and Fowler (2013) detailed the several steps required for such a problem to rise to the policy issue level. First, there must be competing opinions about a particular issue, which are usually the result of different values held by the involved stakeholders (Fowler, 2013). Next, this controversy must be of public importance; value systems that can be handled independently by stakeholders do not rise to the level of public policy (Dye, 2013; Fowler, 2013).

Once there is a problem with an appropriate amount of conflict that must be handled at the public level, the next several steps must occur in order for the issue to become public policy (Dye, 2013; Fowler, 2013). First, the issue must be defined (Fowler, 2013). The definition of the

issue is often strongly influenced by the values and opinions of the stakeholders. For instance, Freeman (2015) discusses the role that the media played in defining the accountability testing scandals that took place in Atlanta: By omitting any discussion of poverty and equity issues, the issue became defined as one of cheating teachers and administrators rather than taking a closer look at what might have motivated the cheating in order to address the root causes. This led to the issue being defined as needing greater accountability for educators, rather than the underlying issue, which was the high-stakes and inequitable nature of testing.

Even after an issue is defined, it may not make it into public policy unless it is added to the policy agenda (Fowler, 2013). This is typically done by politicians, who are, of course, motivated to act by various stakeholders who advocate for policies that suit their interests (Dye, 2013). Glazer et al. (2019) discussed how, in order for a policy to be successful, it must appeal to a wide variety of stakeholders, who may have varied values and needs. If the call for the policy is strong enough, it may end up being written into a bill during the step called policy formation. Again, special interest groups such as lobbyists, unions, and other organizations impact how the bill is actually written and how it will address the problem (Placier, 1993). Jimerson and Childs (2017) explain that some bills may symbolize a particular value but actually signal another value altogether. For instance, a bill may call for school districts to create afterschool programs for "at-risk" young people, but provide neither funding nor consequence if this is not done.

Once a policy is written, it still has to be adopted by the appropriate governing bodies, which again will often depend on the stakeholders to whom the particular politician answers (Dye, 2013; Fowler, 2013). The next step after policy adoption is to determine how it will be implemented (Fowler, 2013). Policies will then be evaluated, often by research offices, which

may also have their own guiding values that impact how they characterize the success of the implementation based on what they choose to study (Dye, 2013; Fowler, 2013).

### *Value Systems and Public Policy*

Values play a role in each step of the policy process (Dye, 2013). While there can be many different values at play in any given policy issue, Wirt et al. (1989) outlined four of the most common policy values: efficiency/accountability, choice, quality, and equity. Sometimes these values can work together, but often these values compete with one another (Wirt et al., 1989). Moreover, a policy may espouse a particular value, but be written in a way that actually emphasizes a different, even competing, value (Jimerson & Childs, 2017).

Accountability. Accountability is often associated with efficiency, which Fowler (2013) defined as when an education system "achieves high levels of student learning with relatively low expenditures" (p. 100). Gregory (2007) explained that "Managers' concerns for standardization and efficiency are assessed in such organizations through control and performance measurement methods involving strict top-down target setting, gathering of feedback information regarding the performance of the system and the use of reward and penalty measures to bring the system performance closer to the desired target" (p. 1503). In education, this often leads to federal and state education systems collecting a large range of output data to determine the effectiveness of the money put into the system. This output data may take the form of standardized assessment results, attendance data, teacher evaluation data, graduation rates, etc. (Fowler, 2013). Wirt et al. (1988) explained one form of efficiency is accountability, by which "superiors in an authority system can oversee, and hence control, their subordinates' exercise of power and responsibility" (p. 272).

Choice. Wirt, Mitchell, and Marshall (1988) asserted that when it comes to policy, "choice" refers to "a means for citizens to exercise their sovereignty" (p. 273). Fowler (2013) explained that the very structure of the U.S. education system itself can be seen as an embodiment of the value of choice because education was officially awarded as a duty of the state governments that often leave many decisions up to localities.

Equity. Fowler (2013) discussed how the concept of equity is often less about equality of outcomes, but rather about equitable access to opportunities. Wirt et al. (1988) explained that the value of equity is often used with regard to gaps in achievement between groups and using resources to fill those gaps. Equity can also be defined as "the worth of every individual in society, and the responsibility of society to realize that worth" (Wirt et al., p. 274).

Quality. Quality often has close ties with both accountability and equity because a quality school system is often seen as one in which many students achieve at high levels (Fowler, 2013). Wirt et al.,(1988) further expound that quality has two facets; the first has to do with the ideas of "excellence," "proficiency," or "superiority," and the second has to do with providing the resources in order to meet those standards.

### *Accountability Policy History in Virginia*

Virginia began its accountability journey in 1994 with the creation of Standards of Learning (SOLs), which dictated what should be taught in each grade level (Ruff, 2019). A year later, the Virginia General Assembly determined that standardized assessments should accompany this standardized curriculum (Ruff, 2019). When No Child Left Behind (NCLB) was passed in 2001, and then later reauthorized as the Every Student Succeeds Act (ESSA), Virginia already had a strong accountability system in place (Ruff, 2019). Virginia has seen changes to the state accountability system over the years. Two particular facets of the Virginia

accountability system will be examined in this section: (a) the recent move from flat pass rates to a more complex system that gives credit for student growth; and (b) the recent removal of some SOL tests in favor of locally-developed assessments with an emphasis on performance assessments.

Measuring Student Achievement vs. Measuring Student Growth. After the passage of NCLB, Virginia's accountability system featured assessments in the areas of reading, writing, mathematics, social studies, and science beginning in third grade. Each test consisted of 35-50 graded items (and around 10 field test items for future assessments). Students were (and continue to be) rated on scales of 200-600, with a score of 400-499 considered a "Pass" and a score of 500-600 considered a "Pass/Advanced." A certain percentage of students had to pass each test at each grade level, as seen in Table 1, for a school and district to be accredited in Virginia (Virginia Department of Education, 2008).

**Table 1**

***Virginia Original Adjusted Accreditation Benchmarks***

| Subject | Grade 3 | Grade 4-5 | Grades 6-12 |
|---|---|---|---|
| English | 75% | 75% | 70% |
| Mathematics | 70% | 70% | 70% |
| Science | 50% | 70% | 70% |
| History | 50% | 70% | 70% |

Schools in which students met all these benchmarks were given the designation of Accredited. Schools that did not meet the benchmarks were given the designation of Accredited with Warning, which they could receive each year for up to three years. Schools who failed to meet requirements after three consecutive warnings would be given the status of Accreditation

Denied and would then need to submit action plans to the state for improvement (Virginia Department of Education, 2008). Initially, results on these assessments were low; in 1999, only 6.5% of districts were considered "Accredited" by meeting the established standards. Nevertheless, Virginia felt that the SOLs and their tests were helping to move students in the right direction because Virginian scores on the National Assessment of Educational Progress test increased four points.

Changes to Accreditation Formulas. Virginia began making gradual changes over the following years regarding student achievement and pass rates. Now, instead of receiving one of the three designations discussed above, school performance is measured by several School Quality Indicators. These indicators determine whether a school is performing at a Level One, Level Two, or Level Three designation in each content area. Additionally, schools no longer have to achieve an outright pass rate and will get credit for reducing failure rates. For instance, in English (reading and writing), all of the following can count positively toward accreditation for schools: the number of students who outright pass the SOL test, students who show growth from one band to another as prescribed by the Virginia Department of Education, and English Language Learners who show growth on VDOE approved assessments (Code of Virginia, 2018).

Moreover, even if schools do not have 75% of students passing or showing growth as just outlined, they can still be considered a "Level One" school, the highest designation, if they were Level Two the previous year and reduce their failure rate by 10% or more (Code of Virginia, 2018). Schools that still cannot meet the requirements for either condition under Level One are assigned a score of Level Two if their current or three-year average is at least 66%, or if they previously had a rate of at least 50% and decrease their failure rate by 10%. Finally, if they still

cannot meet Level Two or have been in Level Two already for four years, schools receive the Level Three rating (Code of Virginia, 2018).

To determine the overall accreditation of a school, the rating (Level One, Level Two, or Level Three) in each of these content areas is examined. Any school that has all of its indicators at either a Level One or a Level Two is considered "Accredited." Any school that has a Level Three is considered "Accredited with Conditions." A school is only considered "Accreditation Denied" if "the school or school district fails to adopt and implement school district or school corrective action plans with fidelity" (Code of Virginia, 2018).

The Addition of Performance Assessments. Under NCLB, Virginia had not only met the requirements of the federal Title I bill, but had gone even further by implementing five assessments in science, social studies, and writing that were not required (Code of Virginia, 2018). The Code of Virginia was changed to allow local educational agencies to develop "local alternative assessments" rather than have state-created tests for these subjects (Code of Virginia, 2018). These alternative assessments needed to "incorporate options for age-appropriate, authentic performance assessments and portfolios with rubrics" (Code of Virginia, 2018). A spokesperson for the Virginia Department of Education explained that these performance assessments would help to not only measure content knowledge, but also the 5Cs: citizenship, collaboration, communication, creative thinking, and critical thinking (Doiron, 2019).

**Organizational Constructs**

Public policy typically is an external force on learning designs in school districts,but internal forces also exist. Some of these are overt and others may be more implicit. For instance, enabling school structures are generally easily identifiable and it is obvious when they have not

been implemented. On the other hand, many educators may instinctively use institutional logics and isomorphism to make certain decisions without realizing why they are making them. This next section will explore some of the research behind enabling school structures, institutional logics, and isomorphism.

### *Enabling School Structures*

Structure in an organization can either help or hinder individuals to be successful in meeting their objectives (Gray & Summers, 2015). Some structures, in addition to hindering, are also coercive, or focused on forcing employees to comply with rules or be punished (Adler & Borys, 1996). Structures that provide a positive impact on members of an organization are called "enabling." Hoy and Sweetland (2001) define an enabling structure as a bureaucratic element that "guides behavior, clarifies responsibility, reduces stress, and enables individuals to feel and be more effective" (p. 297). Examples of enabling structures in schools are rules that allow some flexibility for professional judgement, administrators who remove disturbances to teaching and learning, a hierarchy that delineates who will accomplish which tasks while continuing to allow for distributed leadership, and access to the appropriate professional learning (Wu et al., 2013). Other enabling structures in organizations can include providing adequate technology for the tasks, providing systems to cross-check the quality of work, and cross-training individuals to provide backup in case the main person who completes that task is absent (Nowell et al., 2017).

Enabling school structures are associated with higher levels of academic optimism and collective efficacy, which both have a positive impact on student performance (Hoy & Sweetland, 2001; Wu et al., 2013; Gray & Summers, 2015; Gray & Summers, 2016; Gray et al., 2016). One reason for this may be the impact that enabling structures have on professional learning communities. Gray and Summers (2016) found that schools with the enabling structures

that allowed for trust in administrators, trust in colleagues, and a belief of collective efficacy were more likely to have successful professional learning communities (PLCs). Once these effective PLCs are established, they in turn become an enabling school structure. School administrators can implement structures by ensuring a time and place for such PLCs (Gray & Summer, 2015). Both enabling structures and PLCs have been found to increase teacher feelings of power within their own organizations, and this in turn creates feelings of self-efficacy, academic trust, and academic optimism (Sweetland, 2001; Wu et al., 2013; Gray & Summer, 2015; Gray & Summer, 2016; Gray et al., 2016).

### *Institutional Logics*

Gray and Purdy (2018) defined a logic as "a set of organizing principles that govern the selection of technologies, define what kinds of actors are authorized to make claims, shape and constrain the behavioral possibilities of actors, and specify criteria for effectiveness and efficiency" (p. 37). Institutional logics work as frameworks for actors and may influence the way they speak, the way they act, and their values and beliefs (Thornton et al., 2012). Institutional logics are not ideologies, however. Ideologies may assert or constrain some actions and beliefs, whereas institutional logics account for how individuals and organizations impact one another, potentially even changing one another's values (Thornton et al., 2012). Kroezen and Heugens (2019) argued that while institutional logics may change, previous institutional logics leave their mark on current institutions; moreover, it is possible that reviving previously discarded institutional logics can effect change. Change in institutional logics can also occur if one institution begins to adopt the logics of another institution, leading to a hybridization of both logics (Upton & Warshaw, 2017; Parish, 2018). For example, many universities have recently

adopted business institutional logics in addition to their higher educational logics (Upton & Warshaw, 2017).

Institutional logics may be overt or subtle and they may guide the way that people approach problem-solving. Ngoye et al. (2019) found that even reading a text that subtly implied various institutional logics would have an impact on how participants rated solutions to problems. Participants in their study were more likely to rate highly solutions that supported the institutional logic in the text they read. Nath (2019) described three ways that institutional logics may impact problem-solving in organizations or individuals. The first is diagnostic framing, in which the institutional logic is used to understand the problem and its cause. Prognostic framing, on the other hand, helps determine solutions and their viability. Lastly, motivational framing provides the belief that the organization or individuals should take responsibility for solving the problem.

Institutional logics can also cause problems. Glazer and Groth (2019) analyzed competing institutional logics in charter schools, which are supposed to adhere to logics of standardized testing while also enacting logics around relationships and community. These two sometimes competing logics frequently made it difficult for any charter schools to thrive. Likewise, Wall (2017) found that when teachers see a curriculum change as coming from a bureaucratic logic (focused on compliance) or a market logic (focused on assessing student learning), they are unlikely to implement the curriculum with fidelity. Therefore, it is important for organizations to analyze their current guiding institutional logics to determine if those logics are appropriate for the organization's stated objectives.

### *Isomorphism*

DiMaggio and Powell (1983) defined isomorphism as "a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (p. 149). When applied to organizations, isomorphism can be understood as organizations seeking legitimacy by looking and acting like other organizations. It is a form of organizational change or "organizational homogenization" (Woelert & Croucher, 2018, p. 480). DiMaggio and Powell (1983) identified three types of isomorphism: (a) coercive, in which organizations feel pressure to conform to the standards set by other organizations; (b) mimetic, in which organizations choose to look like other organizations during tumultuous times as a solution for the uncertainty before them; and (c) normative, in which an organization is attempting to define itself as being professionally equal to other organizations of the same type. Mimetic and normative isomorphism can have positive effects on an organization. Seyfied et al. (2019) found that coercive isomorphism is not associated with increased effectiveness, which they suggest may be the result of an organization not truly internalizing the changes. Nevertheless, coercive isomorphism tends to be the "strongest form of isomorphism" (Seyfried et al., 2019, p. 126). In organizations of a new type, isomorphism may be associated with innovation as these new organizational sectors seek to solve the problems for which they were created; after a certain point, however, the adoption of isomorphic changes "provides legitimacy rather than improves performance" (DiMaggio & Powell, 1983, p. 148). One criticism of isomorphism theory is that it places too much emphasis on why and how organizations are the same rather than also studying why and how they are different (Pizmony-Levy, 2011; Woelert & Croucher, 2018).

Schools frequently face coercive isomorphic pressure from governments or other accrediting organizations, though schools also often are pressured by mimetic isomorphism to compete with other schools (Woelert & Croucher, 2018). Increasingly, educational organizations participate in isomorphism on a global scale as standardized assessment results are compared country-to-country (Aikda, 2017). Metha and Peterson (2019) found three different types of global isomorphism: (1) borrowing, in which one country seeks to outright mimic the policies or structures of another country; (2) co-construction, in which members of two or more countries work together to find solutions to complex problems; and (3) systems thinking, in which members use the systems and processes of other countries to better understand their own. Schools may, however, also use isomorphism to distinguish themselves by touting the ways in which they are different from "traditional schools" (Woelert & Croucher, 2018).

## Summary

Crises present both challenges and opportunities for beneficial change to organizations. Leaders must engage in several actions in order to be successful during a crisis. First, a leader must pay attention to circumstances and plan for potential crises as soon as possible. A leader must be able to manage the organization in a way that is effective during the crisis, and this may require a different approach than during non-crisis times. When a crisis occurs, leaders will want to ensure that they control the narrative, rather than letting outside sources create their own stories about the role of the organization in the crisis, which also helps protect the organization's reputation. Leaders must also build relationships and encourage the perception that any conflict is productive, both with internal and external parties.

Additionally, leaders need to be aware of the various influences that may impact them during a crisis. Public policy can require certain decisions which may or may not align with the

district's values. These policies may be the result of institutional logics, which influence policymaker's ideas of what school "should be," whether that logic is appropriate for the crisis or not. Leaders themselves frequently use institutional logics to solve problems, and need to question their own motives to make sure the solutions will truly ameliorate the crisis. Lastly, leaders may use isomorphism by adopting some of the solutions used by other organizations in the same or a similar crisis, but need to be aware of their own organizational constructs and whether those structures enable or hinder the chosen solution.

# CHAPTER III:

# RESEARCH DESIGN AND METHODOLOGY

This chapter revisits the methodologies that were used in this study in greater detail. First, I discuss the purpose of the study and then the research questions that were used. I provide explanations for choosing the grounded theory research design, and then justifications for the specific grounded theory methodologies I used during the course of this study. Importantly, I also discuss my potential biases based on my current role in a Virginia school district and how those biases may have impacted portions of this study. This chapter also includes discussions on the participants, interview process, and data collection and storage. Memos are a key component of grounded theory studies (Saldana, 2016), so the intended methodology for writing and analyzing memos will be discussed. Lastly, I discuss limitations and delimitations of this study.

## Purpose

The purpose of this study was to examine how superintendents understand the factors that impacted the design of their 100% virtual learning programs during the COVID-19 crisis. This study helped to develop a theoretical framework that can be used during future long-term crises in which virtual learning may be required.

## Research Questions

In a grounded theory study, research questions tend to be open-ended because the researcher should not make assumptions regarding what will be found during the study (Corbin & Strauss, 2015). Moreover, the research questions use constructivist theory to assume that the factors influencing the design of virtual learning are not objective so much as based upon the narrative reality that participants (superintendents) construct. This constructivist perspective incorporates the complexity theory elements of cybernetics and emergence by assuming that a

whole plan emerged as a result of the feedback between actors, with actors not necessarily being defined as people, but rather as influences acting independently and also as a result of one another (Shoup & Studer, 2010).

This study was guided by the following research questions:

1. What was the relationship between internal and external influencers on the 100% virtual learning design choices made by superintendents during the COVID-19 pandemic crisis?
2. What role, if any, did feedback between the various actors play in the emergence of the 100% virtual learning plan?

## Research Design and Rationale

Many agree that the last major pandemic to occur in the United States took place over a hundred years ago during the 1918 influenza epidemic, also known as Spanish flu (Center for Disease Control and Prevention, 2019). At no time in recent history has a pandemic been so widespread and so dangerous that it has caused schools to close for months; in fact, during the 1918 pandemic many schools actually stayed open, with the reasoning that schools were more hygienic than many of the situations in which students lived, especially in cities (Markel, 2020). Unlike during the 1918 pandemic, present-day educational institutions were able to make use of technologies to continue teaching and learning even when both students and teachers were in their own homes.

Many schools, however, found themselves having to design virtual learning with very little experience in having done it before. The particular cause (a pandemic) and the solution (virtual learning) were so unique that little research exists on this topic. Therefore, this study used a grounded theory methodology, which Corbin and Strauss (2015) explained can be used to "study new and emerging areas in need of investigation" (p. 32). Unlike other research

methodologies, which frequently add more understanding to an existing theory, grounded theory can be used to develop a theory where none currently exists (Charmaz, 2014). Glaser and Strauss (1967), the pioneers of the grounded theory approach, sought to eliminate what they call "armchair" theories in which scholars create theories based upon their own experiences but without the use of actual data (p. 14). Unlike quantitative studies, the qualitative method of grounded theory does not assume that the researcher can be objective and separate from the research (Charmaz, 2014; Corbin & Strauss, 2015). Rather, the researcher is able to combine her own knowledge with empirical evidence by "abductively moving back and forth between empirical materials and efforts to conceptualize them via incredibly robust and sophisticated theorizing and sampling" (Clarke, 2019, p. 6).

Grounded theory methodologies have seen some changes throughout the years as other research methodologies have gained attention (Clarke, 2019). One of the biggest changes was the introduction of constructivism (Charmaz, 2014). Glaser and Strauss (1967) originally recommended that grounded theorists should begin their research without any preliminary study in order to remain as open to new theories as possible; this assumed, however, that researchers can approach a topic devoid of all bias (Corbin & Strauss, 2015). Corbin and Strauss (2015) came to believe that researchers cannot ever remove themselves completely from bias, and therefore the best way to obtain the most valid results possible was for the researcher to admit as many potential biases as possible before beginning the study (Corbin & Strauss, 2015). The researcher then remains aware of these biases all through the study, constructing the theory through using both the empirical evidence and the researcher's own perspectives. Not only that, Corbin and Strauss (2015) saw no reason not to engage in reviewing the extant literature on a topic, as long as the researcher disclosed the research that took place before the study and

discussed how such research may influence the emergence of themes during the course of the study.

This particular study employed the constructivist approach to grounded theory. As a researcher, I was close to the subject and understood that this connection may make the research stronger by combining my background knowledge with the gathered evidence. I also understood, however, that in addition to disclosing potential biases, I needed to continually analyze the conclusions I drew from the evidence, including how and why those conclusions were drawn. As such, the reader is required to determine how generalizable the results of the study will be to other contexts.

The basic steps taken during the study most resembled the grounded theory methodology espoused by Charmaz (2014) in her book Constructing Grounded Theory (2nd ed.). More so than Corbin and Strauss (2015), Charmaz (2014) took a strong constructivist approach to grounded theory and believed that process, while important, should not impede the development of themes. She explained, for instance, that frequently when researchers use grounded theory for the first time, they focus too much on following the "rules" to the detriment of following their own instincts to analyze the data, often leading to codes that are too numerous, too disparate, and do not provide an actual theory.

## Context of the Student and Discussion of Potential Researcher Bias

No data can be collected without bias in either the instrument or simply the choices of what the researcher has chosen to measure (Mazzocchi, 2016); therefore, strong qualitative research methods require that the researcher examine, to the best of her ability, her own perceptions, contexts, and biases (Corbin & Strauss, 2015). Moreover, Mazzocchi (2016) argued that to assume a reductionist ontology regarding complexity theory—namely, that there are

underlying patterns to the world that exist independent of observation and can be determined by enough observation—is false, because observation cannot help but become entwined with the system being observed. He purported that there is no objective reality, and therefore researchers who use complexity theory as a framework must adopt an epistemology that involves understanding their own role in observing, understanding, and communicating that which they observe. Therefore, from an ontological perspective, this study did not ask what factors influenced decision-making as much as what factors did leaders believe influenced decision-making. Furthermore, it becomes critical that I, the researcher, explain my own role in selecting and developing this topic and how my own perspectives may influence the patterns that were observed.

In my role as a Director of Innovation and Professional Learning, I saw all these fluctuations happen in real-time, and was often included in the planning and implementation of my district's response. I oversaw and participated in the training sessions developed by my team of Digital Learning Specialists as we created several synchronous and asynchronous training modules to help teachers be successful with 100% online instruction. Frequently, however, the parameters of digital learning (i.e., the number of instructional minutes, instructional models, etc.) were determined by our district leadership team based on a variety of factors, and our task was to create training that fit those parameters. At times, those factors were explained to me, but at other times, I did not receive justification for their decisions. Understanding how superintendents interpret the reasons why they make decisions will add to the literature by exploring what influences learning designs during long-term, unprecedented crises.

Corbin and Strauss (2015) believed that a researcher, especially one close to the topic, can extrapolate potential topics based upon her background knowledge. Additionally, it can be

beneficial for a researcher to outline what she thinks the results of a study may be before engaging in grounded theory research; this helps the researcher be more aware of potential biases before beginning the study, and therefore more open to themes that were not originally expected (Corbin & Strauss, 2015). The themes that chosen for Chapter II were a direct result of my own experience with the design of virtual learning during the COVID-19 pandemic. Chapter V compares and contrasts these original themes with the actual themes that were found.

Another way that I sought to limit researcher bias was by developing a research team that consisted of two other people. This research team reviewed my memos, diagrams, and interview transcripts as a measure of member-checking. This will help to ensure that I am not seeing patterns that do not truly exist, and also that I am not missing patterns that do exist. Members of the research team will have had formal training in qualitative research methods at the doctoral level; one member had recently completed a Ph.D. in the same program, and another was at the dissertation phase in their Ph.D. program

## Participants

Participants were Virginia public school superintendents, who were employed in the same district from March 13, 2020 through at least December 1, 2020. They must have led districts that engaged in 100% virtual learning for at least some part of the first quarter of the 2020-2021 school year. The number of themes extracted during a grounded theory study can be quite large; ensuring the use of data only from superintendents whose districts engaged in 100% virtual learning helped to ensure that the development of those learning designs is not conflated with the development of hybrid or other distance learning designs. Participants were chosen based personal connections and random selection. I used my own connections developed during

the course of my work to find initial participants. I also reached out to people that had mutual connections with me.

Once I had exhausted those avenues, I accessed the VDOE State Snapshot: Virginia School Operational Status in order to determine which school districts had been fully virtual (or "fully remote," according to the VDOE's terminology) at some point during the first semester of the 2020-2021 school year. The State Snapshot page included information about district status for September 8, September 22, and November 12. This webpage also gave information regarding the number of students and, if districts had gone to an in-person or hybrid plan, the schedule of the grade levels going either in-person or hybrid. I downloaded this information into a .csv file, keeping the raw data on one tab of a spreadsheet in order to be able to refer back to it. I then duplicated that tab and, on the new tab, removed any school districts that had not engaged in 100% remote learning for at least some portion of the 2020-2021 school year. Sixty-eight school districts met this criterion. I removed the names of the superintendents I had emailed in the personal connections phase, so as not to send them two invitations. I then randomized the order on the spreadsheet in order to randomly choose more superintendents to whom to send an invitation. I looked up the superintendents and their Emails for each of these school districts in order to send my introductory email and request for an interview (Appendix C). Of the potential 68 superintendents, 41 superintendents received invitations. Of these, 16 accepted the invitation to be interviewed, and 15 set up an interview time and completed the interview process. These fifteen interviews provided a saturation of themes.

Participants' districts were representative of a wide variety of characteristics and demographics. For instance, overall in Virginia, 39% of people identify as minorities. In this study, in which 15 superintendents were interviewed, three of their communities had 0-15% of

people who identified as minorities, six had 16-30% of their community population who identified as minorities, four had 31-45%, one had 46-60%, and one had more than 60% who identified as minorities (Census Reporter, 2019).

Regarding socioeconomic status, 13% of Virginia's children under age 18 are considered living below the poverty line. Of the superintendents interviewed for this study, four supervised districts with less than 10% of children under the age of 18 identified as living below the poverty line. Six superintendents supervised districts where 11-15% of the children lived in poverty. Four superintendents were in charge of districts where 20-35% of the students lived in poverty (Census Reporter, 2019).

Another demographic in which the districts showed a great range was the number of people in the district possessing a bachelor's degree or higher. Overall in Virginia, 29.6% of people have obtained a bachelor's degree or higher. In the current study, four superintendents oversaw communities where less than 20% of the population had earned a bachelor's degree or higher. In five of the districts represented by superintendents, 21-30% of the population had earned a bachelor's degree or higher. Another five districts had 31-40% of their community who had earned a bachelor's degree or higher, and one district had over 40% of their population holding a bachelor's degree or higher.

One area in which the superintendents' districts were less representative of the overall population was the percentage of people speaking a language other than English at home. In Virginia, 17% of the overall population identifies as speaking a language other than English at home, with 83% speaking only English. In this study, however, 13 of the 15 superintendents represented districts in which less than 10% of the population spoke a language other than

English at home. The other two districts still had less than 20% of their population speak a language other than English at home (Census Reports, 2019).

Lastly, the districts represented by superintendents had a great variance in their 2020 Fall Membership (VDOE, 2020b). Seven districts had fewer than 5,000 students. Two districts had 5,001-10,000 students counted in their Fall membership, and two districts had 10,001-15,000 students in their districts. Three of the districts had more than 15,000 students (VDOE, 2020b).

The collection of data from superintendents who supervised school districts with varying characteristics helped to get a wider picture of the influences on virtual learning for the study. Although the superintendents were chosen either randomly or for their connections to the author or randomly, they represented a wide array of Virginia districts in terms of their demographics and Fall 2020 membership.

## Data Collection & Storage

Interviews were the main source of data. Interviews were semi-structured in order to keep the discussion on-topic while also allowing for flexibility in the discussion (Corbin & Strauss, 2015). A copy of the interview protocol can be found in Appendix A. I asked follow-up questions as needed to probe more deeply into various topics. Each interview was conducted via Zoom due to the ongoing pandemic. This facilitated a smoother data collection process, as neither I nor the superintendents had to travel anywhere to complete interviews.

Participants were all offered the opportunity to decline being recorded via the Zoom recording feature; they were told that the recordings would only be used for the purposes of transcribing the interviews in order to obtain the most accurate data. Participants were assured that they would receive a copy of the transcript and could edit anything they desired, and that they could also request that I immediately strike anything they said from the record.

Additionally, participants were told that all data would be anonymized to ensure any details that could potentially be used to identify the person or the school district would not be used. All transcriptions were kept in a password protected Google Drive folder using Google Docs. All participants completed and returned a Consent for Participation in Interview Research form before being interviewed (Appendix B). Additionally, each superintendent was given a code number that was used instead of their names in the transcriptions. Once an interview had been transcribed and anonymized, the transcript was Emailed to the appropriate superintendent. Superintendents were each given four to give days to make any edits to the transcript before coding would begin, though they could request more time if needed. At the end of the study, all recordings were deleted.

Immediately following each interview, I engaged in what Glaser and Strauss (1967) call "analytic memo writing" (p. 72). This memo writing allows the researcher to look for "emergent categories, reformulating them as their properties emerge, selectively pruning his list of categories while adding to the list as his core theory emerges" (Glaser & Strauss, p. 72). Memoing also allows the researcher to examine how her own experiences and beliefs may help and/or hinder the data analysis process (Charmaz, 2014). Another benefit of writing memos is that the researcher can have a record of not only what was said, but the participant's affect, body language, or any other potentially important information. Initially, memos were mostly a brainstorm or a chance to "let loose with [my] thoughts" (Corbin & Strauss, p. 132). As the interviews, memos, and coding progressed, however, memos were used to make sense of the evidence in order to develop a theory.

## Data Analysis

In grounded theory, the data analysis and data collection usually coincide. As Glaser and Strauss (1967) explained, the researcher is "constantly redesigning and reintegrating his theoretical notions as he reviews his material" (p. 101). To that end, transcripts and memos were analyzed immediately after they were written, and each memo was revisited as more interviews occurred in order to establish patterns and determine what themes were emerging. Furthermore, as themes began to emerge, they influenced some of the follow-up questions asked during the semi-structured interview. For instance, one superintendent spoke at length on the influence of the Standards of Learning tests on the creation of their virtual learning program; therefore, I incorporated this question into several interviews thereafter to see whether it appeared to be an influencer for other superintendents, which would confirm the conclusions of the first superintendent.

Before coding, I read and reread all transcripts and removed any identifying information. I then sent the transcripts to superintendents, with a requested return date for any changes they would like to make. Once the timeline for changes had closed, or the superintendent indicated that the interview was acceptable, I began the process of coding. The coding methods I used were those recommended for constructivist grounded theory research in Charmaz's Constructing Grounded Theory (2nd ed., 2014). First, initial line-by-line coding was done on several interviews until general themes began to emerge. This type of coding helps to stimulate "ideas that might not appear if coding for larger themes and lets the researcher see detail and patterns that might not otherwise be noticed" (Belgrave & Seide, 2019, p. 176). While no researcher can completely divorce herself from seeing patterns through the lens of her own beliefs and experiences, Charmaz (2014) advocated that during coding, the researcher continually reviews

her own potential biases and lens and understands these not as given truths, but rather as one perspective. An example of this line-by-line coding can be seen in Table 2.

**Table 2**

***Sample Line-by-Line Coding and Potential Category Development***

| Transcript | Line-by-Line Coding |
|---|---|
| Ashe: We should be thinking about it now, but we've got school starting up again, about these lessons learned. I think there's tremendous potential. Our teachers are really good at it now. They're really good at it. So you talk about limited resources like, "We don't have buses," and, "Well, we don't have enough time," and all these other things. Well, maybe those things aren't such limitations anymore. | Lessons learned<br><br>Virtual can overcome resource limitations |
| Juneberry: Well we are now one-to-one. We got the money. We made it happen. We got the devices out in the middle of the pandemic. So it's not going back. So the challenge will be to take everything that the teachers have learned to do so well and learn to incorporate it into their classroom and not just say "we're done with that. Let's go back to normal." I think we've advanced so much through necessity in the use of technology in the classroom to complement what's happened and to really instruct in a different way then I think it's going to impact teaching and learning from here forward. | 1:1 now<br><br>Creating a "new normal" that incorporates some things from the pandemic<br>Impact on future teaching and learning |

From these general themes, a diagram of overall influences was developed, as represented in Table 2. Further interviews were then coded using these themes, while also continually refining the diagram if new and/or important themes were discovered. Charmaz (2014) also emphasized that the process of coding should not get in the way of letting themes develop. In other words, themes should develop naturally rather than as a result of a researcher engaging in a rote process that may or may not be ultimately helpful.

During this portion of data analysis, I also examined the data for in vivo codes. This examination fulfilled two needs: (1) it allowed me to analyze terms that participants assume mean the same thing to everyone, but frequently do not in education (e.g, the terms "virtual learning" and "distance learning" are frequently cited as meaning the same thing, even though virtual learning is type of distance learning); and (2) examining these implicit meanings allowed me to compare current data and the emerging categories (Charmaz, 2014). Perhaps the most notable code discovered during this phase was the usage of the term "remote learning" to replace "distance learning" or "virtual learning." Several superintendents, especially those in rural districts, were more likely to use the term "remote learning" because, as one superintendent explained, "I hate to say virtual because not everyone has internet access." Nevertheless, they frequently defined it differently. One superintendent, for instance, identified three types of learning: face-to-face, fully distanced, and remote with packet learning; in this case, "remote learning" meant using zero technology. Another superintendent used it to mean anything other than in-person learning, while another used it to mean virtual learning that took place anywhere other than school. Emerging vocabulary such as the word "remote" meant that I had to frequently ask superintendents to define what they specifically meant by such terms.

After in vivo coding, focused coding was completed. I considered which of the codes seem most salient when accounting for the various data, where similarities of codes emerged, and whether there appeared to be gaps in the data. This portion of the coding also involved comparing codes with other codes (Charmaz, 2014), and sometimes collapsing them into one category. For instance, some superintendents discussed the concepts of "hindsight," "reflection," and "lessons learned." Meanwhile, one superintendent talked at-length about their hopes for the future, and another combined the ideas of reflection on the past and the future by expressing the

need to use what we had learned to inspire the future of education. Whereas I originally used various words to describe these concepts in the line-by-line coding, during the focused coding they were collapsed into “Looking Back” and “Looking Ahead.”

Next, axial coding was completed as I sorted codes into categories and subcategories (Corbin & Strauss, 2015), but with the knowledge that the process of coding was not the purpose of the study, and the process should not distract from allowing themes to emerge (Charmaz, 2014). The point of axial coding is not necessarily to encompass every topic discussed by superintendents, but rather to tease out the most frequently discussed themes. Axial coding coincided with diagram creation because “diagrams enable researchers to organize data, keep a record of their concepts and the relationships between them, and integrate their ideas” (Corbin & Strauss, 2015, p. 137). Additionally, diagrams helped show relationships between concepts in ways that memos may not (Corbin & Strauss, 2015). As the themes began to emerge, my diagram began simply, then increased significantly in complexity as more categories and subcategories began to emerge. It was then pared back down as certain themes subsumed others. When determining which categories to elevate to themes, Charmaz (2014) recommended choosing a potentially more abstract theme that subsumes multiple categories, which explains why the final diagram ended up simpler than some of its previous iterations.

This process of collecting and analyzing data continued until saturation was reached—the point at which further data collection yielded no new results. The evolution of memos, coding, and the diagrams allowed me to develop: (1) thick data that illustrated the concepts discussed by the participants; and, over time, a theory of how superintendents viewed the influences on virtual learning during the COVID-19 pandemic. Memos and diagrams also afforded me the opportunity to examine my own feelings and connection to the material, both in order to better interpret the

data and to avoid potential bias (Corbin & Strauss, 2015). For instance, in my literature review, I initially supposed that isomorphism would be a strong influence; however, almost all the superintendents explained that they were more concerned with doing what was right for their own communities rather than attempting a cohesive plan with nearby districts. Once the themes were developed into a potential theory, I reviewed all memos and diagrams to determine whether there were any gaps in the logic. I also engaged in member checking by sending the transcripts, codes, and potential themes and theory to two colleagues. This ensured that I did not miss any themes and did not exhibit bias toward particular themes.

## Delimitations

The following delimitations were established for this study:

- Only superintendents who were employed in their school districts from March 13 through December 1 were used.
- The period being studied was March 13, 2020 through January 31, 2021.
- School districts must have engaged in virtual, distance, or remote learning from March 13 until the end of their school year in 2020. They must have engaged in 100% virtual learning during at least some part of the first marking period of the 2020-2021 school year.
- The study focused only on 100% virtual learning. Several school districts implemented a "hybrid" model in which students attended in-person schooling for one or more days a week and engaged in distance learning one or more days a week. These school districts were not studied, given that the students most likely did not engage in live virtual learning sessions.

- By choosing to use complexity theory, this study sought only to describe the influences on designing 100% virtual learning experiences for students; it did not seek to prescribe best practices or pass judgment on any of the information that participants supplied.

## Limitations

The following were limitations of this study:

- The study took place in Virginia and was therefore reflective of Virginia educational policy. This may or may not be reflective of the circumstances in other states.
- This study was limited to PreK-12 public education, and may not be reflective of private, parochial, and/or charter schools.
- The participants were district superintendents. The darkness principle of complexity theory explains that no actor can know more than that actor's own role and relationship to other actors. A superintendent may have a different view and understanding of their district when compared to other central office personnel, school-level administrators, teachers, and other educators in the school district.
- The study took place through the lens of my own experiences and perspectives in combination with the collected data. Charmaz (2014) explained that this is both a strength and a limitation of grounded theory work. I worked to decrease the impact of this limitation by meta-analyzing how I analyzed the data.
- The topic of the study was 100% virtual learning and may not be generalizable to other learning designs.

## Summary of Methods

Using grounded theory methodologies presented an opportunity to explore an unprecedented time in American educational history and use the results to better understand the influences superintendents believe impacted the design of 100% virtual learning in their districts. The use of semi-structured interviews allowed for the widest net to capture data, rather than imposing preconceptions on study participants. Continuously creating memos and diagrams allowed me to leverage my own experience in designing virtual learning systems in order to understand the processes of others, and the reflexive analysis helped to determine my own potential biases. Engaging in open coding, then focused coding, and lastly, axial coding helped the most salient ideas to emerge and enabled connections to be made regarding the factors that superintendents believed impacted the design of their districts' virtual learning programs. Data collection and analysis reflexively continued until saturation was reached, allowing for the production of a theory that can provide insight into learning designs during an unprecedented crisis. This methodology was approved on January 12, 2021, under the IRBNet ID of 1679088-2.

# CHAPTER IV:

# DATA ANALYSIS AND FINDINGS

The goal of this study was to develop a theory that helped to answer the following research questions:

1. What was the relationship between internal and external influencers on the 100% virtual learning design choices made by superintendents during the COVID-19 pandemic crisis?
2. What role, if any, did feedback between the various actors play in the emergence of the 100% virtual learning plan?

Using a grounded theory methodology and open-ended questions allowed me to study this unprecedented phenomenon that included both a pandemic and available technology to allow for virtual learning. "Actors" are defined as "influences" in that they "act" upon something. "Feedback" was defined as the way in which these actors (or influences) interact with each other (Shoup & Studer, 2010). Therefore, the focus was not specifically on responses to and reactions of stakeholders, but more so on the interplay between what superintendents saw as the main influencers. To uncover answers to these questions, I interviewed 15 superintendents across the state of Virginia. As the leaders of their school districts, superintendents were most likely to have the largest vantage point of the influences on these learning designs. They were the people most likely to help mitigate the darkness principle of complexity theory, which states that no single actor can know more about the whole system than that actor's own role and relationships; it is impossible for any actor to understand the entire whole (Richardson, 2016).

In this chapter, I present my findings to develop a theory of superintendents' perceptions of influences on designing 100% virtual learning during the COVID-19 pandemic. There were two main theoretical codes: unintentional influences and intentional responses. Categories under

the unintentional influences included political factors, resource availability, and emotional needs of stakeholders. Categories under intentional responses included leveraging relationships, communicating purposefully, and reinforcing the mission. Data revealed that each of the unintentional influences impacted the intentional responses and vice versa, creating a complex interplay between the various influences that ended in the creation of virtual learning plans that emphasized the importance of equitable learning opportunities for all students.

It is also important to note there were not always clean lines between the categories in both the unintentional and intentional responses. For instance, Superintendent Foxglove commented:

> There are already so many other things to be concerned about. You're juggling so many new things, so if we can help take one of those bits of anxiety away by being receptive, to listening, to answering and giving you a solution ... We set up hotlines for families, for kids, for staff. So, we tried to be as transparent with it as possible.

The quote was coded as both addressing the unintentional influence "emotional needs of stakeholders" and also the intentional influence "communicating purposefully." Charmaz (2014) explained that a researcher using grounded theory should use any pre-knowledge about a topic to make sense of data, and that data may fluidly fall in and between categories. For this reason, I used my own knowledge from my instructional technology and district central office background to determine where a piece of evidence best fits for this Findings section. It is likely, however, that readers will find certain quotes applicable to other categories as well.

Additionally, a pervading theme identified in every interview with superintendents was that of how to ensure equitable virtual learning for all students. First, this chapter will unpack the themes seen around equity. Then, this chapter will look at the unintentional influences (political

factors, resource availability, and emotional needs of stakeholders) before turning to the ways that superintendents intentionally influenced virtual learning designs, including leveraging relationships, communicating purposefully, and reinforcing the mission. Lastly, this section will present a summary of the major findings of this study.

## Equity as a Pervading Theme and Desired Outcome

The study revealed that the value that concerned superintendents the most when designing virtual learning was equity. When defining equity, it is important to understand the differences between equality and equity. On one hand, "equality" frequently looks at individuals and assumes that they come from level playing fields, whereas "equity" takes into account differences in the way that society has historically treated different groups (Caldwell et al., 2007). If "equality" means that all people receive the same resources and opportunities, "equity" is about taking into account individual needs and differences to ensure that each person receives what they need to be successful. While an equitable education may not provide the same outcomes for all students, it should at least ensure that all students have access to the same opportunities (Fowler, 2013). Wirt et al. (1998) further defined equity as "the worth of every individual in society, and the responsibility of society to realize that worth" (p. 274).

Every superintendent, in some way, discussed the idea of technological equity (see Table 3). Before the COVID-19 pandemic, technology frequently was seen as a additive measure that could ameliorate achievement gaps, or, as McLeod and Shareski (2018) wrote, "certain groups of students get to use technology in creative and empowering ways, while other primarily react to practice exercises that the computer inflicts on them" (p. 37). The goal, therefore, was less about learning to use technology in ways that emphasized critical and creative thinking that could provide students with important skills for college and careers, but rather as a means to the end of

closing achievement gaps as measured by standardized assessments. Voithofer and Foley (2007) explained it another way: “Technology is often viewed by educators in terms of what it can add or how it can supplement current educational practices rather than as a material change in the pedagogical dynamics between teachers and students” (p. 14).

This theme of equity in the use of technology was seen in different ways. In Superintendent Greenhart’s district, the leadership team “had to have conversations with some teachers on why some students had their cameras off.” The teachers equated being able to see students with being able to measure student engagement. Superintendent Greenhart, however, explained that sometimes students do not want others to see their living conditions, or have adults in the background acting inappropriately. Instead, the district urged the teachers with concerns about cameras being turned off to “have a one-on-one with the student ... then maybe you can probe a little bit deeper.” This district also had “to get teachers who could really create a brand new pedagogy...where, I need you to find some different ways to determine if your kids are actively engaged in class.” Superintendent Greenhart described this district as “probably about ten years behind in a lot of things they could do. And it’s ten years behind on purpose because people want to remain in power and don’t want to share it with the folks that need it” but explained that “I’m gonna push back, verbally. In a respectful manner. I’m gonna keep it professional, but I’m gonna question their statements, which people aren’t used to.”

Superintendent Ashe discussed similar equity issues during virtual learning. This superintendent discussed a program in the district in which the teachers would recognize outstanding students during virtual learning. At first, Superintendent Ashe thought it was a great idea, but soon had second thoughts because:

> But when all the kids look the same and they look like they're coming from the same neighborhoods, I just want to pick up the phone and call the school counselors and say, "Can you pick some virtual all-stars who look different than these ones, or is that really what's happening?" Is that really what's happening?

Superintendent Ashe could not tell whether teachers were choosing mostly White students due to implicit bias, or because of the connection between socioeconomic status and race in the district. Were the students from families that received free and reduced lunch significantly struggling with virtual learning? And if so, Superintendent Ashe wondered why, and how to solve such issues if opening school doors was not an option.

Superintendent Larch took the theme of equity further than simply needing infrastructural and pedagogical changes, however, explaining that what was really needed was an entire culture shift:

> We should not have been in a position where we didn't know [number] of our families had no internet access. And so, they didn't have it before this happened, and yet we need them to have it, and we didn't know. We never asked. So that points to our challenges, our internal, institutional, structural challenges and the barriers that we put up to prevent children from learning. And so, you know, I mean you can do things to address that, you have to do things to address that, but you have to change your culture and your mindset and your belief about children. And so, at the very least, what I hope and think this kind of spotlight on equity issues will do is force people who have not been having that conversation to have it.

Throughout the rest of this chapter, themes of equity will be seen in both the unintentional and intentional responses on designing virtual learning. From national politics, to internet access, to

fears of the virus and trying to meet diverse stakeholders' needs, the theme of equity pervaded each interview.

**Table 3**

***Excerpts of Quotes from Each Superintendent Regarding Equity***

| Superintendent | Example Equity Quote |
|---|---|
| A. Ashe | And the existing inequalities in our community and our school district have been exacerbated, because for the haves this is fine, and for the have-nots it's just not. |
| B. Birch | So I think for us, it has really been, what is so essential, has been all of the systems and the fact that we as a district, we have been able to identify where the gaps exist or existed and we have been in a stronger position, I think, to address those particular gaps in terms of building that virtual world |
| C. Cypress | I think it's made an opportunity for teachers to really get to see students in their environment and see exactly what some of the challenges have been for our students, when you see them in that aspect. So it brings some light to the whole educational environment and learning the students, and understanding their challenges away from school. |
| D. Dogwood | We have bought some hot spots for students, especially with our students with disabilities and our struggling students and English language learners and so forth, to make sure that they have connectivity. |
| E. Elm | That's why we held onto the in-person so long...because we couldn't figure out a way from an equity lens to deliver virtual learning. |
| F. Foxglove | In...rural Virginia, there are deep pockets without equitable internet access. We are still fighting that battle. |
| G. Greenhart | We also brought in [consultant] for our culturally relevant instruction and cultural competency. And that way, it made some people uncomfortable, but the good thing about [consultant] is [they] really tied it to the science of the brain and not just the color of your skin. And so we're gonna expand that, do some things on implicit bias within the process of finalizing our equity policy. |

| | |
|---|---|
| H. Hazel | And then I think, still, getting ahold of students. It seems like maybe a quarter of our population is still difficult to get in and part of my fear is, I'm sure this is everybody's, is you retain 15 or 20% of your students. |
| I. Ironwood | That was a huge [challenge], access, and kind of accommodating particularly kids in poverty. That's an interest of mine, and a concern because I think it's a mitigating factor that always comes into play beyond any other factor that you're going to deal with. It's all about resource allocation, access, all those things. So yes that was a huge challenge in our rural community. |
| J. Juneberry | Parents started leaving in the summer. We're an interesting community. We're about 35% free/reduced lunch….And so some families could afford options and others can't. |
| K. Knowlton | We have a myriad of issues where we can see that it's not equitable for every family. And knowing that, we tried to make the learning as approachable and as supportive to our families as we possibly can, because we know families are stressing out to the max about learning. |
| L. Larch | I get a little peeved at the people who say, well, this thing has really created some equity issues and I'm like no, those equity issues were pre-existing conditions. |
| M. Maple | [Prior to the pandemic], we had also known that a good portion of a part of our district is really challenged in terms of WiFi access. And so we've known all along that it would be great for students to each have their own device, especially those who are economically disadvantaged. But we were aware that even if they had the device, that being able to equitably implement some of the key learning strategies such as flipped classrooms, well, those kids wouldn't be able to do it. |
| N. Nogalito | We've probably got between 25 and 35 kids who just are AWOL still. They're just not responding. And in most cases we've been able to make personal contact and bring kids in, and some cases we've brought kids to the campus for isolated, just to get them engaged. But there are this handful of kids that have done nothing. |

| | |
|---|---|
| O. Orange | But the biggest need that we've had is in Title I schools. What we find is that around 50 to 60% of those families chose the virtual, which surprises me at first. But then when I started delving into a little bit more of those families were really afraid of the virus and they were afraid of not having the healthcare to overcome it and a lot of those kids were being raised by grandparents who really were afraid that it would be brought home to them. |

## Unintentional Influences

During the theoretical coding, it became clear that the major influences could be divided into two distinct categories: those over which school districts had influence (the intentional responses) and those over which they did not (the unintentional influences). In fact, many of the intentional responses were a result of the unintentional influences. Of these unintentional influences, Superintendent Birch said:

> You have to recognize that sometimes there are outside forces that can influence other aspects of the work, and you recognize that. And then you sort of kind of regroup and say, "What could we have done that we didn't do in terms of...are there opportunities for us? And then how do we move forward because you have got to be a strategist in this work as well.

This section will explore these unintentional influences that had impacts on the designs of virtual learning. First, this section will look at the impact of political factors such as national politics, the role of the Virginia Department of Education, and relationships between superintendents and school boards. Then, this section will discuss the availability of resources, including what technology and devices were available prior to the pandemic, the role of the substantial federal funds that were distributed to all school districts, and scarcity of personal computing devices and internet access. Lastly, this section will consider how the emotional, mental, and logistical needs

of stakeholders impacted virtual learning designs. These needs will include fears about the virus and technological change, the importance of trust between stakeholders, the difficulty of balancing different stakeholders' needs, and the emotional needs of superintendents themselves.

## The Impact of Political Factors

Fowler (2013) explained that public policy is both "dynamic" and "value-laden" (p. 5), and also purports that not all public problems rise to the level of policy issues. The global COVID-19 pandemic quickly became a policy issue due to completing opinions on how to handle the impact of the pandemic on the economy, the health industry, the educational sector, and other areas. On the conservative side of politics, President Donald Trump, after recovering from the COVID virus, tweeted, "Feeling really good! Don't be afraid of Covid. Don't let it dominate your life. We have developed, under the Trump administration, some really great drugs and knowledge" (Pesce, 2020). At the time, 210,000 Americans had died of COVID-19; at the time of writing this dissertation, it is over 500,000. Furthermore, the CDC noted that "there is increasing evidence that some racial and ethnic minority groups are being disproportionately affected by COVID-19" (Centers for Diseases Control and Prevention, 2021). Whether and to what extent schools should close doors in favor of virtual learning became a topic of heated debate. Each superintendent interviewed discussed the politics of the decision regarding whether to use virtual, hybrid, or fully in-person learning. This section looks at the impact of national politics, official and unofficial mandates from the Virginia Department of Education (VDOE), and how relationships between superintendents and their school boards varied between districts.

### *Divisive National Politics*

By far, one of the biggest impacts on the designs for virtual learning was national politics. While it was not the purpose of this study to examine influences on the decisions to

teach virtually versus in-person, the politics of that decision were so divisive that every superintendent spoke about this topic in their interviews. In areas that tended to have more conservative constituents, superintendents were far more likely to see virtual learning as a stop-gap or last resort, therefore putting less time into training and developing plans for it. Superintendent Elm described working with school board members who represented different viewpoints on the political spectrum:

> There is some doubt about whether the virus is real or manufactured…. There was a huge priority to in-person learning, no matter what the metrics say. I spent a great deal of time working with our board members, and they span from extremely liberal to extremely conservative and everything in between, and really worked with them on the unknown and what we could do with the guidelines.

Superintendent Maple made a similar statement when discussing a portion of the community who did not like virtual learning from the start. This superintendent said:

> I think everybody probably throughout the state went through that because of the inherent kind of bizarre politics that have been a part of this. And just like everywhere else, we've had a group, a smaller, vocal group…. And there's always a cherry-picked argument that we should have them all back in.

This superintendent also maintained that part of the role of the district leadership was to keep their stakeholders engaged "without allowing the external forces to drive us into making, I think, the process stir-crazy." Superintendent Maple explained that it was important to reserve judgement on the opinions of others during such an unprecedented and fluid situation. "You'll think, well, I was right here, and somebody else was wrong, and then another six months from now we'll go, wait a minute. Maybe they were right and I was wrong," they said.

Some communities were more divisive than others when it came to the virus. Superintendent Juneberry leads “a community with a 50/50 split.” This superintendent explained that, “Some think the virus doesn’t exist or doesn’t bother them and 50% are afraid. We’re one of those communities where it’s not totally in one camp or the other so we’re walking a fine line every time.” This split had some difficult consequences for this district. Superintendent Juneberry explained that when Governor Northam closed schools in March, 2020:

> We managed reasonably well but we lost kids. So you ask about parents' reaction when we came back virtual. Parents started leaving in the summer.... Some families could afford options and others can’t. So it’s very interesting. Because of our community, we lost about 500 students.

Meeting the needs of those who feared the virus and those who wanted students back in school was even more difficult because of the divisive politics involved.

Even the national debates about the effectiveness of masks and whether masks should be mandated ended up impacting virtual learning. Superintendent Ashe, for instance, shared that, anticipating that the Department of Health was about to require masks, “I went ahead and told families that masks would be required.” The superintendent went on to say, “Well, you would've thought I'd cut their right arms off or something.” As a result of the mask pronouncement, families who refused to wear masks changed their choice of methodology from in-person to virtual. Superintendent Ashe explained that due to logistical issues, this increase in numbers of virtual students made it impossible to support both a virtual and an in-person model. “So there's a certain breakpoint where you don't have enough [teachers] to staff both models...at least for us with our staffing pattern, we couldn't do it anymore.” This was one reason that Superintendent Ashe’s district ended up being 100% virtual for a while.

Meanwhile, other national events created the need for a greater focus on equity, especially in terms of race. News coverage included deaths such as that of George Floyd, who died from having a police officer kneel on his neck, even after Floyd said that he could not breathe; Breonna Taylor, who died after police officers raided the wrong home on a "no knock" raid; and Ahmaud Arbery, who died after being shot by a white father and son who mistook him for a criminal when Arbery went for a morning jog (Brown, 2020). These deaths represented all the racial issues that still exist in America today, and were on the minds of many school officials when planning for the 2021-2022 school year. Superintendent Greenhart, for instance, said that "those events...brought it all to the forefront, made people realize, okay damn, maybe [I] know what [I'm] talking about 'cause we don't want something like that to happen here." Greenhart's school board tended to be divided along political lines. "I mean, it was bad! It was bad!" Greenhart said. "And this probably made some people upset, I was like, here we are, we got all the adults having all these arguments but no one is talking about the effect it's having on the kids."

Superintendent Hazel experienced working with a school board that also had a variety of viewpoints that impacted both fear of the virus and beliefs of equity. On discussing the decision whether to open virtually or in a hybrid model, this superintendent said:

> It was just a damn fistfight with the school board. I mean, you know, our dynamics are a good picture of America, kinda half black and half white. And our board is the same way. We had eight on the board and we just couldn't get to a point where we could get consensus on re-entering school and so it was in early August when we made that decision."

According to Superintendent Hazel, whether families wanted to go back to school was also correlated with race:

> [Elementary school], which is a 90% Black school...when we did our survey about getting kids back in school, we had just under 40% of our [families] who...wanted kids back in school. [Another elementary school], which is [a] mostly white elementary school, had over 60% wanted their kids to come back to school.

### *The Virginia Department of Education's Official and Unofficial Mandates*

One way in which the Virginia Department of Education (VDOE) influenced the learning design was by requiring districts to turn in return-to-learning plans before the end of the summer. When describing creating their return-to-learn plan, Superintendent Ironwood explained that "You had to rush because you felt rushed," and that impacted the ability to fully plan and involve more stakeholders. Superintendent Maple also discussed the ways in which the VDOE sometimes hindered more than helped, by explaining that:

> We were already hearing about learning loss from the state superintendent and others before we'd even started the school year. And I'm like, thanks. … I get the concern, but we're not going to help ourselves by everybody being in panic mode. What I felt like was most important since we weren't going to have kids as much in the buildings, that we used the first week of school, and really the first two weeks, to build relationships, and not to focus on content, not to focus on let's get a jumpstart on pacing, or anything like that.

While learning loss is an issue, Superintendent Maple also saw a need for their district to focus more on the "social emotional connections and the wellbeing of our students and families."

Superintendent Nogalito also discussed frankly how the VDOE's attendance requirements made little sense during virtual learning in the middle of a pandemic:

> I'll just be honest with you. So the state is requiring us to track attendance, primarily because the state chose for this to be the measure of engagement in the profile of Virginia graduate, which is stupid. It's a stupid measure of engagement. It's like the SOLs, it's just it's clean and it's quantifiable. That's the issue. … You will never be able to know whether they're participating when you're in a remote environment. You can make your best guess and in some cases you might know, because the child will be synchronously with you and you can see them and you can hear them. And then you get the [assignments] through [online learning management system]. You'll never know whether or not the kid is engaged during that time or not. You'll never know whether they did it three hours after your class. There's just so much margin for error, you're making a guess either way. And what we found was that the more rigid structure is typically not as favorable to the child.

Superintendent Nogalito also found synchronous online engagement difficult to track. This superintendent told the story of a high school teacher who asked the class to respond to a question in the chat box. One girl did not answer, and after communicating with the student via another method, the teacher discovered that even though the student's internet had been "glitching" and not allowing her to respond on the synchronous platform, the student was able to effectively answer the teacher's question. Superintendent Nogalito used reasons such as this to explain how difficult it can be to measure the engagement and attendance of students while engaged in 100% virtual learning, and summed up the topic by saying "that [story is an example

of] the stuff that we were finding was getting in the way of this easy, simple, quantifiable, present, not present way of thinking about [attendance]."

Superintendent Ashe similarly did not always agree with mandates from either Governor Northam or the VDOE. This superintendent found loopholes in requirements they felt were harmful to students. Superintendent Ashe explained:

> I basically went to the principals and said, "Get all the kids who are struggling and bring them in anyways." Because nothing said we couldn't bring in kids who the model wasn't working for. They just said we couldn't open back up with the model that we wanted. So we started bringing in kids for in-person learning, even if in-person learning looked like a bunch of kids sitting spaced apart in the cafeteria with teachers coming in and providing assistance. So we piecemealed it through the first semester, and I think that made a big difference too.

Regardless of their feelings on VDOE requirements, some superintendents planned to make the best use possible of things such as SOL tests. Even though the VDOE said that SOL tests would not be used for state accreditation this year, Superintendent Greenhart still wanted to use the data to see what worked during virtual learning and to make upcoming instructional decisions. Nevertheless, this superintendent cautioned that:

> "Even though [state accreditation has] been waived, I know because the people that were mad that we're still out of school, they're gonna use that as a reason to say, "See, the virtual learning doesn't work, look how low the SOL scores have dropped." I already dropped the hints to them and gave them some foreshadowing by saying, "OK. This is 1998, this is year one....This is the new ground zero. Don't judge it from 18-19 school year. Out the window. This is the new ground zero.

This “new ground zero” would certainly look different than years in the past, given the challenges to providing instruction from March 13, 2020, until the end of the school 2019-2020 school year through the end of the 2021-2022 school year.

***“Staying in Lanes:” Relationships with Local School Boards***

The relationship between a superintendent and the school board can be a tenuous one. Generally, a school board is a governing body and the superintendent is in charge of the day-to-day operations; however, there are several “gray” areas regarding specific duties. Given the uniqueness of the pandemic, sometimes there were no precedents to turn to regarding who should make which decisions which impacted the relationship between the board and the superintendent in some school districts. Superintendent Maple described this phenomenon by saying: “It's hard to describe how politically some of these things work differently in different places. I think for us, it's been a sense of awkward, shared decision-making between the superintendent, staff, and the board.” Nevertheless, Superintendent Maple said that maintaining a strong relationship with the school board was important, giving the advice to “spend time with your board, talking with them, processing. Don't get into ultimatums. Just talk about how to navigate a crisis together.”

The amount of school board power over virtual learning plans varied from district to district. In almost all districts, the actual instructional designs were left to the school personnel, though school boards seemed to have the most power over whether to open virtually, hybrid, or in-person. In some districts, this decision was left completely up to the board. For instance, in Superintendent Elm’s district, the board insisted they have the right to vote on if and when all cohorts of students would return (a cohort being a group of students, such as “students with disabilities,” “English language learners,” or “grades kindergarten and first grade”). “Even

though I try to get them not to," quipped Superintendent Elm. Part of the reason for this is because whoever makes the decision about when students return tends to receive the most criticism. Superintendent Elm acknowledged that his board "took a lot of heat" when they voted to open the 2020-2021 school year in a virtual format. In describing their relationship with the board during the pandemic, Superintendent Elm explained that "we had an interesting battle as most superintendents do, between what they have authority over and what I have authority over."

In Superintendent Ashe's district, the superintendent and the school board had worked out an agreement to open schools about halfway through the first semester. Instead, however, the board "flipped the decision" after hearing from teachers who were worried about the "long-term effects of the virus." Superintendent Greenhart's district had a similar experience. This superintendent explained:

> I made the first recommendation to set a date for kids going back because the metrics at the time were lower. But my board wasn't comfortable sending anybody back. And so the board got beat up really bad. … I had people in our community that [sic] were actually trying to pit me versus the school board. And I was like, it's their decision. All I can do is give them the recommendation and they kinda take it from there.

In Superintendent Birch's district, the board initially agreed with the superintendent that the decision over whether and how to open schools should belong to the superintendent rather than the board. "My recommendation was they leave to the superintendent the day-to-day authority around the opening of schools up to a certain phase of our implementation or reopening return to school. And the board graciously [agreed] because they understood, and they've always understood, that the day-to-day operations best reside with the superintendent and his or her staff." When the superintendent first recommended bringing back students, however, the board

expressed their reluctance in such a way that while they did not overturn the decision to leave it up to the superintendent, it became clear that to maintain a positive relationship with the school board, decisions to bring back more students would need to be postponed. This reluctance, according to Superintendent Birch, came from the fact that several staff members still had a fear of the virus and did not feel ready to return to brick and mortar classrooms, which they expressed to board members. "Board members represent constituents. When you have constituents with concerns...then constituents see the board or board members and that's where the leverage exists," the superintendent explained. Superintendent Birch also theorized that the board was operating "from the standpoint of... there's more that we should be able to do and how can we support you as superintendent in what now appears to be an overwhelming unreadiness to move forward with expanding grades and so forth?"

Not all superintendents experienced conflict with the school board, even if the board ultimately made the decision about whether to open virtually, hybrid, or in-person. Superintendent Nogalito explained that their school board "did a really good job of staying in...I'll say, staying in their lane in terms of really governing." This superintendent noted that the school board seemed to be "pretty much on the same page" and did not disagree with recommendations from the superintendent about whether to have students return to brick and mortar classrooms, even though the school board ultimately voted on whether to accept those recommendations.

Superintendent Cypress and their board had a more nuanced understanding. Superintendent Cypress described their relationship with the board as a positive one in which Superintendent Cypress made the recommendations and the board voted after taking those considerations into account. The relationship was collegial, even if the board did not always

follow the superintendent's recommendation. In situations in which decisions needed to be made quickly, however, Superintendent Cypress said:

> They do give me the authority [to make quick decisions when necessary]. For instance, what happened the week before we were planning to come hybrid, and we had an uptick, I didn't have to call a school board meeting to get permission to make a change. You always have the right to do that. Of course I always run it by them and say, "Based on the data, this is what I'm going to do."

This kind of understanding between the superintendent and the school board requires a certain level of trust.

In only one district in this study did the board cede the decision to entirely to the superintendent. Superintendent Junenberry explained that prior to the start of the 2020-2021 school year:

> I had many conversations prior to the decision with the Board where I said, 'You have got to decide now if you're making the decision or if I'm making the decision [about whether to open virtually].' And so we went back to policy and they decided that the calendar was theirs but the mode of instruction was mine.

Superintendent Juneberry went on to explain that because of this decision, "The target is on my back, not [the school board's]," but explained that even so, "They've gotten criticism for not voting, which has been very interesting."

Superintendent Knowles had a similar relationship with their district's board, saying that the board "understands its role and what I would consider the difference between a governance board and a day-to-day operational board." This superintendent went on to say that the board has been "fully supportive" because "they trust us to make those decisions" regarding "how we go

about instruction on a day-to-day basis, how we take a look at scheduling, all of those intricacies of the instructional plan."

**The Role of Resource Availability**

The majority of the superintendents who were interviewed communicated that while their districts had access to virtual learning before the pandemic, it was minimal and usually came from outside providers. When virtual learning took place, it was generally asynchronous and used for credit recovery or for students who could not attend school in-person, either for disciplinary or other reasons. In smaller school districts, virtual courses were offered for courses for which there were not enough students to justify a teacher, such as upper level courses or some foreign language courses. Only one superintendent said that their district had zero virtual learning experiences prior to the pandemic. Three superintendents discussed already having virtual classrooms available for students, but even those tended to serve only a small number of students. Therefore, widespread virtual learning that was designed and conducted by the district for all students proved to be a new experience for each superintendent interviewed. This section will discuss how the resources for virtual learning that either were available before the pandemic, or became available during the pandemic, impacted how virtual learning was designed. First, this section will discuss the technology resources that superintendents identified as available to their districts prior to the pandemic. Then, this section will describe how money from federal funds allowed districts to increase the amount of technology available for students, and the impact that had on their virtual learning designs. Lastly, this section will consider how worldwide device shortages and an overall lack of internet infrastructure, especially in rural districts, influenced the way in which districts could design virtual learning.

### *Technology Resources Before the Pandemic*

The districts in this study had varying levels of access to technology in schools before the pandemic. Although many districts involved in the study had 1:1 programs for some or all grade levels, frequently students were not allowed to take these devices home, therefore limiting the technology experiences for students. Superintendent Greenhart said, "Before I got to [current district], I mean, we were one-to-one, but we were only one-to-one during the day. Like, students were not allowed to take their Chromebooks home, which was amazing to me." Superintendents also spoke about limited technology usage in schools. Superintendent Elm, whose district had a 1:1 program pre-pandemic, discussed conducting a "day in the life of a student," where senior leadership each followed a middle or high school student around for an entire day in order to determine the extent to which students used their devices. He summarized his experience by saying:

> The sad part was, uh, that really they did not need the device—at all—during the day. Instead of taking notes on paper you would take them on your Chromebook in some form or fashion … I believe the high schooler I followed...only one class did she even have to take the Chromebook out.

Superintendent Orange experienced similar issues. This superintendent discussed the difficulty of getting digital textbooks prior to the pandemic; they could not buy digital textbooks because they did not have enough devices for students. Moreover, the community was reluctant to spend money on such devices. "One of the things that happens when you're a school district that's doing so well academically is, what do they say? A good as the enemy of great. We're doing well. And you have to convince people to move forward and try new things and be innovative," this superintendent explained. This resistance to devices and virtual learning even came from other

district leaders. Superintendent Orange described a past situation in which a student requested to go 100% virtual in order to pursue an important and potentially life-changing opportunity. “I didn't want to stay in the way for her having that opportunity. So we worked it out for her and what struck me was it was such an ordeal to make that happen,” said Superintendent Orange. Therefore, the district was already on a trajectory to include more virtual learning for students’ needs, and Superintendent Orange explained that “It was probably a three- or four-year plan, but during this pandemic, it became a three month plan or a three week plan.”

Other districts were making more strides with their technology usage before the pandemic. Superintendent Ashe’s district had been only weeks away from rolling out a 1:1 plan for the entire district that would also allow those without internet access at home to have hotspots for the year, when Governor Northam closed schools. The district was still able to contact families and managed to deliver all the devices and hotspots, therefore keeping on track with their initiative.

Superintendent Ironwood described that a problem-based learning initiative in their district had led to many teachers integrating more technology in order to complete projects. Additionally, their district had already started rolling out a 1:1 initiative to some grade levels, and had several students involved in the region’s virtual Governor’s School. “We had some movement and trajectory in the right direction, I would think,” Superintendent Ironwood said. Superintendent Maple thought their district was similarly well-placed for the pandemic with regards to virtual learning. Although this superintendent’s district did not have a 1:1 program, they had been implementing programs to help staff understand how to use technology to engage students in critical and creative thinking. This superintendent explained that the district had centers in each school “where students were having modeled for them, as well as staff, how to

better engage students in using technology for problem solving, using it for critical thinking, using coding, the many different things that, instead of just saying, 'Let's go on there to read from a textbook, or let's go on there to get more surface learning on a device.'" The superintendent continued by saying, "Let's maximize that capability. So I feel like that progression over time was about integrating technology in such a way that it engaged students and it moved learning forward." A big focus of the district at the beginning of the pandemic therefore needed to be acquiring enough devices for all students, but Superintendent Maple felt that they were "primed for the crisis" because they had used professional learning to "set the stage" and "had a number of staff, including many of our [instructional technology resource teachers] that had become at least [technology program level one] certified, and many beyond that."

***Plentiful Money for Technology***

Many school districts may have struggled to find money for technology prior to the pandemic; during the pandemic, however, the release of billions of federal dollars as a part of the Trump administration's Coronavirus Aid, Relief, and Economic Security (CARES) Act gave schools significant funds to purchase technology for virtual learning as well as mitigation equipment for in-person or hybrid learning (Ujifusa, 2020). The Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA) passed under the President Biden administration provided millions more. For those that placed orders early enough, districts could use this money to bridge device or internet gaps for families. For instance, Superintendent Greenhart had their leadership team place an order for 1,500 personal wifi hotspots before the end of March, 2020, and also paid the service charge so that families could have free access to the internet if needed.

Superintendent Nogalito was also able to use these funds to expand the use of technology in their district. This superintendent shared that prior to the pandemic, around 40% of families in the district did not have access to broadband internet. Because of this, the district never purchased a learning management system that could help make more online opportunities available for students because "we just couldn't justify the expense when so many of our families wouldn't even be able to access it at home." With the CARES and CRRSA funds, the district was able to purchase hot spots for all families who needed one, even though the superintendent pointed out that hot spots could only provide so much access if the cellular tower signal was weak. This district was also able to use a learning management system that was provided at no cost, partly due to the pandemic, and took advantage of the free training provided by the learning management system itself.

***Technology Scarcity: Shortages and Infrastructure Needs***

The CARES Act provided districts with plentiful funds for purchasing things like devices for students, but devices were hard to come by for three main reasons: 1) schools across the world were closing doors in favor of virtual instruction, therefore pushing demand for devices to unprecedented levels; 2) the pandemic resulted in temporary closures of the factories that produce such devices; and 3) the U.S. government imposed sanctions on some Chinese companies that were the biggest producers of these devices (Krass, 2020). In other words, demand increased significantly at the same time supply fell. In August, 2020, the three biggest computer suppliers, Lenovo, HP, and Dell, reported being short almost five million laptops compared to the number of orders placed (Gecker & Liedtke, 2020). This shortage impacted the districts in this study in different ways. Superintendent Foxglove, for instance, did not have a

district that previously had a 1:1 program, and so they did experience some worry about whether the devices would come on time:

> We did scramble to find [tablets], a whole bunch of them. But we secured those. We did have to get our fair share of [laptops] as well. But they all came in, in time for us to be able to touch them and get them set up for distribution. And so, we didn't have a lack of technology hardware that impacted our implementation.

Superintendent Greenhart, on the other hand, sensed that ordering devices needed to happen sooner rather than later, saying:

> I think I beat everybody to the punch on ordering as many [laptops] as we possibly could. Ordering as much PPE equipment as we possibly could. Putting in the orders for interactive whiteboards. This is before we even knew how much money we were going to get from the CARES act, right? We wanted to make sure we got in line because economically it was going crazy.

Greenhart also discussed giving their leadership team an early deadline to get everything ordered, despite the protests of his leadership team, because he had been reading about the pandemic and how it was affecting other countries. Because of this, Superintendent Greenhart and his district leadership found that those early orders saved money "because we were ordering before the prices went up. Then people came to understand, okay, there was a little bit of method to his madness."

One of the biggest issues for many stakeholders was access to the internet. While nearly all superintendents discussed this issue, rural superintendents were likely to struggle with this issue more than urban or suburban superintendents. Superintendent Knowlton described using the CARES act funding their district received to provide devices to each student and attempt to

provide internet to as many families as possible. Even so, Superintendent Knowlton explained that having extremely rural areas meant that:

> In order to have connectivity, you got to have a cell tower. So if you don't have cell tower service, then I can get you all the MiFi devices in the world, and they still don't make any difference in helping you. So we have a myriad of issues where we can see that it's not equitable for every family.

Superintendent Elm described similar circumstances where "even hotspots don't work" because there are no cell towers. "We had to be very creative and we have about 200 kids who come for virtual learning in person every day, um, in our online access center," explained Superintendent Elm of their "in-person" virtual learners.

**Emotional, Mental, and Logistical Needs of Stakeholders**

The pandemic-caused districts to move to a virtual teaching style that was new to many staff and families and added stress to the emotional, mental, and logistical needs of several stakeholders. Several of the superintendents discussed the need for empathy for all stakeholders during this time. For instance, Superintendent Maple explained that at the same time they would be asking teachers to focus on the "whole child" at the start of the 2020-2021 school year, they knew that the district leaders also needed "to be cognizant of the whole educator, because our staff has kind of been going through some really tough stuff, not just the trauma of all of this." This superintendent also advised that it was important to "remember everybody's interest in this, because people need the sense that you have compassion and empathy no matter what their perspective is." Some of the most frequently discussed topics around these emotional, mental, and logistical needs of stakeholders included fears both of the virus and of technology changes,

trust between internal and external stakeholders, the tension of balancing different stakeholders needs, and the emotions of superintendents themselves.

***Fear of the Virus and the Unknown***

A significant challenge to districts when designing virtual learning was stakeholders' fear of the unknown. A fear of the unknown could be seen in multiple areas during the pandemic, but most especially the decision about whether to employ virtual or hybrid learning, to what extent, and in what ways. Superintendent Ashe explained that:

> Probably if we knew then what we knew now, we would've probably been in school the whole first semester and probably would be virtual now, but we just didn't have enough information about the virus to make those risk-benefit decisions back then.

While health metrics were the most frequently cited reason for starting the 2020-2021 school year with a 100% virtual program, determining whether to keep school 100% virtual or move to a hybrid plan frequently divided stakeholder groups because of fears of the virus, leaving school districts caught in the middle. For instance, Superintendent Birch discussed trying to bring students back for a hybrid program and encountering significant teacher objections. This superintendent hypothesized that teachers' objectives were a result of "fear of the unknown," and explained that even though the district had strong mitigation strategies and communicated those strategies to teachers in multiple ways, "then that information needs to be digested but not all staff members had." In other words, focusing simply on data and formal strategies did not appear to sway the teachers when faced with the fear of the unknown. Superintendent Hazel also found their district trying to determine how to meet the needs of multiple stakeholders: "I mean, you know, we try to talk philosophy all the time and our philosophy is that student learning comes first, students come first, but then we want to protect our employees and help our employees."

In Superintendent Orange's district, there was a divide between teachers and parents about whether to bring students back. This superintendent explained that:

> There was a good section or segment of our parent population who were very unhappy because remember I had about 30 to 40 parents who spoke to the July board meeting wanting us to come back. So that group really came after us, came after the board. And what you learn is there's two sides and two extremes, and they're both very vocal. And then you got people along the middle. So what really surprised people is when I started saying we're going to start bringing small groups back, cohort groups back based on need. And then I had some teachers who were upset because we were starting to bring students back, but rightfully, it's understandable. They were scared and they didn't know what to expect.

Interestingly, as the number of virus cases for the community began to increase, which seems like it should have made the decision about whether to be virtual easier, Superintendent Orange found their district even more caught in the middle. "I started having people say, you need to close, you need to go virtual because of the community spread," this superintendent explained, while at the same time, "my health department [was] saying, you don't need to close. We're not seeing in-school transmission." Teachers were also divided, with some who feared the virus and wanted the schools to be virtual, and others who emailed the superintendent to say, "Please don't take our kids from us. They're really making progress in person. They have to be here. Our youngest learners have got to stay in school." Superintendent Orange finally solved this by deciding not to look at community data, but rather to look at individual school data in order to make decisions.

Superintendent Elm had similar issues with staff seeking exemptions for returning to school in-person due to fears of the virus, explaining that, "Taking care of staff, staff want you to be very mindful of coming back, to the community, who want you to just come back no matter what.... Yeah, you lose on everything you do right now." Superintendent Juneberry also discussed the tension regarding teachers' fears of coming back versus the community's desire to reopen in-person: "There's been a very delicate balance between the health and safety of students and the fact that students need to be in school for mental health and everything else. I think that's been the most challenging thing." Superintendent Juneberry naviated the disagreement by looking at the long-term, saying that "the cost was going to fall somewhere and valuing staff and keeping our good staff. And knowing they will be here next year to serve students is a huge piece of it." In many cases, this fear of the virus required superintendents to make difficult decisions between appeasing their community and appeasing their teachers.

Superintendent Knowlton, however, took a different tactic to deal with staff fears about returning to buildings in-person by requiring teachers to return very early in the school year, even if the students were not. This superintendent stated: "If our eventual goal is to get kids back in school, we have to first as adults become acclimated and feel comfortable being back in our physical [buildings]". The superintendent acknowledged that initially, teachers were anxious, but explained that it offered the chance to have teachers consider "the physical distancing aspects, the wearing of face coverings, the temperature screenings, getting down the processes of what the operational procedures would look like for kids once we started bringing back kids." Requiring staff to be back in the buildings turned the unknown into the known, therefore making it less threatening.

Similarly, Superintendent Elm's district called teachers into the buildings from day one, even though the students were learning virtually. "That doesn't make me the most popular person in the world. But that's okay. Because of all the unknowns, we wanted to start with more control," this superintendent explained. The virtual learning daily schedule in this school district was shorter than what occurs during in-person schooling, and continues to be modified to find solutions that work for not only for both families and teachers. Superintendent Elm said, "We knew the stress on our teachers—didn't want to solve short term problems and create long term problems as far as protecting the staff" and also that, "as far as screen time, we didn't want it to mirror our usual day—on the screens for six and a half hours."

Other stakeholders also faced these fears of the unknown. Superintendent Dogwood described the necessity of empathy for the community, and vice versa by saying:

> I can say the community since has been supportive, because...to be honest with you, I know it's a hardship on everyone, but think about families. You send your kids to school one day, and then when they come home that afternoon, who knows if they're going to be home for a whole nother year.

Additionally, Superintendent Dogwood noted that some families preferred virtual learning, "Probably because they were scared. They're still scared with health concerns in their families and so forth."

Superintendent Knowlton also explained that one of the reasons that their district stressed flexibility in remote learning plans was because "we don't want to do anything to add on and enhance the stress levels that are already there as a result of the pandemic." There are several logistical issues that families must work through in order to participate in remote learning, and

when "You throw that on to the fear and the anxiety of being in a pandemic...and seeing the implications and the ravages that [the virus] has had, that's just a lot for families to deal with."

***Fear of Technology and Change***

One thing that frequently held back progress in the implementation of the virtual learning designs was teachers' fear of change. Multiple superintendents used the analogy of "building the airplane while flying it." Superintendent Larch took this a step further and quipped that:

> We also realized we were building without a blueprint, right? And trying to actually fly two planes at once, you know. So, how do you build a face-to-face program in this new COVID world and build a virtual program for those who need it?

Superintendent Hazel said of some of their secondary teachers, "I mean, they want to deliver instruction 'sit and git' and are more reluctant to utilize it than other areas." Superintendent Knowlton acknowledged that some teachers took more readily to the new technologies than others. He saw this less as an obstacle and more as a need for support for these teachers: "We all know that we have teachers who have different levels of technological proficiency. So some have taken it and run with it, and some you have to kind of help along a little more."

Superintendent Larch theorized that much of the stress of moving to virtual learning was caused by teachers trying to make the institutional logics and pedagogies of in-person teaching work in a virtual environment. Of this, Superintendent Larch said:

> That's where the stress is coming from. You know, you hear from our teachers about how stressed out and burned out and how hard they're working and I keep...I'm very empathetic but I also keep thinking, it's 'cause you're trying to put a square peg in a round hole. You know, you're really trying to do what you've always done in an entirely different world and I bet that is very stressful. And I'm like, if you open up to the

> possibility that things can be a little different, you'd probably be having more fun like some of the teachers who have and are really enjoying this moment. Try opening up to this moment.

In some ways, however, the pandemic helped overcome fear of change regarding technology and virtual learning. Superintendent Foglove explained:

> I think the ability to implement new strategies and programs, I think in hindsight, is one of the silver linings to this, because you know in education, sometimes if you were trying to implement a brand new strategy or instructional tool to a faculty of teachers, you kind of have your sacred cows in there that are like, 'Oh, hell no. Ain't doing it. I am retiring in two years. No.' This forced everybody's hand. You had no other choice.

Superintendent Greenhart also spoke of the pandemic requiring those who had previously eschewed technology to embrace it. The superintendent said:

> I quickly learned that some of my people here don't like new stuff. It makes them really nervous if it's not the traditional format …. And so, that was something that you were really trying to get people to kinda come up to speed on and the only thing that really worked in my favor was that it was a necessity because the pandemic had hit.

Superintendent Ashe also experienced positive impacts of the virus on technology usage, mostly due to the collaboration between teachers. This superintendent explained that while there were some teachers who were initially reluctant to use technology, "their colleagues really helped them out and helped them step up, the administrators supported them, and eventually everybody got where they needed to be on their learning curve."

In some cases, however, the fear of change came not from teachers, but from district-level leadership who worried about overwhelming their teachers with too much training too fast.

Superintendent Elm explained that they "we didn't switch to [other learning management system] because we didn't want it to be one more thing that folks had to learn." Furthermore, the district felt it prudent not to change platforms because "we've already invested in [the current learning management system], and invested time and energy. We can coach in [current learning management system] because we know it." Likewise, Superintendent Elm urged schools to use one of two online video platforms for synchronous classes, but to keep the choice as consistent as possible by level (elementary, middle, and high school). This type of consistency helps students and families more easily navigate online learning by only having to learn one platform.

***The Importance of Trust with Internal and External Stakeholders***

Superintendent Foxglove related that during the pandemic, trusting colleagues was even more imperative than pre-pandemic. This superintendent explained that people who become superintendents usually "want to be the one that can help out, that can provide solutions," but that during the pandemic, there often were no good answers. Therefore, superintendents had to "trust the people that you proudly work side-by-side with every single day. You rely on your colleagues. Sometimes there's leaps of faith, but you're hand-in-hand doing it, and you've got to put that ego aside."

Similarly, trust between the district and external stakeholders is always important, and especially so during a pandemic. For instance, Superintendent Birch discussed the importance of establishing trust with external stakeholders before a crisis such as a pandemic, saying, "If you don't build that trust [and] have trust along the way when you get to a pandemic, it's hard to get it." One major finding of this study is that trust impacted not only how virtual learning was designed, but also how it was received by stakeholders. Regarding how learning was designed, multiple districts who had a 1:1 program for any or all grade levels found that the level of trust

between schools and students increased in regards to home-usage of devices. Superintendent Elm, for instance, discussed how originally students in their district were not allowed to take their 1:1 devices home for fear of damage or improper use, but the pandemic proved that students can indeed take devices home without much more damage or many more issues than when the devices stay at school.

Superintendent Cypress also discussed helping students and teachers develop trusting relationships across grade levels. In this superintendent's district, elementary teachers worked together to record lessons that were shared between classes. The superintendent described it by saying:

> Another great takeaway from this was our kindergarten teachers, our preschool teachers, they worked together as a grade level and by subject area so students really saw all the teachers for their grade level, which was nice, versus just theirs, because one might do the lesson today and record a video, and tomorrow another teacher might do a lesson. It was nice for them to get to see all of the teachers and get a little bit of experience from all the teachers in their grade level versus just their teacher.

Superintendent Cypress said that they even encourage the district's Central Office leadership to record themselves reading books for students to watch, therefore helping to build relationships all around. "You just read a book and record it, and send it to the teachers and say, "Okay, here's a story. Ask some questions to the students, and you're involved in the lesson as well," Superintendent Cypress explained.

***Different Stakeholders' Needs for Flexibility***

Despite the importance of trust, it does not ensure that all stakeholders will always be happy. Superintendent Knowlton explained that "I think that our staff trusts us, and I think that

went a long way. Again, does it make everybody happy? No." This is especially true when stakeholders have conflicting needs. Several superintendents discussed the need for flexibility in trying to meet as many of the emotional, mental, and logistical needs of stakeholders as possible. Superintendent Maple said, "One of the things that I've had to do with this is to make sure that you not only demonstrate, but truly consider the needs of everyone." Superintendent Elm also spoke about the need for flexibility by saying that his advice to superintendents navigating a unique crisis would be: "Just be flexible. Like, we didn't have the answer day one, and I don't even know what day we're on now, but we have a better answer today. … We're getting better every day." Similarly, Superintendent Foxglove said that their district philosophy became "Maximum humility, maximum flexibility." Some examples of flexibility include Superintendent Greenhart's district, where the district paid for childcare for all of the staff, and Superintendent Hazel's district, in which teachers were allowed to work from home when possible.

Superintendent Dogwood discussed how there were few mandates from the Central Office about what the online learning needed to look like, including whether teachers were required to hold synchronous lessons via an online video platform. This decision was instead left up to the individual schools. "I've found though, in my years of education, the more district level mandates, the less willing participation you get. You get participation and compliance. So I've kind of let the principals kind of streamline that from their school," he explained. Similarly, Superintendent Greenhart described the benefits of giving options to teachers regarding the video platforms for synchronous instruction: "Our teachers had good buy-in because we gave them options. And that's all they really wanted." Superintendent Foxglove also discussed giving latitude to teachers to determine which platforms they wanted to use for synchronous instruction,

saying that “One of the things that we quickly realized was, there's more than one way. If that means that an individual may feel a little bit more comfortable, particularly when it comes to implementing something new...let's not be so stringent.” Superintendent Ironwood, on the other hand, had a different experience in which families strongly requested continuity in learning platforms. This superintendent explained:

> All of a sudden you had this collision course with parents, because it's like which one are you using? Which one are you really using? … It didn't get to the debacle stage, but it was pretty frustrating for parents, but we worked our way through that as well.

Other superintendents had similar experiences of not being able to meet opposing needs of all stakeholders. Superintendent Dogwood explained that they have not required families to choose either remote learning or in-person learning and then “lock[ed] them in to nine weeks’” worth of that choice; instead, families can choose to move between virtual and in-person learning as necessary with the minimum required advanced notice to the school. “I have gotten a little pushback from the teachers that it's a pain and I get that, but I think it gives parents the flexibility because what works for a parent today because they may work shift work or childcare may not work next week, they have to give us a week notice,” the superintendent said. Sometimes, the flexibility has to be a “give and take.” Superintendent Dogwood gave schools and teachers a significant amount of autonomy to determine what their learning programs would look like, and in exchange, expected that the schools and teachers would afford similar flexibility to the families they serve.

Superintendent Knowlton similarly had to negotiate the need for family flexibility with the need for teacher flexibility when it came to schedules. This superintendent explained that two working parents may not be able to work with their grade schooler until six o’clock at night, and

the district wanted to be empathetic to that and create learning opportunities for those students as well. On the other hand, Superintendent Knowlton understood that teachers could not be expected to teach at all hours of the day, and therefore the district used the following compromise:

> So we said, "Okay, well, if you got a group of kids that you can't provide instruction for them during the day because of the extenuating circumstances that may be there, that on this day, you may have evening hours. So instead of your timeframe going from 8:00 to 4:00, you may go 1:00 to 8:00." So we just tried to take a look at whatever the principals came to us with what the challenges were and what the teachers were experiencing, to try to work with our families to meet the kids and their families where they are.

Sometimes it was not a case of internal versus external stakeholders' needs, but external versus external stakeholders' needs. Superintendent Ironwood explained that the large amount of asynchronous learning was the district's best idea and also the one that received the most criticism. Due to the nature of this district in which not all students had access to the internet due to lack of infrastructure, the district defaulted to a large amount of asynchronous instruction. They also found that this met the needs of parents who worked during the day while sending their children to babysitters or daycares, who could then work with their children in the evenings. Meanwhile, a nearby district stuck to its pre-pandemic schedule with synchronous instruction. According to Superintendent Ironwood, "We lost a few students, because we weren't doing what they were doing. But then we gained almost twice as many because of how we were doing it."

Internal stakeholders also experienced conflict regarding how to build virtual learning plans. Superintendent Ashe, for instance, discussed the conflict that occurred between the elementary school principals and the central office instructional personnel. The principals were

in favor of keeping the traditional school hours even with virtual learning, whereas the instructional personnel advocated for shorter classes for elementary students. Superintendent Ashe navigated this conflict by telling the central office team:

> You have to let them try. You have to let them try it. We can always make an adjustment. Everybody understands. Whatever we decide now, we're going to learn as we go, and we don't have to stick to it. We can learn as we go and make modifications as we go.

The same conflict that existed between the instructional personnel and the principals could be seen in the families' reactions to this much screen time. Superintendent Ashe said that some families "thought it was too much screen time. And we did get backlash from parents on screen time. But for a lot of other families that didn't have a lot of extra help at home, I think they appreciate it."

In another case, the ability to give choice was hampered simply by logistics themselves. For instance, Superintendent Orange's district originally cut the number of courses for middle schoolers to half during the virtual instruction. Once they started bringing students back in-person, however, they found that the middle and high schools would have to teach both in-person and at-home learners at one time because "anytime you give families choice, you're never going to have things work out mathematically the way you want them to." In order to maintain the in-person schedule, the district had to put the middle schoolers back on their regular seven block schedule. To still meet the needs of the virtual learners, the teachers would frequently bring students in for the beginning of the block during the instructional modeling portion of the lesson, and then have the virtual students log off and work independently while the teacher worked with the in-person students.

Superintendent Birch discussed how meeting the needs of stakeholders, in addition to fears of the unknown surrounding the virus, may have contributed to the length of virtual learning in their school district. “Families feel that sense of uncertainty and when you have a degree of uncertainty, what do you do for your children?” Superintendent Birch continued:

> As adults, our children are the most vulnerable in many cases, we protect them so I think it’s a natural instinct for parents and families to want to protect, not that we don’t trust you or have confidence in you as a school district. And then and then the fact also remains, [students have] been in virtual, [families have] gotten accustomed to it. I think it speaks to the fact that, while [virtual learning] may not be the ideal system for many, it’s like you’re delivering on what you said you were going to deliver on and so it may not be what we ideally want but you’re doing a good job….

In others words, because the district’s virtual learning designs were acceptable, many families chose to continue doing virtual learning rather than face the risk of the virus. Even though Superintendent Birch wanted to bring students back to in-person earlier, and some families supported that decision as well, having “a good product” for virtual learning, according to Superintendent Birch, impacted the decision of other families to stay virtual until more could be known about the virus.

***Emotional Needs of Superintendents***

Several superintendents were candid about their own emotions during this time as well. Superintendent Dogwood described that when the majority of the decisions around reopening fell to the superintendent rather to the school board, “Then they felt...bad that all these decisions were on my shoulders.” Superintendent Juneberry explained that, because their school district did not resume in-person learning as fast as many in the community desired, “I think there’s been

a loss of trust for me as a leader in the community." Superintendent Elm remembered waking up "in a cold sweat going, 'How do I teach kids that are five and six years old through virtual learning?" in empathy with the kindergarten teachers who were the ones that would actually have to teach those students.

The relentlessness of having to make hard decisions without any prior experience of navigating virtual learning during a pandemic weighed on some superintendents. Superintendent Larch joked that when asked by their spouse what they wanted for their birthday, they responded, "I want one week I don't have to make a decision that pisses somebody off." Similarly, Superintendent Ironwood related a story about their spouse telling them, "Hang in there. Same pandemic. Different day" and likened being a superintendent during the pandemic like being stuck in the movie Groundhog Day. Superintendent Maple recounted telling their school board that "We are going to be wrong no matter what the decision is, no matter how we execute it." Knowing and accepting that a certain segment of the population would be unhappy with any decision made regarding whether and how to do virtual learning "helped us to keep our sanity during this time," Superintendent Maple said.

Superintendent Foxglove acknowledged these same struggles to stay focused despite public backlash:

> We willfully sign up for this. I have two assistant superintendents, and one always reminds me ... He literally just told me again today. He goes, "You want me to get where you signed your contract?" … So, we get it. And we wouldn't have it any other way, but it doesn't stop people from posting stuff, but we just kind of accept it. It just is, unfortunately, one of the things that we have to be subjected to, but it doesn't stop us from doing what we feel is right.

In some ways, however, the pandemic actually helped the affect of sitting superintendents. Superintendent Elm explained the superintendency is "a lonely job, but it's a lot better now that we connect on all these issues. Before you only talked when it's a snow day. But [the pandemic] really has brought... superintendents in general closer together." Superintendent Foxglove explained how the pandemic had given everyone, including themself and district leaders, more patience when receiving messages from stakeholders that conveyed frustration: "Because it was during this time of pandemic and you kind of had more grace about you. You understood. I think we became a little bit better leaders and models of appropriate behavior, on being on the receiving end of that stuff."

## Intentional Responses to Unintentional Influences

Superintendents may not be able to control the unintentional influences on learning designs, but they were able to take intentional actions as a response to those unintentional influences. This section describes the most frequently discussed categories. First, this section will discuss how superintendents used relationships to overcome the various obstacles they faced when designing virtual learning. Then, this section will explore how superintendents purposefully used communication structures to inform and collect feedback on virtual learning. Lastly, this section will describe how superintendents used the pandemic to reinforce the ultimate mission of teaching and learning.

### Leveraging Relationships to Overcome Obstacles

The level of trust between schools and families is a crucial factor in predicting the level of collaboration that occurs between these two groups (Tschannen-Moran, 2001). This trust is needed for both internal district relationships and external relationships with families, communities, and other districts. First, this section will look at how superintendents worked to

strengthen the internal district relationships in order to design virtual learning. Then, this section will consider the roles played by community and business relationships when designing virtual learning. Lastly, this section will discuss how districts built or advantageously used relationships with other districts to create virtual learning designs.

### *Strengthening Internal Relationships*

During the summer of 2020, school districts had to make decisions regarding the design of their learning plans for the 2020-2021 school year, and increasing the internal relationships helped districts make these crucial decisions for virtual learning. Frequently, districts developed committees made of various stakeholders in order to develop these plans. Superintendent Foxglove, for instance, recalled having over 50 people on their district's return plan, including principals and teachers. This superintendent articulated that, "I think years from now, we'll be able to determine if it was successful or not. But we won't be able to question the effort, the commitment, the time that was put in." Superintendent Larch similarly discussed the importance of developing these relationships around leadership by meeting every day for about six months with senior leadership, including Saturdays and Sundays.

Superintendent Ironwood also talked about using internal stakeholders to overcome obstacles related to training both staff and families.

> We had someone from the central office who just kind of took it by the horns, and she literally just made visits [to families], socially distanced visits. … She went on-site [to schools] and did training, and worked with teachers, and she actually spoke on the phone [to families].

In this case, the success that this person had working with both families and teachers translated into a long-term strategy of establishing an actual help line that families could call and have someone walk them through helping their student with virtual learning.

Superintendent Dogwood also explained how the district, which does not have a large technology staff, used student interns to help with virtual learning: “They come around and they help problem solve some technology and so forth.” These student interns were also on the task force that created the remote learning plan, along with other stakeholders. Similarly, Superintendent Elm spoke of utilizing high school lead teachers, who had already been trained on the district’s chosen student devices and learning management platform, to train teachers at other grade levels. Especially in small districts, it can be essential to take advantage of stakeholder knowledge, and employ people in new capacities to make a system work.

Superintendent Cypress found that virtual learning, contrary to what many stakeholders previously thought, could actually strengthen the relationships between teachers, students, and their families. This superintendent explained, “It's just so interesting to see students in their space at home. Yeah. They want to bring the cat, or they want to show you the dog.” Despite students and teachers not being in the same classroom, teachers sometimes developed more empathy based on this ability to see how students lived. Superintendent Cypress explained, “And they would have never been able to share some of that stuff at school.”

***Growing Community & Business Relationships***

In some cases, relationships were also used to overcome families’ lack of internet. As Superintendent Dogwood explained, “Well, first thing we did, we just bought some hotspots to put out in the community, whether it was at a local fire department, whether it was local places of worship, or so forth, to partner with, and so we put six of those out in the county, in the

community." Superintendent Ashe described a program between the district and a local university in which the university would help provide resources to train families on how to use devices. In other words, education moved from a responsibility of just the local educational agencies to a responsibility in which the whole community needed to participate.

Superintendent Cypress also discussed how their district worked with the community to help solve internet issues:

> The county contacted me, the county administrator and board of supervisors. Of course the county received a lump sum of money too, and their procedure was a little different than what schools had to go through to be awarded the grant money. They just got theirs all upfront. It wasn't like they had to write in what they were using it for like schools did. So they reached out and said, "Can you survey your families, or do you already know how many families do not have internet where we could buy WiFi spots for individual families?" And that was a tremendous help.

It is important to point out that even with the community's help, Superintendent Cypress pointed out that some of her community still had to have lessons downloaded onto flash drives due to lack of cell phone coverage.

Relationships could also be used to acquire the devices needed for students and teachers to engage in 100% virtual learning. Superintendent Greenhart, for instance, discussed using regional Request for Proposal contracts to acquire devices and software. Generally, purchases over a certain threshold require that districts put out this Request for Proposal and then evaluate the merits of various bids, which can take a significant amount of time. Due to the impending shortages of devices, and the need to get virtual learning up and running, however, Superintendent Greenhart knew the importance of ordering early. One way to hasten the process

is to “piggyback” on a contract completed by another local district; if that district already completed the Request for Proposal (RFP) process and wrote it as a regional contract, then frequently other districts can elect to join the contract without having to complete the entire process themselves. He described his thoughts as, “I know that we gotta have three bids. Who can I piggyback on? Like, I had the team work on that 24/7. Whose contract can we piggyback on?” Superintendent Orange also described choosing a learning management system because they could “piggyback” off a nearby district’s RFP, therefore saving a significant amount of time in the process (O. Orange, February 9, 2021).

Superintendent Greenhart also sought new business relationships in order to solve the problem of childcare for employees. Determined to pay for this childcare, Superintendent Greenhart made a new RFP and brought in a different childcare company than the one the district previously used. While this solved the problem, it also “Ruffled some feathers because the school district had always used the [previous childcare company] but the [previous childcare company] was charging three times as much as [new child care company].”

***Making District-to-District Connections***

Although several superintendents discussed the importance of building plans that worked for their specific communities, superintendents also described a growth in relationships between school districts. For instance, Superintendent Foxglove explained that since the pandemic:

> We were relying heavily on regional collaboration...we have a really strong superintendent group in region [number], so we're thick as thieves. We always communicate. We reach out to each other. We still meet once a week about things and bounce ideas off of each other.

## Communicating Purposefully with All Stakeholders

Many superintendents discussed the importance of effective communication with both internal and external stakeholders during the pandemic and when creating virtual learning designs. Communication structures that are enabling help stakeholders carry out their duties and responsibilities (Hoy & Sweetland, 2001), and can also help prevent other organizations (such as the media or social media) taking control of the narrative (Rim & Ferguson, 2020). When designing virtual learning, district leadership had to determine the best ways to communicate with multiple stakeholder groups. This section will first look at how superintendents led their districts to decide when, how, and with who to communicate. Next, this section will look at the use of data in communicating decisions about virtual learning. Then, the role of training in communicating expectations will be examined. After that, the importance of controlling the narrative, especially in the media and social media, will be discussed. Lastly, this section will look at the role of two-way communication in designing virtual learning systems.

### *Deciding When, How, and With Whom to Communicate*

Many superintendents discussed the need for frequent and effective communication with different groups of stakeholders. For instance, when asked about their biggest piece of advice for successfully navigating virtual learning during a pandemic, Superintendent Nogalito said:

> I think making sure that you have a consistent flow of communication among all of the stakeholders early. You've got a good leadership team that's meeting routinely to make decisions and to see what's going on. You've got another layer of teacher input, parent community input, so that everybody is on board.

Superintendent Knowlton highlighted the importance of communication, explaining that:

> I've had quite a few parents over the last year, those who have called me to say they really appreciate the level of communication that we've had, because I think probably, I have communicated with families through all call communications from me directly to the community probably 100 times.

Superintendent Greenhart also used frequent communication to help build trust with the community. This superintendent specifically used social media live streaming tools to both give information to the community and allow the community to ask questions, noting that these streams could have thousands of people watching at one time.

How a superintendent chooses to communicate impacts the success of the communication. In response to being asked how they may change their approach in response to a potential future pandemic, Superintendent Dogwood said, “I have to really think about my approach to that. I'm a pretty direct person. I've learned that that's not probably always the best approach in some things.” Conversely, Superintendent Greenhart felt that some conversations deserved an intentionally direct manner, especially when it came to equity in virtual learning, saying:

> Implicit bias is real in [current district]. And unless it affects them, people just don’t understand it. We had to have conversations with some teachers on why some students had their cameras off. Our way was, was the kid there? If the kid is there, then to us that’s all that matters. When you have a one-on-one with the student, which we encourage you to do, then maybe you can probe a little bit deeper. Or the conversations with the parents.

He also noted he received pushback, but that was not a reason to cease important discussions. He explained:

> People didn't want to have those conversations until I got here and it's probably rubbed some people the wrong way. You got this outsider coming in wanting to tell us what's best for the school district. ... We can build beautiful schools, but what does it matter if people of color are the reason why the student achievement gaps are so large because they keep getting kicked out of class?

Effective communication can also help maintain cohesiveness between stakeholders. Superintendent Knowlton discussed maintaining open communication with the school board and articulating his preferred method of working with the board: "If there's something that comes up, then let me know what it is that you have a question about or a concern about, and let's try to work through those things even before we get to a public framework." To help facilitate these open lines of communication, Superintendent Knowlton spends "a lot of time talking to them one-on-one about the initiatives and what's upcoming" in order to find out board members' thoughts and answer questions before getting to the public forum of an actual board meeting.

In addition to how superintendents communicate, it is also important for districts to have specific expectations and systems for communication from all levels of leadership. Superintendent Birch explained that "I think a best practice that will come out of this will be how we engage building leaders around communication and the tools and how best to make certain that that communication is shared and so forth." Superintendent Birch further described that the district would continue building a system that all levels of leadership would better understand "how do I use this information, when do I use this information, what is the best vehicle, is it in a faculty and staff meeting, should I share disperse get this out the next day or the following day?" This superintendent described sharing expectations for what communication agendas should contain, as well as when and how the communication should take place, was a best practice, "But

that's a growing pain best practice. That's an outgrowth of sometimes challenging experiences where, 'Hey, we sent the information out BUT.'"

Superintendent Birch also discussed the importance of communicating clearly with families, saying that another best practice that the district had used during the pandemic was to anticipate family questions and create Frequently Asked Questions documents based on those questions. "Don't wait for people to ask. Anticipate what they're going to ask. If you were a parent at this particular juncture, what are the things you would want to know...? Well anticipate that and let's answer that," this superintendent said. Superintendent Birch also talked about the importance of differentiating communications, including these Frequently Asked Questions documents, based upon the needs of the stakeholders. They related the importance of creating "One [communication] for in-house and then we say parents and family members aren't concerned about this, they want to know these things. And so I think we understand the value of it, that strong communications system."

***Using Data to Make and Communicate Decisions***

Multiple superintendents discussed using data in order to drive decisions about whether to stay 100% virtual or move to hybrid learning. Superintendent Greenhart realized as early as July of 2020 that their district would most likely start the year 100% virtual. This decision was made based on:

> Health measures. That's all it was. I mean, I started giving my board and my school community hints in July. Let's prepare to be virtual. … These are gonna be the metrics we're gonna look at. The total number of cases per hundred thousand and percent positivity rate were the two main driving factors.

Superintendent Greenhart also expressed that the number of African Americans in the community impacted their decision because the virus "has a greater impact on people of color. That was always gonna be in the back of my mind."

Superintendent Orange also spoke about using metrics to make the decision to open virtually. Despite wanting to open with 100% in-person or hybrid, this superintendent explained that "When we hit July and the metrics were looking the way they were, being as high as they were, we started realizing that we're going to have to seriously look at 100% virtual option." The district indeed did end up opening with a 100% virtual learning program, despite having "30 parents come to speak and demand that we open school five days a week in September." In August, the health metrics continued to be high, "So we made the decision to start virtually at least initially for everybody." This only lasted for a few weeks, however, and the district began bringing students back quickly as the metrics went down. Even though this district used health metrics to move forward with virtual learning at the beginning of the year, Superintendent Orange said that they did not want to make future decisions based solely on health metrics because:

> We were concerned about school districts that were setting set thresholds where they said, when this happens, we all go home. ... And we didn't want to do that because we didn't know what we were facing. We had no idea. This is something we'd never experienced before. … We knew that they rated [the risks as] high, medium and low. We just didn't know what that really meant or how often that would happen. And we didn't want to constantly be going back and forth, back and forth.

This superintendent also explained that "What we knew in July is very different than what we know in February," and that the community health metrics do not always match the school health

metrics. Superintendent Orange also discussed the importance of working with the local health department to make decisions. As the 2020-2021 year progressed, this district moved from looking at community spread of COVID-19 to instead using data from actual cases in schools. Moreover, this district decided to instead make decisions for individual schools rather than the entire district. The health department approved of this plan because the alternative might be "these kids...roaming the streets...and spreading [the virus]. They felt like them not being at school does not stop the spread, it increases the spread. Because being in school, we hold the students and staff accountable to using those strategies." Instead, the district began to drill down to "move classrooms, hallways, or entire schools to virtual if need be" by creating a data dashboard for each school and building.

Superintendent Nogalito echoed many of these sentiments. This district originally opened with a 100% virtual model because "the director of our health district came to our school board meeting right before and we made that decision, and painted a very bleak picture of what we would expect if we weren't able to manage the mitigation strategies perfectly." The superintendent expressed that before school began, district leaders took this advice due to worries that students would not be able to properly use the mitigation strategies. Once the district began bringing students back for a hybrid model, however, Superintendent Nogalito said that the majority of students do "really well" following the mitigation strategies. "I think in retrospect everybody's learning that it's a little safer than we thought it was for kids," they said.

In addition to using data to determine whether to open schools virtually, Superintendent Ashe also discussed the importance of using relevant data to measure student learning. This superintendent said:

> You probably read a whole bunch of stuff, like I did, how distance learning doesn't work. Look what happened in the spring. And none of that made any sense from a research point of view, because nothing was graded. We weren't teaching any new material. We weren't assessing anything. So there's no way you can make a judgment on how well the spring worked.

For similar reasons, Superintendent Greenhart wanted their district to instead focus on gathering data during summer school (during which a new curriculum could be taught), saying "all those things were more data gathering than actually looking at the overall effectiveness. You weren't going to be able to know the effectiveness until Summer School was over." This superintendent also discussed the importance of using diagnostic tests at the opening of the 2020-2021 school year in order to reach data-driven conclusions about learning loss.

Superintendent Birch also discussed using data to drive decisions around instruction. When discussing how to design virtual learning experiences, they said, "For us, it was around already using data. How do we monitor student achievement? How do we monitor priorities within our school district?" Given the number of systems that the district had in place to gather information about student learning, Superintendent Birch said that "We have been able to identify where the gaps exist or existed and we have been in a stronger position, I think, to address those particular gaps in terms of building that virtual world, that 100% virtual world."

***Providing Training and Explaining the Expectations***

Several superintendents discussed how they prepared teachers for online learning through training and communication of expectations. Superintendent Juneberry estimated that their school district had probably delivered close to 1,000 professional development sessions since March, 2020; these training sessions included both mandatory and optional sessions, but all were

"very specific and very directed to what they would need as adults in the classroom." Superintendent Ashe also described a robust professional learning program. When Superintendent Ashe's district began to plan for summer learning, they did not know whether their school district would open virtually or in a hybrid format, and therefore decided to prepare staff and families to "plan for the most restrictive return to school. We're going to plan to come back as if we're all-virtual, and then we can work back from there." Furthermore, this superintendent related that they said to the teachers:

> "Hey, you guys. Unlike past summers, we're going to ask you to not go off the grid this summer. We need you to stay connected. And I'm asking you to stay connected because we want to do all this training. There's a big chance we're going to have to shift our whole way of thinking about delivering instruction. And I promise you, if you get smarter with us and you hang in there with us, you'll be a lot less stressed out when the school year starts in August." And to their credit, the teachers did.

Superintendent Cypress similarly decided as early as late May/early June to prepare for both hybrid and virtual instruction. Despite "not knowing which model we would start with," Superintendent Cypress knew that at some point they would definitely be hybrid, but that there was also a strong possibility that they would be virtual. Even if the district was mostly virtual, this superintendent knew that "some of the parents would be uncomfortable sending students back and not feeling safe, so we wanted to have both plans."

Time was a limiting factor for the amount of training that could be completed before opening virtually. Superintendent Knowlton explained that "I would have liked to have had more professional development for staff...And we just didn't have the amount of time that we would need, I think, to plan to the very best of our capabilities." Furthermore, Superintendent Knowlton

discussed how the emphasis on simply learning to use the technology inhibited the training on virtual learning pedagogy.

Superintendent Dogwood described wishing their district had implemented smaller, more frequent training sessions and made them mandatory for staff, saying that it would have allowed "the people a little bit of success to begin with, then kind of build upon it." Instead, the district assumed that teachers would voluntarily take advantage of any training offered, which did not appear to always happen. Superintendent Dogwood also explained the importance of communicating the need to reflect on what did and what did not work with his staff, even though sometimes "people take offense to that. But it's not about taking offense to it. It's just, now's your time to reflect on it." Superintendent Larch similarly explained the need for purposefully dedicating time for communication about what did and did not work, saying "We need time to stop, pause, and reflect. And smart leaders are gonna build that into their process, right? … We gotta build this in." Leaders must designate specific time to have difficult conversations regarding the effectiveness of the implementation of expectations.

Superintendent Greenhart found that their leadership team not only needed time to reflect on effectiveness, but also on the reasons why they were creating training. This superintendent told the leadership team to look through "the kids lens and give the teachers the professional learning, the resources so that the kids lens stays at the forefront and we're really addressing their issues." Superintendent Greenhart was happy with the training program that their district implemented. The district leader in charge of professional learning "did a great job of coming to our board meeting and going over the ins and outs." The purpose of all this training was not simply to train teachers, but also to make sure that "all of our principals, building leaders…[and] staff were really trained on those [the district's virtual learning platforms] first." As the opening

of school drew nearer, more training was implemented: “As soon as August hit, we began to have these Friday learning sessions for teachers,” explained Superintendent Greenhart, who also said that these Friday learning sessions also continued after the opening of the 2021-2022 school year. This allowed the district to continue to communicate expectations and strategies for virtual learning.

Superintendent Juneberry also described the Fridays that teachers had for planning during the 100% virtual opening of the 2020-2021 school year. Superintendent Juneberry reflected that “The best thing we did was setting aside that one day for teachers because they were able to plan together, get together and have everything ready to go for the next week. I think without taking that day and making that their day to get ready, it probably wouldn’t have worked.”

Superintendent Maple described a similar program in his district in which students worked asynchronously on Wednesdays while teachers could attend professional development and engage in planning. “If there's one thing among many that we've gotten really good feedback from our staff about, it's been, ‘We love Wednesdays,’” this superintendent explained. In fact, because the teachers enjoyed it so much, they wrote into their academic calendar for the following year to have one Wednesday a month that’s planned to be an asynchronous day.

Superintendent Nogalito’s district had teachers engage mostly in self-paced training that was provided for free by their learning management system. The training helped teachers “enter the year really having a great comfort level with how to use [online learning management system]” and some teachers were able to “rise to be experts that were able to help their peers navigate some of it.” In addition to this training on how to use the learning management system, the district also provided expectations to the teachers regarding how much they expected students to be engaged in work. At the elementary level, the district changed expectations

regarding class sizes and schedules in order to meet the developmental needs of students. One expectation that proved more perplexing than originally expected was that of how the district would measure attendance. Superintendent Nogalito said that the original plan was that teachers would count attendance based on how many tasks students completed, but that proved complicated and not a true measure of student engagement with a task, especially in an area where internet connections could be weak and a student may struggle to turn in assignments. Instead, Superintendent Nogalito said the district moved to a system that allows teachers to "more intuitively communicate with the child and the family to determine whether they were engaged."

For Superintendent Birch's district, the expectations were not that teachers "start over" to learn to teach online. Instead, this superintendent explained that "You basically make adjustments within the current system." Superintendent Birch explained that prior to the pandemic, their district had a professional learning program that had "already established the thinking around professional development, around how to use technology as a tool to help facilitate, not the driver it's just the vehicle for delivery, how best to use the technology."

Superintendent Cypress' district also provided training for parents via their website. This superintendent explained that:

> If you visit our website, you'll see all of the resources for parents and students. We were showing them videos of how to just maneuver through [learning management system] and [online video platform]. There were parents and students that were not familiar with the [learning management system] and [online video platform] so we thought that would be helpful to them.

Providing this kind of training to families could help to ensure success of the virtual learning program, as well as decrease the stress of teachers, students, and families.

***Controlling the Narrative***

Superintendents were also likely to cite the media and social media as both a tool for and a barrier against controlling the narrative. For instance, Superintendent Birch described how the use of social media by teachers from other nearby school districts influenced a delayed timeline in bringing back students, therefore lengthening the amount of time spent in virtual learning for most students. Superintendent Ashe also talked about how a local news outlet picked up a story about an email from a staff member asking for more cleaning supplies, but spun the story to make it seem as if the district was not prepared for teaching and learning during the pandemic.

Superintendent Dogwood explained, "Everybody airs their concerns on social media, they contact board members, or staff or whatever. And then all that comes to me," but further explained that, "but I don't lead the school district [based] on Facebook, or social media." Superintendent Foxglove said, "Keyboard courage is kind of the norm. People have no problem sitting right here...and putting anything and everything out here. And we realize that, on a calm day, we have a bullseye on us." This superintendent also discussed having people send him screenshots of social media in an attempt to share frustrations. "I received frustrating messages. Not frustrating to me. Messages communicating their frustrations, through email, phone calls. People would send me screenshots of what's on social media." Superintendent Foxglove tried to remember to have grace when reading this messages, explaining that, "I think we kind of get it, that this teacher may have a child with special needs at home, who's also a student of ours, who they also have Grandma living with them and they're concerned about her health."

Superintendent Greenhart, on the other hand, described using social media to control the narrative in their district. Every month, this superintendent used a social media streaming platform "just to answer everyone's questions directly" and to address any "lies" that people had been spreading about district decisions or reasons for those decisions. Viewership was frequently in the thousands, allowing the superintendent to "answer some of the lies that were coming through the [social media streaming platform] chat. And the response was ridiculous, it was so positive." This superintendent used these streaming events to directly address comparisons with other districts' plans and private schools in order to help community members understand the reasoning behind the decisions.

***Emphasizing Two-Way Communication***

Two-way communications means that not only are districts giving information to stakeholders, but taking and receiving the feedback of stakeholders as well. Districts accomplished this in different ways. Superintendent Foxglove explained that:

> Me and my leadership team, we go out and we do listening tours of all of our schools twice a month. We just go there for an hour and just listen, and see how things are going, what has worked, what hasn't, what supports you need. And so, we've done our best to try to be very, very receptive to that. I think it's important to get out there and to listen. So, I myself, I even did [online streaming platform] with the entire district. Q&A, just went out like it was a virtual kind of TED Talk or something. And then I gave everybody my cell phone number. … We didn't want the barrier of not being able to get a resolution, to get an answer, to prevent you from doing what it is that you needed to do. There are already so many other things to be concerned about. You're juggling so many new things, so if

> we can help take one of those bits of anxiety away by being receptive, to listening, to answering and giving you a solution ... We set up hotlines for families, for kids, for staff.

In Superintendent Maple's district, they brought the teachers to the superintendent rather than the other way around, but still emphasized the importance of that two-way communication. Superintendent Maple explained that they meet with a teacher representative from each school, in addition to meeting with building leaders, instructional teams, the curriculum and instructional team, and the professional learning personnel.

Superintendent Greenhart also believed in the importance of getting feedback in addition to communicating expectations. This superintendent explained that their district had been doing professional development every Friday since August, and was about to send out a survey regarding its effectiveness in order to make decisions, saying that "I'm looking for data. … I'm always looking for common things. You gotta sift through all the BS and look for the common things and then you try to find some low hanging fruit that you can address."

**Reinforcing the Mission**

One significant finding from this study was how many superintendents talked about how the pandemic and virtual learning either strengthened, added to, or changed the mission of their organizations as they saw it. In Superintendent Maple's district, for instance, they found that the pandemic reinforced their mission, which focused on developing collaboration from the top-down and the bottom-up. Superintendent Nogalito also found it helpful that they had the opportunity to hire most of their leadership team, allowing the district to come "into the pandemic with the benefit of a pretty common set of core values." This section will look at how superintendents used or refined educational missions. First, this section will consider how superintendents used their actual district philosophies to navigate the pandemic and build virtual

learning systems. Then, this section will consider how the personal philosophies of superintendents impacted their district's virtual learning designs before turning to superintendents' discussions on the need to rethink what "teaching and learning" should look like in America. Lastly, this section will look at how superintendents use these missions to reflect on their experiences during the pandemic, and then how they hope to use those experiences to move forward.

***Articulating District Philosophies***

According to Superintendent Birch, the focus of any school district should be on the core mission, regardless of the methods of learning. "I think that's essential to any environment to any environment that you function in, whether it's 100% virtual, whether it's in person. It really essentially starts with your core business. Why do we exist? It's all about teaching and learning," explained this superintendent.

Having a district philosophy could help undergird the process of creating a virtual learning plan. For instance, Superintendent Hazel explained that their district's pre-pandemic philosophy centered around building relationships with students, and this carried into their virtual learning designs. "We always talk about philosophy and our philosophy was, let's build relationships. Let's just get content second and relationships first," explained Superintendent Hazel. Superintendent Maple's district found that their mission statement helped them weather the pandemic. This superintendent said, "Per our mission, what we, I think, had done over time was to develop a sense of collaboration, top-down, bottom-up" and that during the pandemic they developed "a sense of a very tight-knit, kind of interdependent group that nobody's moving here while somebody else is moving over here."

Likewise, Superintendent Foxglove discussed their district's working philosophy for the pandemic by saying "Throughout this whole thing, we've tried to, to the best of our ability, practice two big things. Maximum humility and maximum flexibility, where we don't know all the answers. We don't have to know all the answers."

One superintendent, Superintendent Dogwood, described how sometimes the most important philosophy was simply to get the work completed. In a district where internet access can be a challenge for families, Superintendent Dogwood explained that the mission they gave their take force in charge of designing remote learning was:

> To number one, provide instruction, some type of instruction. And then to get that, get something started, whether it's really good or maybe it's not the best, but that we attempted, and we got something started. I wanted us to have a purpose, I wanted us to be resourceful and I wanted us to be innovative. At first, we just needed to do it. And every time, we just need to build upon it.

As the year progressed, Superintendent Dogwood also talked about returning to the work their district had started pre-pandemic regarding the 5Cs: citizenship, collaboration, communication, creative thinking, and critical thinking. Even though remote learning had initially taken priority over other initiatives, Superintendent Dogwood nevertheless brought schools together to discuss how they were incorporating the 5Cs into remote learning. He intimated that he was pleased to hear how creative some of the schools had been in ensuring that the remote learning continued to help students focus on the 5C skills. He also plans to meet with some of the students to discuss if/how they have felt that the 5Cs have been incorporated into their learning this year.

Superintendent Larch also incorporated district philosophies in the debate about whether to continue virtually or change either a hybrid or in-person experience for students. He explained:

> You have the whole open-our-schools-yesterday movement and the whole how-dare-you-even-talk-about-opening-our-schools movement and the two of them love to stick us in the middle, so as I've been pressing along the whole time, what you gotta do is stop caring about what people think. I mean, that sounds terrible but at some point, I keep telling my team, we have a set of core values that we live in and, I mean, we put 'em on the front page of our website and it says, "Put children first" is the first core value. So, instead of caring about what the open yesterday people think and the never open people think, find the science and then do what you know is right and then do what you know is right for the kids based on the science.

***Staying True to Personal Philosophies***

Superintendent Dogwood discussed the importance of owning leadership decisions. "I make the decisions, and we just go with it. And I just kind of own them, and I try to give people enough notice and so forth." Superintendent Knowlton expressed a similar philosophy: "I believe in making a plan and then sticking to the plan." Superintendent Maple, on the other hand, saw his role as facilitating collaboration within their district, saying that, "I think we have a real time approach here, a real together approach. And so my role is always just trying to stimulate that and make sure that that's how we're operating."

***Rethinking "Teaching and Learning"***

One consequence of the pandemic and the closing of schools in favor of virtual instruction has been what Superintendent Dogwood called a need to "rethink school, if we want

people to see the value of a public education." The institutional logics that fit a pre-pandemic education model based on in-person learning in brick and mortar buildings did not, in many instances, work for virtual learning. Superintendent Nogalito also discussed the need for schools to "fit the kid" rather than the other way around. This superintendent said that one of the benefits of the pandemic was that:

> Not only are we having to innovate, but we're forced to ask some questions that we really should have asked probably 20 or 30 years ago. Like, Why do we...? What do grades mean? Why do we average grades? What is the point of this midterm exam? What makes us think that all of the eight year olds should move together to third grade for no other reason than because they turned nine? … I think we've just always made kids squeeze themselves into the traditional box, and now we're going to have to do the opposite.

Similarly, Superintendent Knowlton knew that their community had many working parents, who may or may not have had access to the internet due to a lack of cell phone towers and internet providers. For that reason, Superintendent Knowlton knew that learning could no longer be defined as being in a classroom for six and a half hours a day, and instead required the district to "define what meaningful intervention and meaningful contact was throughout the course of the day" by working "to set things up with families individually." In fact, Superintendent Knowlton saw the pandemic as an opportunity to "rethink or reimagine what some of the learning could look like" and "think beyond the brick and mortar" in order to better meet the needs of students and families.

Superintendent Foxglove described a similar thought process, specifically saying that their school district had to figure out how to "rebrand education." "It was like rewriting the book of how we were delivering, what we were confident in was a really, really meaningful and

beneficial product, the instructional opportunities that our kids had pre-March 13th." Sometimes, however, this rethinking led to uncomfortable conclusions. Superintendent Ironwood revealed that:

> Things that we knew we had some problems and some concerns about, but revelations have been excruciating … As an institution, no one wants to acknowledge that you're woefully in trouble or behind, but I think for all of us ...to say it rattled our cage is a minimum. It woke us up, it made us realize how far behind that we are, or how disconcerting it has been now for a school community, and for just a community at large, to recognize not about just access and things like that, but about the fact that we are not maximizing the benefit of our education. We are not doing it, and that hurts to say that.

***Looking Back and the Importance of Reflection***

Most superintendents reflected either on their pre-pandemic schools or on the effectiveness of their district's virtual learning since the pandemic. Frequently, reflections on pre-pandemic learning involved regrets about not using more technology with students, or not using it in ways that emphasized critical thinking skills, prior to the pandemic. Superintendent Cypress, who reported that their district did no virtual learning before the district, said of their pre-pandemic teaching and learning:

> And then just think about all of the students that are in college now. Everyone experiences, I would think at least one online class that you don't have a professor that's in front of you for. And I'm thinking, so why did it take a pandemic for us to even move in this direction, if we're teaching... And think about all of the jobs now that people are working from home, not just because of the pandemic, but this was happening prior to the

> pandemic, and pre-pandemic. … And if we're preparing students for college life and for jobs, why weren't we doing some of this before the pandemic?"

Superintendent Greenhart also spoke about wishing that students in their district had had more experiences with technology prior to the pandemic, saying that "That's the one thing I wish I had done differently...would have been PreK through 12...each kid having a Chromebook."

The pandemic required districts to create entirely new learning plans. At the start of the pandemic, Superintendent Ironwood, a veteran superintendent, received many phone calls from other superintendents asking for advice about how to navigate the transition to remote or virtual learning. Superintendent Ironwood replied to those callers, "You need to understand something, I haven't done this any more than you have. I'll be coming to you." This superintendent summed up this feeling of everyone navigating this unique situation in a quote from their spouse: "You're not going to have any insight until you've had some hindsight." In other words, sometimes the best way to navigate a path to move forward is by reflecting on what worked and did not work in the past. This superintendent explained the importance of "Fail[ing] faster, so then you can get on with it, because it's not a matter of if you're going to fail, it's a when, so just fail faster and get over it so you can learn."

Several superintendents spoke directly about their reflections on preparing for virtual learning for the 2021-2022 school year. Superintendent Dogwood described wishing that their district had held smaller, more frequent training sessions and made them mandatory for staff, saying that it would have allowed "the people a little bit of success to begin with, then kind of build upon it." Instead, the district assumed that teachers would voluntarily complete these courses, but not enough did for a smooth transition to remote learning. Superintendent Ironwood,

Superintendent Hazel, and Superintendent Birch all discussed not planning for 100% virtual learning soon enough, usually because they were anticipating opening with a hybrid plan instead.

Superintendent Greenhart also felt that, in addition to reflecting on how the district could have improved learning plans, the district also needed to reflect on what had been done well. “People have so much anxiety about just change and just really being able to handle something new...Just celebrate the small victories.” Superintendent Maple had a similar philosophy, saying that their district starts every team meeting with internal and external stakeholders by first talking about “what’s going well. Because we're going to go ahead and later spend most of the time on what's wrong and what the problems and the challenges are.”

Superintendent Ashe also reflected on virtual learning going better than they had originally expected, saying:

> I think the teachers were surprised that it worked as well as it did, that students were as engaged as they were. Especially you hear that from the elementary level teachers. They really didn't think it was going to work at all. But you know, it was weird if you're an administrator and you're walking down the hallways of a school and you're looking in classrooms, and they have, "Do not disturb. We're zooming," and you see a kindergarten teacher singing and dancing and jumping around the classroom. So they didn't stop the things that they always did. They're still engaging in the right pedagogy and everything.

***Looking Ahead and Sustaining Positive Changes***

Reflection is the first step to effect substantial change; taking action is the next. In both steps, it is crucial for districts to “interrogate their reality,” as Superintendent Ironwood said. “Don't try to live in a fairytale land. You've got to say here's our reality. And what we learn from that, is we have some really cool things already in place, and we were headed in the right

direction in a lot of ways," explained Superintendent Ironwood. In other words, educators must question institutional logics and ask if they are still relevant to the current world. Superintendents discussed both the positive and negative effects of the pandemic on learning.

For instance, Superintendent Orange had originally had a four year plan to move to a 1:1 program for all students. This multi-year plan would have allowed the district to replace outdated or no longer working devices on a cycle in order to lessen the impact on a single year's budget; instead, the Superintendent Orange would now have to figure out how to replace many devices all at once. Superintendent Hazel also wondered about future negative impacts, especially the fact that 15% of the district's students did not complete any work or attend any school sessions. This superintendent explained:

> The consequences for that are unbelievably beyond instruction. … How do you retain 15% of the kids in any school district? That's a gigantic number. So what does that do to your facilities in the future? What does that do to your access to technology? What does it do to your staffing? …That's a 15 year unwind, the way I see it. You've got kids that are four years old that may have delayed starting preschool and kindergarten...the numbers are going to be impactful for a long, long time.

Superintendent Nogalito echoed concerns about students who were "AWOL." The district had made attempts to contact these students, but despite the district's best efforts, "there are this handful of kids that have done nothing," leaving Superintendent Nogalito wondering how the district would meet the needs of those students moving forward. Superintendent Ashe described similar issues during virtual learning, saying that "families who are hard to reach become harder to reach. The number of families that you can't reach... There have become more of them."

Superintendent Nogalito also discussed positive impacts of the pandemic, such as how the long-term plans of their district were accelerated. Superintendent Nogalito's district had already begun offering virtual experiences at the high school level, specifically for students who did not "fit in the traditional high school infrastructure. Kids who are marginalized because of their inability to establish relationships, kids who have considerations at home that they bring to school that caused them to disengage." When building this virtual learning program, the district rethought several of the institutional logics that sometimes cause frustration for students who need a different learning experience, such as highly structured schedules. Superintendent Nogalito explained that "we got rid of all those boundaries and allowed it to be a very student centric place where they have a lot of choice in their learning and their passions." The district had experienced a "tremendous amount of success" and had been considering how to use some of the same strategies to rethink the high school experience for all students. The pandemic sped up that progression of events as the district then had to design such learning experiences for all students.

The pandemic also brought to light staffing needs. For instance, Superintendent Ironwood realized their district needed someone to coordinate technology from a district-wide point of view. "We need someone to build, we need someone to coordinate. So that's a benefit going forward, not just for online, it's going to affect everything that we do in the classroom, the engagement we talked about." Superintendent Greenhart also had plans for using what had been learned during the pandemic. This superintendent likened the process of applying what had been learned to coaching athletics, and emphasized the importance of gathering and then using strong data to make decision, saying that:

> We're gonna take what we've already seen from the instructional data that we've done, including grade distribution reports. Mixing that with taking a look at the strands of the kids that didn't do well online, the feedback the administrators will be giving the teachers, and in the fall was that feedback actually being applied, that's what we're doing for the next three months.

Multiple superintendents discussed potentially opening a virtual learning academy or at least allowing more virtual options for students. Superintendent Orange explained that this would be far easier to do post-pandemic given that their district had purchased cameras that would follow the teacher around the classroom, allowing teachers to teach virtual and in-person students at the same time. Superintendent Dogwood explained:

> I think we will work to keep remote learning as a part of our curriculum...or a part of the way we deliver school because there are some kids that need to work, there's some kids that need to do internships and so forth, and they can still accomplish what they need to do. And so I think all of that will remain, or bits and pieces of it will remain. And it just gives the flexibility.

Superintendent Ashe also discussed opening a virtual school for the district in high school and possibly middle school. The superintendent explained that for some students, virtual learning has been beneficial compared to brick and mortar classroom learning, saying:

> It's the social pressure, the anxiety, and all of those things. And for some special learners, they've excelled, which is kind of counterintuitive, but I think they don't feel like every time they volunteer to answer a question someone's going to make fun of them or call them a school shooter or whatever. So for some students that really struggled in school, this has been better for them.

Superintendents Juneberry and Cypress, in addition to mentioning the possibility of a virtual academy, realized that such an opportunity could increase enrollment by offering students' opportunities to learn from home but also play sports on school teams, which would be helpful after public school districts lost students to either homeschooling or to private schools during the pandemic. Superintendent Cypress explained that:

> And we're hoping that [a virtual academy] will increase our enrollment as well, because we're losing a lot of [students] either to Christian schools or to the private schools, and homeschool as well. Definitely we'll be able to get those back from the homeschool venue because they would be actually enrolled as a [current district] public school student, but then never have to come into our buildings, but still could play sports, which is not the case when you're in homeschool.

Superintendent Ashe also saw potential benefits for students by combining virtual and in-person learning. This superintendent described how the use of synchronous video conferencing sessions could ameliorate some challenges such as busing or staffing. They gave the following example:

> Maybe if you do have a group [of students] who needs some extra mediation and things like that, why couldn't you work your school schedule so that you have a different school and staffing pattern where the students who need an extra reading group, a second, third reading group in a day, could get that just with some smart scheduling and staffing? You don't have to have everybody in the same place. You could even do it across schools. So if you have your top reading teacher and you say, "Hey, you're going to teach a regular schedule, but in the afternoon we're going to send you strategic groups from three different schools, and you're going to work with them on Monday, Wednesday, and Friday from this time to this time, and we're going to cover your class."

Having both the technology and the technical knowledge to use it would allow the district to leverage human resources in new and possibly more effective ways.

Superintendent Birch also had some families reach out to say that virtual learning worked well, and sometimes better than in-person learning, for their learners. This superintendent recounted discussions "with parents who have said that this is absolutely working for their child or children." Superintendent Birch further said that, "It's a new role that we have in terms of new structures and new systems for pre-K through 12. And I think it should be. I think we've begun to now really revitalize this whole educational system." As part of this revitalization, Superintendent Birch discussed it being important that:

> We recognize...that one size is not going to fit everyone and that's very true even as it relates to our educational delivery system and systems. Virtual has and will continue to work better for some of our students and families and, by gosh, that's a best practice. If we don't come out of this with a virtual system as a companion system to what has been the traditional system of brick and mortar, then shame on us.

Other superintendents called for a need to sustain some of the changes that had taken place during the pandemic. Superintendent Elm, for instance, stated, "What I'm pushing our folks now, we've been pushing our folks the whole year is, don't lose this. I don't want us to come back in September and go back to exactly what we did the September before last." He further conjectured some of the potential changes that could be made to the educational profession as a result of the pandemic:

> It's those type of things...hours that we work, the telework options that we can give to employees, what a sick day is and what a sick day isn't. I think there are many different avenues that we'd be doing a disservice if we didn't at least explore keeping some of

> those things. If we go back to a regular eight to three with 30 minute lunch and 30 minutes recess, or whatever the case may be, I just think we're missing something.

Superintendent Nogalito had worries that even if the district learned from and grew because of the pandemic, other political factors would pressure the schools to operate as they had prior to March 13, 2020, and the closure of schools. "What I think is going to be challenging is to make sure that if and when ... we do get back to whatever is normal, that it's going to be easy to let that stuff just come right back in from our legislators down to our teachers and parents." This superintendent feared that traditional institutional logics would prevail, forcing the district to abandon innovative changes to fit the students in favor of accountability measures such as only tracking attendance according to seat hours, requiring end of year standardized assessments, and counting of instructional minutes.

Some superintendents explained that while the pandemic has had terrible effects, there was a "silver lining." Superintendent Foxglove said of teachers' previous fears of virtual learning, "We have evidence in the 2020-2021 school year, that we've done it." Superintendent Larch described this phenomenon as having "proof of concept" that virtual learning can be done, and done well:

> I think there's a lot of opportunity in front of us because there's a lot of proof of concept now and that's what people need. ...There are some people who are totally comfortable in the innovation space, right? They're just like, "Let's try it! Let's throw it at the wall and see if it sticks!" And that's fine and you can build structure for that and you have to and you should. ... But there's a whole other group that's like, "What are you talking about? That's not what public school is!" And so we'll have to offer proof of concept. You have to show them.

Superintendent Orange noted that the pandemic had sped up their five-year professional development plan, unintentionally bringing about long-term goals that would have been previously difficult to implement. He explained:

> Ultimately where we wanted to go and the one-to-one learning and personalized learning. But what I have seen during the course of all of this madness is, I see teachers using playlists and doing personalized learning and differentiating instruction like gangbusters. They're doing amazing things with students in the midst of all of this. It's really forced them to innovate and meet the individual needs of students whereas they may not have felt the need to do that, but now they have to do that in order to survive

Superintendent Maple had similar feelings about wanting to sustain the collaboration that existed during the pandemic, saying that:

> When people aren't in their comfort zones is when they tend to say, "I need help." And so we've heard from folks that they've never collaborated more in their careers than they have over the last eight, nine months. And so the key to me is that, that's got to sustain. We've got to transfer that new capability, that new capacity, and we need to kind of keep it going forward.

This superintendent's district also made other changes that were specifically due to the pandemic that stakeholders decided they wanted to keep. For instance, due to the ban on large gatherings, in Superintendent Maple's district, all the elementary teachers met, socially distanced and with masks, with every single students' family beforehand. This superintendent explained that rather than going back to mass open houses, for the 2021-2022 school year families would have set days to come in and meet teachers individually in order to establish strong teacher-family relationships. Similarly, by using virtual meetings and asynchronous assignments and other

digital platforms, Superintendent Maple said that moving forward the district would work on a 24/7 engagement plan with families. “You can't make your staff work all that time, but we [can] be, as a system, engaged with our families and our students 24/7 moving forward,” this superintendent explained.

Superintendent Larch summed up many of these discussions by speaking about the relationship between equity, culturally responsive leadership, and the pandemic to explain their hope for the future:

> Don’t come out of this seeking to go back to normal, right? Come out of this maybe seeking to go back to face-to-face because God knows many of our kids need to be with it, but don’t come...I mean people are like, oh I can’t wait to get back to normal, I’m like, you have missed the dialogue. So come out of this seeking to be better for kids tomorrow than we were yesterday and we have a great opportunity built.

## Summary

Of the fifteen superintendents interviewed, questions around equity was a dominant theme around virtual learning. Even in more urban districts with abundant cell phone towers, districts had to provide internet access to families at no or low cost, which was made possible only through federal grants. In rural areas, virtual learning was frequently called “remote” learning, because frequently parts of the communities could not access the internet even with hotspots due to the lack of cell phone towers. The intersection of the pandemic, virtual learning, and racial tensions in the United States resulted in superintendents being more focused on the value of equity rather than the previously dominant value of accountability.

When designing these virtual learning systems, districts experienced unintentional influences which superintendents answered with intentional responses. Political factors, resource

availability, and the needs of stakeholders were the most commonly cited unintentional influences. These were not necessarily factors outside of the superintendents' control, but rather influences that superintendents did not purposefully seek out or employ in order to create virtual learning systems. In order to build virtual learning systems that had the most equity possible, superintendents leveraged internal and external stakeholder relationships, communicated purposefully, and reflected on the ultimate mission of education in order to make plans for moving forward from the pandemic. Through doing this, superintendents hoped to keep the best practices learned or developed during their districts' experiences with 100% virtual learning, including more flexibility for students and staff and expanding equitable virtual learning to all.

# CHAPTER V:

# IMPLICATIONS OF FINDINGS

This section presents conclusions drawn from the findings. First, I will explain changes to the original research questions and present an overview of the theory that emerged based on the data. Second, I will consider the original themes from the initial literature review and how those themes evolved during the study. Third, I will discuss the implications of the findings for both theory and practice. Fourth, I will consider limitations of the study and how future research may yield more information. Lastly, I will present an overall summary of the study.

## Overview

This study was initially guided by the following research questions:

1. What was the relationship between internal and external influencers on the 100% virtual learning design choices made by superintendents during the COVID-19 pandemic crisis?
2. What role, if any, did feedback between the various actors play in the emergence of the 100% virtual learning plan?

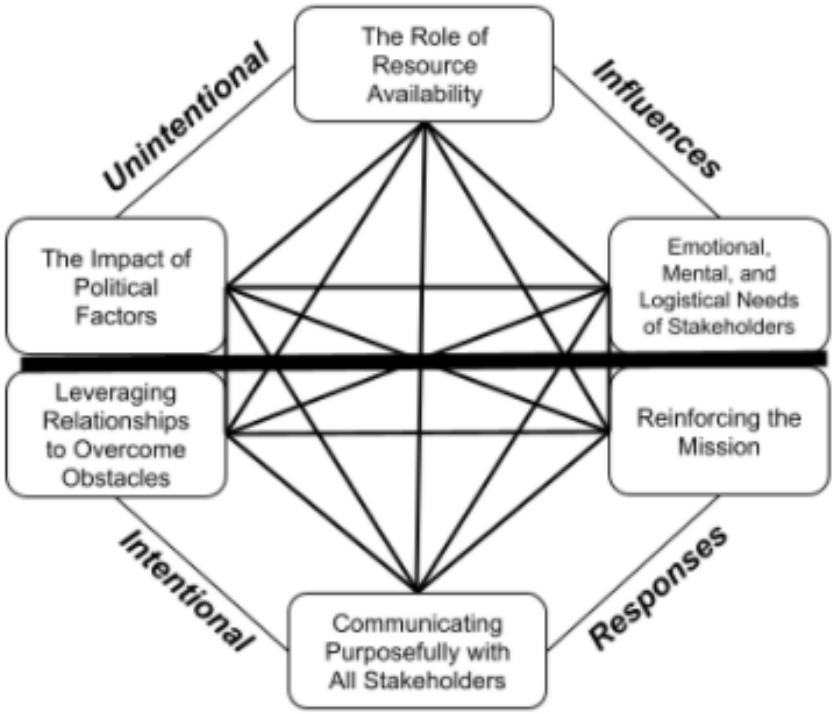
Charmaz (2014) explained that researchers who use grounded theory may find that their initial research questions change during the course of the study, and this is what happened during this study. The original first research question considered the relationship between internal and external influencers; as the study progressed, however, it became clear that the influencers were better separated into the categories of unintentional influences and intentional responses. For instance, the emotional, mental, and logistical needs of stakeholders were a major influence on the design of learning plans, but these needs were not neatly divided into internal and external categories. In many cases, families and district staff had the same needs. Both staff and families might, for example, have a fear of the virus that led them to prefer virtual learning. Similarly,

political influences included political views of constituents, school board members, and staff, and therefore also occurred internally and externally. For that reason, the first research question was reworked from "What was the relationship between internal and external influences on the 100% virtual l earning design choices made by superintendents during the COVID-19 pandemic crisis" to: "What was the relationship between unintentional influences and intentional district responses on the 100% virtual learning design choices made by superintendents during the COVID-19 pandemic crisis?" This new first question provided guidance toward the second research question as well, because districts reacted to these unintentional influences with intentional responses, and virtual learning plans emerged from these complex interactions.

Findings showed that districts sought to plan equitable virtual learning experiences for all students based on unintentional influences and district responses. The Influence and Response Complex Emergence (IRCE) Theory explains that during an educational crisis, learning plans emerge as a result of the feedback between unintentional influences (politics, availability of resources, and needs of stakeholders) and district leaders' intentional responses (leveraging relationships, communicating purposefully, and reinforcing the educational mission). Figure 3 shows a visual representation of this theory. Each of the unintentional influences is written with a noun as the key word, demonstrating that these were things that happened to the district. Each of the intentional responses is written as a verb, representing how superintendents and their district leaders took actions as a result of the unintentional influences. There are lines that connect each influence to every other influence; these are symbolic of the feedback that each influence gives to the others. The overall design is that of a prism, a fully three-dimensional object with many faces that shows the complexity of the factors that helped to create these virtual learning designs.

**Figure 3**

***Influence and Response Complex Emergence Theory (IRCE)***




## The Evolution of Themes and Implications of the Findings

I initially engaged in a review of the literature I thought would be germane to the study, but the use of the grounded theory methodology meant that these themes, while suspected, were not guaranteed. It can be a challenge in a grounded theory study to not unintentionally steer participants to discuss particular topics based upon the interviewer's own knowledge and suspected themes (Charmaz, 2014). I knew this, and while I had prepared questions, my goal was to let the interview flow naturally to the topics the participant felt were important to discuss. I allowed the actual themes to emerge naturally from the interviews of the 15 Virginia superintendents, and through the use of memo-writing, diagraming, and the coding process. Some of the initially suspected influences did become categories of influences in the final theory; others, however, did not. This section will describe how certain themes evolved over the course

of the study, including: 1) the role of institutional logics, 2) the importance of communication and narrative control, 3) the move from emphasizing internal versus external influences to emphasizing unintentional versus intentional responses, 4) the influence of politics versus actual policies, 5) equity replacing accountability as the dominant value, and 6) the lack of isomorphic impact on virtual learning designs.

**Institutional Logics**

"Institutional logics" can be defined as "a set of organizing principles that govern the selection of technologies, define what kinds of actors are authorized to make claims, shape and constrain the behavioral possibilities of actors, and specify criteria for effectiveness and efficiency" (Gray & Purdy, 2018, p. 37). The ideas about what "should be" were present in many of the chosen categories and subcategories for this theory. I did not choose to make institutional logics of education a main category of a subcategory because while they were discussed, they frequently did not rise to the level of an actual influence. Superintendents were equally as likely to discuss a desire to break with these institutional logics as they were to support them. For instance, several superintendents discussed changing the schedule for virtual learning to meet the developmental needs of students by limiting screen time. On the other hand, Superintendent Ashe described keeping the traditional schedule to help students feel a sense of "normalcy" and to prevent caregivers from needing to directly contribute to the teaching and learning of students. In this case, the dominant influence was meeting the needs of stakeholders, and the challenge to or the upholding of the institutional logic was a byproduct of the influence. Several superintendents also expressed a desire to keep some of the flexibility of schooling that had developed during the pandemic, but worried that teachers might want to return to "normal" after

the pandemic ended. This example demonstrates how even when institutional logics start to shift, the previous logic leaves its mark (Kroezen & Heugens, 2019).

**Communication and Narrative Control**

Communication became a major theme of the study, and narrative control a sub-theme under it. Communication itself was not a separate theme in the initial literature review, but was featured prominently or tangentially in several sections, such as narrative control, reputation management, relationships with external stakeholders, and internal conflict management. Every superintendent in the study discussed at least one aspect of communication, and many described multiple aspects. Communication was mainly used as an intentional influence when creating virtual learning designs, with district leaders needing to determine how, when, and with whom to communicate. The pandemic made communication even more difficult because students were not all attending virtual lessons, parents were frequently trying to work from home while also supervising their children's learning, and circumstances changed frequently as COVID-19 case numbers fluctuated and more was learned about the virus. Nevertheless, communication was essential as there was no more "business as usual" and stakeholders needed to be kept informed about new developments and decisions from the district. Stakeholders frequently received these updates through the media outlets and social media.

Superintendents discussed the importance of needing to maintain control of the messages that were given to stakeholders using these venues. Superintendents described social media as a particularly useful method of communication to reach stakeholders, but frequently pointed out that it could also hinder communication. In some cases, superintendents used social media streaming platforms specifically to combat misconceptions that had been spread on those same social media platforms. Using social media in this way allowed district leaders to maintain

narrative control rather than allowing social media to drive judgments about district-level decisions (Rim & Ferguson, 2020). Similarly, social media could be used by district leaders as a way to regain narrative control when the news media "spun" stories about the districts in a certain way.

**The Importance of Relationships**

The original literature review discussed two topics related to relationships: relationships with external stakeholders and internal conflict management. These themes collapsed into the category "Leveraging Relationships to Overcome Obstacles" during the study. Superintendents frequently discussed the importance of growing all relationships, both internal and external, in the attempt to rethink how teaching and learning could continue during a pandemic in which students could not physically attend school. Internal relationships were strengthened as superintendents brought together teachers, administrators, and other district personnel to design their virtual learning systems. Superintendents also cultivated external relationships with businesses and community organizations. Business relationships were used to obtain the laptops and hotspots that were needed for students to participate in virtual learning from their homes. The need for internet access also facilitated relationships between schools and other community organizations. In some instances, localities were able to use state or government provided funds to purchase hotspots, and other organizations boosted their WiFi signals to provide internet access to nearby families. School systems also worked closely with local health departments to make and communicate decisions regarding the opening of schools and mitigation strategies. Frequently, these internal and external relationships made virtual learning either possible or run more smoothly.

**Politics vs. Policies**

The study revealed that politics themselves were a bigger influence than actual policies. I originally discussed the role of values and policies and supposed that these would be main influencers in my literature review, but as it turned out, overt policies were rarely mentioned by superintendents as influencers. Politics at the national, state, and local levels were all discussed frequently as influences on the virtual learning designs. National political influences included beliefs about the virus and responses to racial tensions. State-level politics could be seen in how superintendents responded to official and unofficial mandates from the Virginia Department of Education. Lastly, another big influence was the politics between superintendents and their school boards regarding who would determine when a district would engage in virtual learning and when it would engage in hybrid or in-person learning.

**Equity vs. Accountability**

The original literature review discussed the importance of values, and especially the value of accountability. The study revealed, however, that superintendents were far more focused on the value of equity when designing virtual learning. This may be because the VDOE announced that the state Standards of Learning (SOL) assessments would not be given soon after the closure of schools on March 13, 2020; the VDOE also decided to waive state accreditation requirements (Lane, 2020e). It further became apparent that many of the school districts would open virtually for the 2020-2021 school year, and the VDOE announced that while students would need to take the SOL assessments in the Spring of 2021, state accreditation would again be waived, both for the 2020-2021 and 2021-2022 school years. Without data for the 2019-2020 school year, there would be no data to use as comparison for growth purposes (Lane, 2020g).

Districts and teachers suddenly found themselves without the longtime guiding value of accountability. As Superintendent Nogalito explained:

> At the heart of it is the predominance that we've put on the standardized tests, those being a measure. Before the pandemic, when Virginia made its movement towards a more holistic model of accountability through the profile of a Virginia graduate and the incorporation of the 5Cs and all this kind of stuff, I mean, Virginia took a great turn to face the right direction. It just never took a step. And so this experience has been transformational for [teachers] because they've learned. They've not only learned a different way to approach instruction, but they've seen the value in it. … I think they've just seen the value of teaching this way, as opposed to everything being about that test. So I guess what I'm saying is it's been difficult, it continues for me to be difficult to get teachers, to let go of that mindset.

Another participant, Superintendent Dogwood, confirmed this movement away from focus on accountability by saying:

> I haven't focused a lot on the SOL tests, just because I just wanted to make sure we had students in and there was some type of meaningful instruction will take place. … If you only see the purpose in your subject, because of a SOL test, then really do you really believe in what you're doing?

On the other hand, Superintendent Knowlton explained that in this particular situation:

> We do have accountability, but we want to try to work with families to support them because it's unlike anything that they've seen and we didn't want to be perceived as being the barrier to make things worse. We want to try to be the support mechanism to help make things better.

Equity, meanwhile, became an issue of concern during virtual learning because even if districts provided devices and hotspots, some areas lacked the necessary cell phone towers or other internet infrastructures. The result was that while some students could participate in synchronous virtual learning using online video platforms, other students had limited interactions with teachers and instead completed work via paper packets or flash drives loaded with asynchronous lessons. Several superintendents mentioned worries about populations of students who also simply did not participate in school when the brick and mortar classrooms closed down. As the impacts of the pandemic continue to be understood, it may be that equity will be the dominant value for a while to come.

**The (Mostly Absent) Role of Isomorphism**

In the original literature review, I expected isomorphism, or the tendency for institutions to act like one another, to be an influence on how districts designed their virtual learning. Conversely, however, several superintendents discussed the importance of tailoring learning plans to meet the needs of the district. Superintendent Knowlton explained that before even beginning to create a learning plan, it was important to "do an assessment of your community and the needs of your students" and "take a look at the dynamics of the students and the community in which you serve, to take a look at who they are, what they need." Superintendent Elm confirmed that the decisions made needed to be based on individual characteristics by saying that "most of the time [superintendents are] too busy to really get in each others' business." Nevertheless, this superintendent emphasized that the COVID-19 pandemic increased the amount of communication between superintendents, explaining that prior to the pandemic, "We would meet quarterly, half the people wouldn't show up... But now, we talk. Weekly."

Superintendent Foxglove presented a more nuanced view. This superintendent also discussed the increase in meetings for the regional superintendents, but said that in the end, “There're 132 of us, in terms of school districts. And it is really, to each their own.” Even so, Superintendent Foxglove described coordinating with the two nearest districts:

> "What's our schedule going to be like? When are we going to be re-implementing middle school and high school athletics and extracurricular activities? And are teachers able to work from home? And when are you dismissing? And what are you doing about serving food on virtual days?” All these different things, we try to get into some alignment with, because we anticipate those questions. But also, strength in numbers does help out. When you can confidently say that there's other schools here in the region that have kind of banded together, and this is what we're implementing, it does ... kind of gives a little bit more value to whatever it is you're trying to communicate and implement.

Superintendent Orange also discussed being aligned with one nearby district about the decision to bring students back for hybrid learning, but also not being worried about overall regional consistency. This superintendent explained that:

> In the region, we would have different conversations, but what we learned quickly was we were all at different places and some of it has to do with your community, but some of that has to do with your school board. What I learned very quickly is some of our school boards were not wanting to take on any risk at all and they wanted to keep everybody home.

Superintendent Birch also had a more complex view of isomorphism. As a superintendent, they felt that “You can have neighboring cities and yet, they’re so different.” Even though the leadership and the families may have different feelings, however, discussions between staff

members in various nearby districts and Superintendent Birch's district nonetheless impacted teachers, who began turning in doctor's notes excusing them from in-person learning at a great rate, despite what Superintendent Birch considered a strong mitigation plan by the district. "I think that when you're in an association there are conversations that take place just you know just as colleagues and there is a level of influence," said Superintendent Birch. The plans for students' return had to be delayed, which Superintendent Birch said was "not because we didn't have strategies in place or strong planning in place" but instead due to "outside influence." It may be that, if the COVID-19 pandemic continues or another long-term crisis necessitates similar virtual learning, isomorphism will begin to take a greater role as more best practices and institutional logics are developed.

## Implications for Theory and Practice

The major function of a grounded theory study is to create a theory that can help researchers and practitioners better understand similar phenomena moving forward. In unprecedented situations for which no heuristics exist, establishing a theory is especially important for applying what has been learning to future situations that exhibit a similar context. The goal of this section, therefore, is to explain how the ICRE Framework can be used in future long-term crises for educational organizations. This section will also examine the essential role of complexity theory in understanding the ICRE Framework, and will conclude with a discussion on the current barriers to future equitable virtual learning experiences.

### Applying the IRCE Framework to Future Situations

At the time of writing this dissertation, the COVID-19 pandemic has yet to end. Despite the development of a vaccine, the introduction of variants continues to leave many unsure about the future impact of the virus on society in general and education in particular (Murray & Piot,

2021). Understanding the influences on learning designs during a long-term crisis can help district leaders plan effective responses. Superintendents and their leadership teams can use the IRCE Framework to consider the unintentional influences that might impact learning designs, including politics, resource availability, and stakeholder needs. They can then intentionally deploy responses that leverage relationships, communicate purposefully, and reinforce the educational mission. Using this framework can help to anticipate complications and efficiently take appropriate actions.

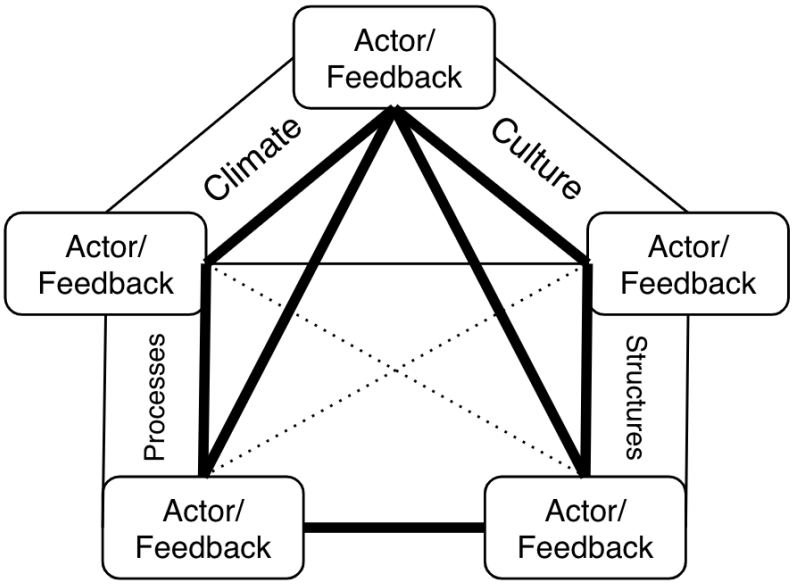
**The Underpinnings of Complexity Theory**

This study began with a complexity theory framework that focused on two features of complexity theory. The first feature, cybernetics, describes how networks of individual actors (or influences) impact each other through feedback loops (Shoup & Studer, 2021). The second feature, emergence, explains how these individual actors and the feedback between them come together to form a systematic whole in which the "sum of the parts becomes greater than the individual parts by themselves" (Shoup & Studer, p. 16). The way that these parts interact and react with each other, and with the overall whole, are what gives the whole its dynamic underlying order. This section will consider the impact of complexity theory on the IRCE theory developed during this study.

The original diagram presented in Chapter 1 on complexity theory can be seen below in Figure 4. This original diagram presupposed that there would be actors and that the feedback between them, and between each actor and the whole, would merge to create an overall learning plan. This all proved true during the course of the study.

**Figure 4**

***Original Diagram of Understanding Emergence as a Result of Cybernetics***




This original diagram served the purpose of demonstrating the relationships between actors. For the final diagram, which can be seen in Figure 3, changes were made to support the current theory. First, the number of "actor/feedback" boxes was increased from five to six, to represent the three unintentional and the three intentional responses, which were each added as the title of a box. The addition of a sixth influence took the diagram from a pyramid to a prism, which has no "up" or "down" ends, therefore showing the idea of complexity rather than linear cause-and-effect. In the original diagram, there were some dotted lines, as if to show that influences did not always have the same level of impact upon each other; in this study, however, the influences were very closely aligned and therefore all the lines were made the same weight. This idea of concepts being tightly connected in the study can be seen in the way in which several of the quotes could have been used as examples for multiple categories, though they frequently represented one category more than another, and were added under that category in Chapter 4.

"Equity" was placed as the title of the diagram, as well as the title of this study, due to the number of superintendents who discussed this theme and the length at which they discussed it.

One important aspect of complexity theory is that all the parts work together to form the whole, and this is an important understanding for the study. The ICRE Framework purports that there is no single unintentional influence or intentional response that created virtual learning plans during COVID-19. Furthermore, each influence and response can only be understood within the context of the impact that it has on the others, and that the others have on it. Like the prism that was presented in Figure 3, no single influence, response, or even relationship can be removed without impacting all the others, and therefore the learning design as a whole.

**Barriers to Future Equitable Virtual Learning Experiences**

One major implication of the study is the extent to which the digital divide continues to exist and the impact that it has on virtual learning. The digital divide, which is also called the digital gap or digital inequality, refers to the different levels of access that individuals have to information and communication technologies, and includes not only physical access, but also the ability and motivation to use these technologies (Soomro et al., 2020). There are generally considered to be two levels to the digital divide. The first level concerns physical access, and is frequently called the first digital divide. The second level concerns the use of technology, and is usually called the second level digital divide. Even while districts have worked to close the first digital divide by providing students with devices and internet at school, the digital divide can still frequently be seen in the way in which the technology is used, with students from poverty being more likely to use technology for test preparation rather than critical and creative thinking (McLeod & Shareski, 2017).

One finding from this study was that students were frequently not allowed to take devices home prior to the pandemic; while the first digital divide may have been narrowed during school hours, it continued to be an issue when students went home. Then the pandemic caused the closure of many schools, illuminating the existence of the first digital divide for home access. Tate (2021) reported that while the use of CARES and CRSSA funds helped to close the digital divide that students experience at home, the number of students without internet access has only shrunk by 25% since the beginning of the pandemic, from 16 million students without internet at home to 12 million. Moreover, many of the measures used to connect families to the internet are temporary in nature, such as hotspots or broadband access paid for by school districts through the use of CARES and CRSSA funds; if no provisions are made before those funds run out, it is likely that these families will again be without access to the internet (Tate, 2021). Furthermore, my study describes how even when hotspots were available, frequently there were no cell phone towers nearby, negating the access that hotspots could have provided.

The continuance of this first digital divide has multiple implications. Even before the pandemic, lack of access to quality internet and devices was correlated with lower student achievement (Gonzales et al., 2020). Students with no or unstable access to the internet during the pandemic frequently had less interaction with teachers than their peers with access, leaving many educators worried about learning loss for the students without access to the internet (de los Santos & Rosser, 2021). In this study, Superintendent Hazel described how having populations of students so educationally far behind their peers will affect budgets, facilities, teaching staff, and other areas of education for years to come. Superintendent Orange also described the future budgetary implications to replace all the devices purchased during the pandemic. In short, unless governments or businesses intercede to ensure widespread internet availability and school

budgets that can afford 1:1 devices and the necessary repairs, most likely the first digital divide will revert to pre-pandemic levels.

Considering that the first digital divide continued to impact teaching and learning during the pandemic, it was not surprising to discover that closing the second digital divide was not a high priority for most districts. This study found that superintendents were far more likely to be concerned about the first digital divide (access) than the second digital divide (usage). This could be seen in the general lack of superintendent discussion about virtual teaching pedagogies. Superintendent Greenhart described needing new ways to measure student engagement during virtual learning, and Superintendent Maple discussed the need for training on how to "address social emotional learning, how to address planning, how to address delivery of instruction, and then how to assess and evaluate kids." The majority of superintendents, however, focused more on the difficulty of virtual learning for families without internet access. When teacher training was discussed, it was usually on topics related to functional uses of the available devices and software, rather than using these in a way to encourage critical and creative thinking. Superintendent Maple and Superintendent Ironwood were the only participants to overtly make connections between the current device usage and previous pedagogical technology training.

There are several potential implications of the unsolved first digital divide and the resulting overall lack of emphasis on the second digital divide. There are, for instance, political ramifications. United States adult groups that tend to demonstrate lower digital problem-solving skills tend to be Blacks, Hispanics, and those born in other countries, even when controlling for age, education, and employment status (Mamedova & Pawlowski, 2018). Beam et al. (2018) also found that "despite the relatively widespread proliferation of Internet access in the United States, Internet skill remains a significant predictor of inequality in online citizen engagement" (p.

1090). In other words, those who are able to skillfully use the internet are more likely to be politically involved. Therefore, unless rectified, both the first and the second digital divides may continue to impact the political enfranchisement of Blacks, Hispanics, and American adults born outside of the United States.

These limitations in equitable internet access will also hinder the redefinition of education so that it better meets the needs of students. During the study, some superintendents reported that they heard from families who preferred virtual learning, frequently when they had students who struggled in traditional classrooms, needed more challenge than the classroom could provide, or required flexibility due to family circumstances. Students cannot participate in virtual learning without equal access to some form of internet, such as a hotspot. A lack of nearby cell phone towers, however, will negate the ability to use a hotspot. While hotspots can provide access to asynchronous content relatively well, if students want to engage in synchronous learning so that they can have more interaction with a teacher, students will need equal access to high speed broadband internet.

Some superintendents also discussed the opportunities for teachers to have more flexible schedules as well. Superintendent Elm, for instance, discussed being able to reinvent what a sick day needs to look like; teachers may be able to teach at home even if they cannot physically come to work. If, however, teachers also do not have access to high speed, broadband internet, they will not be able to teach from home. The idea of allowing teachers to work from home also brings up the question: whose responsibility is it to make internet access available and to pay for its upkeep? Schools were able to pay for internet access for families during the COVID-19 pandemic because of CARES and CRRSA funds. When these funds are no longer available, will the opportunities to reinvent education also disappear?

The lack of internet access for all is certainly proving to be a wicked problem in America. Gray and Purdy (2018) suggest that building partnerships between different sectors may help to develop solutions. Districts may long to offer more flexibility for students and staff through the use of virtual learning, but cannot afford to solve the internet access problem with current recurring budgets. It would behoove educators to seek partnerships with businesses and local governments to solve the internet access problem. This would not only allow more flexibility for students and educational staff, but would go far towards increasing the digital literacy of students, and ultimately, the digital literacy of the population in general. Districts have an opportunity to pursue such partnerships in the wake of the COVID-19 pandemic, and should take advantage of those opportunities while the public still feels the impact of lack of internet during the school closures. Once the first digital divide is solved, districts can then turn to experimenting with and creating best pedagogical practices for virtual instruction.

## Limitations of this Study and Potential Future Research

There are several limitations of the study due to the fact that this is a topic without much prior research due to the unprecedented pandemic creating a time where virtual learning was available for most, though not all, students. One significant limitation is the fact that this study took place only in Virginia. Other states responded differently to the pandemic, with some even opening fully for the 2020-2021 school year (Olneck-Brown, 2021). While most places continued to offer virtual or remote learning for students with medical issues, it is possible that the creation of virtual learning plans might vary greatly from state to state and between schools that opened fully versus those that opened on a hybrid or fully virtual schedule.

Another significant limitation is that random sampling was not used. Invitations were either sent to superintendents with whom I had connections or by random choice.

Superintendents who offered to be interviewed may have been more likely to be interested in virtual learning itself. A truly random sample may have yielded different results. Furthermore, the only person interviewed in any given school district was the superintendent. This was purposeful because superintendents are the person in the district with the greatest overall understanding of the district as a whole, and could therefore provide information about overall influences. This also means, however, that they are less likely to have specific details about any given department than the people in that particular department. Multiple superintendents, for instance, indicated that they had delegated much of the design of virtual learning to their direct reports, and could not necessarily provide finer details of the plans. The purpose of this study was not to compare and contrast specific details between virtual learning plans, but such a study would provide further insight. A case study approach to a smaller number of districts would also provide more information. Such a study could include interviews with superintendents and other leadership personnel, teachers, students, and parents to determine overall understandings of the influences on virtual learning designs. Studies could also use reactions on social media to better understand the communication that takes place between districts and their stakeholders when designing learning plans.

This study did include both urban and rural districts, and future studies could focus more on virtual learning designs in either urban or rural to better understand the influences in each of these types of districts. Comparisons of the influences between urban and rural districts were touched upon in this study, but future studies could specifically focus on this aspect in order to better understand the different challenges that are faced based upon where a district is located. Similarly, some superintendents discussed the influence of families' political beliefs on virtual learning; future studies could examine this relationship more closely. The fact that the virus

tends to have a greater impact on people of color (Centers for Disease Control, 2021), which may make those families more likely to opt for virtual learning, is another area that is ripe for further investigation.

## Summary

The study provided an important base-level of information for understanding the influences on virtual learning designs during the COVID-19 pandemic. As the leaders of school districts, superintendents' perspectives were used to gather information regarding an overall understanding of the districts. I used a grounded theory approach to interview 15 superintendents across the state of Virginia using a semi-structured interview format and then coded these interviews to develop a theory regarding the major influences on virtual learning designs during the pandemic. There were unintentional influences that impacted how districts designed virtual learning, including politics, the availability of resources, and the needs of stakeholders. District leaders were able to respond to these unintentional influences through leveraging relationships to overcome obstacles, communicating purposefully with all stakeholders, and reinforcing the mission of education. These influences acted upon each other and the sum of each influence and its interactions combined to create the whole virtual learning experience. Lack of equity regarding internet access was the pervading theme for all superintendents, and this issue needs to be addressed in order to ensure that virtual learning is accessible by all students. Furthermore, this inequity needs to be solved before districts can turn their attention to developing best practices for virtual teaching pedagogies. Equitable access to virtual learning could provide more flexibility for students and staff in a way that makes public education a better fit for all.

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# Appendix A

## Protocol for Semi-Structured Interview

Thank you so much for participating in this study. I'm excited to work on developing a theory regarding the influences on learning designs during unprecedented long-term crises. Your participation is voluntary and are you able to choose not to answer any question. You can also tell me to strike anything you say from the record. I would like to record in order to capture the most accurate information, and you will be sent a transcription afterward that you may edit as you see fit. This is a semi-structured interview, so while I have some questions prepared, please feel free to share anything you find relevant. I may also ask clarifying or follow-up questions.

You may choose to end the interview at any time and you may withdraw your consent at any time. All information that you share will be anonymized and any identifying information regarding you or your school district will be removed.

Also, there might be some questions that, as Superintendent, you may not know all the answers because one or more of your direct reports will have more specific knowledge about the topic. You are welcome to tell me that a particular topic was something that you delegated to someone else.

Do you have any questions?

Do you give permission for me to record both audio and visual, or would you prefer just audio, or no recording at all?

All right, let's begin!

1. Tell me about yourself. For instance, how long have you worked in the PreK-12 field? How long have you been a superintendent? How long have you been in your current position?
    - Have you worked in any other districts and if so, how did they compare to your current district in terms of technology and instruction?
2. Can you talk about the state of distance virtual learning within your school system prior to Governor Northam's closing all schools on March 13? Did you have any students engaged in 100% virtual learning?
    - If so, what staff were involved? What roles and job descriptions did they have?
    - What percentage of students would you say were involved in 100% virtual learning, with all instruction taking place on the computer, including any Governor's School or extra curricular programs?

3. What did in-classroom digital learning look like in your district prior to the pandemic? For instance, did students or teachers have access to devices?
    - Did you have a 1:1 or a BYOD program?
    - What kind of devices did your students have? Were they provided by the district?
    - How often would you say devices were used in classrooms?
    - Would you say mostly teachers used devices, mostly students used them, or it was a combination of both?
    - Were there any specific expectations about technology use for teachers or students prior to the pandemic?
4. When did you realize you would be opening the school year with 100% virtual learning? Why was that decision made?
    - Did your district discuss pros and cons to opening the school year with 100% virtual learning? What did those lists look like?
5. What was your biggest goal when designing the 100% virtual learning model for your district?
6. I'd love to know more about the creation of your virtual learning plan. First of all, when did your district start planning what the 100% virtual learning design would look like?
    - Who were some of the stakeholders involved in creating that plan?
    - Were there any approval processes that your plan had to go through in order to be implemented? How did these processes impact the plan development?
    - How many students did you have per teacher per class session? How did you make that decision? How did it vary by grade level?
    - Who created the schedules for virtual learning? How long were classes at the various levels? Why did you decide that?
    - Did you use a synchronous online video platform, such asZoom, Google Meet, or Microsoft Teams? What made you choose that?
    - What about a learning management system for asynchronous work, such as Canvas, Google Classroom, Sharepoint, Schoology, etc.? Why did you choose to use that?
    - What kind of devices did students use? Why did you choose those devices? How did you get the devices to students?
7. What role, if any, did your School Board play in designing and approving this model? What did communication with them look like during the process of designing the model?

8. How did your staff find out that they would be doing 100% virtual teaching?
    - What kind of reactions did they have?
    - Did the district provide any training to support teachers with virtual teaching? If so, what did that look like? How did staff react to the training?
9. Can you talk about the reaction from families to your virtual learning program? Did they like it?
    - Did you provide any resources to families, beyond devices, that would help them understand how virtual learning worked? If so, what did those resources look like?
    - Did you hear from any families saying that virtual learning was NOT working for their child? Did they say why?
    - Did you hear from any families who preferred virtual learning? Did they say why?
10. What do you feel went really well with your virtual learning during the Fall of 2020?
    - Why do you think it went that way?
11. Were there any hiccups with the virtual learning plan before it was rolled out?
    - What about after it was implemented?
    - How did the district respond to these hiccups?
12. Has your district discussed any plans to implement virtual learning in the case of other crises, such as hurricanes, snow storms, future pandemics, etc.? What do those look like?

## Appendix B

### Consent for Participation in Interview Research

I volunteer to participate in a research project conducted by Kathleen (Kate) Wolfe Maxlow from Old Dominion University. I understand that the project is designed to gather information about influences on designing 100% virtual learning plans during the COVID-19 pandemic. I will be one of approximately 15 superintendents being interviewed for this research.

1. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty.
2. I understand that most interviewees will find the discussion interesting and thought-provoking. If, however, I feel uncomfortable in any way during the interview session, I have the right to decline to answer any question or to end the interview.

3. Participation involves being interviewed by Kate Maxlow from Old Dominion University. The interview will last approximately 30-45 minutes and be conducted through Zoom or Google Meet. Notes will be written during the interview. Interviews will be recorded in order to be transcribed. Recording includes audio and video, or just audio if I prefer. If I don't want to be recorded at all, I will let the researcher know beforehand. I understand that the researcher will take notes during and after the interview, even if I am not recorded.

4. I understand that I may be asked for one or more follow-up interviews as the study progresses. I may accept or decline any follow-up interviews.

5. I understand that I will be able to review the transcriptions of my interview(s) in order to make any corrections. If I do not want my information to be used at that time, I may withdraw my consent and the researcher will destroy all copies of the data.

6. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

7. I understand that this research study has been reviewed and approved by the Institutional Review Board (IRB) for Old Dominion University. For research problems or questions regarding subjects, the Institutional Review Board may be contacted through Dr. Laura Chezan, chair of the DCEPS HSR Committee via Email at lchezan@odu.edu or via phone at 757-683-7055.

8. I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

9. I have been given a copy of this consent form.

| Sign here | Date |
|---|---|
| Printed Name | Signature of Investigator |

## Appendix C

### Email Invitation for Study Participation

Dear [Add Superintendent's Name],

My name is Kate Wolfe Maxlow and I am a doctoral candidate at Old Dominion University. I also work in Hampton City Schools, Virginia, as the Director of Innovation and Professional Learning.

I am working on my dissertation entitled: District Leaders' Understanding Of The Influences On Designing 100% Virtual Learning Experiences During The Covid-19 Pandemic. I received your name from [X] as a potential participant in this study.

I am using a grounded theory, qualitative, interview-based approach in an effort to develop a theory regarding how learning systems are designed during unexpected and unprecedented long-term crises. Interviews will last around 30-45 minutes and be held by Zoom or Google Meet (your choice) at a time that is convenient to you. I would like to record sessions in order to transcribe them, and you would be sent a copy of the transcription for your review and edits before I would use it as a part of my data. If you would like to participate but without being recorded, that is also an option.

Questions will center around internal and external influences on the planning process in your district for 100% virtual learning during Fall 2020. If you agree to the study, you will be Emailed a consent form to sign beforehand. You may also withdraw your consent at any time during the study.

All information collected will be anonymized and any identifying information will be removed. If you have any questions, I am more than happy to discuss them. You can Email me back at this address or call me at 757 262 9009.

Thank you for considering!

Sincerely,

Kate Wolfe Maxlow

# Vita

Kathleen Wolfe Maxlow 757-262-9009
2404 Pates Creek, Williamsburg, VA 23185 kate.maxlow@gmail.com

Education

Ph.D. in Educational Policy, Planning, and Leadership May, 2021
Old Dominion University Norfolk, VA

1226 W. 43rd St., Norfolk, VA 23508

Coursework in Educational Administration May, 2012
The College of William & Mary Williamsburg, VA

Master of Arts in Elementary Education May, 2004
The College of William & Mary Williamsburg, VA

Bachelor of Arts in History May, 2001
University of Virginia Charlottesville, VA

Postgraduate Professional License

- Elementary Education PreK-6
- Admin and Supervision PreK-12

Awards and Honors

2019-2020 Virginia Association for Supervision and Curriculum Development Leadership Award

Publications

Maxlow, K.W., and Sanzo, K.L. (2017). 20 Formative Assessment Strategies that Work: A Guide Across Content and Grade Levels. Taylor and Francis/Routledge.

Smith, J., Maxlow, K. W., Cggiano, J., Sanzo, K. (2020). Look, listen, learning, lead: A District-Wide Systems Approach to Teaching and Learning in PreK-12. Information Age Publishing.

Selected State and National Conference Presentations

- Learning Forward (2019): A Better Way to Observe Teachers, the Teachers and Observers Partners for Success Tool
- Virginia Association for Supervision and Curriculum Development (2019): Using Essential Questions to Create Performance Assessments
- Virginia Association for Supervision of Curriculum and Development (2018): Using Essential Questions to Connect with Students
- Virginia Alternative Assessment Summit (2015): Region II Performance Assessments

- Virginia State Social Studies Conference (2007): Multiple Intelligence Projects, K-12; Virginia History SOLympics and May Madness
- Virginia State Reading Conference (2008): Using Literature Circles to Integrate Science and Social Studies into the Language Arts Block
- National History Conference (2011): Sing Freedom, See Freedom: Using Primary Resources in the Elementary Social Studies Classroom

Relevant Work Experience

Hampton City Schools — Hampton, Virginia
Director of Innovation and Professional Learning — August, 2018-present
Professional Learning Coordinator — July, 2014-August, 2018

- Improved Hampton City Schools written curriculum, including collaboratively creating curriculum templates for every subject area, training over 100 curriculum writers for all subjects K-12, and reviewing over 100 written curriculum subjects PreK-12 (all subjects)
- Created and maintained the HCS CIA HQ to provide teachers with a one-stop shop for all curriculum documents, professional development opportunities, and other helpful resources
- Pioneered the HCS division-wide blended professional development workshops for approximately 1,200 teachers in order to emphasize the alignment of the written, taught, and tested curriculum, using a combination of Google Classroom, Google Docs, Google Forms, Google Slides, Blogger, Camtasia, and Excel; reviewed 7,674 feedback responses in the 2017-2018 school year and sent 386 personal email follow-ups to teachers
- Created the HCS division-wide Action Step Observation, a formative observation form that helps principals provide concrete instructional feedback to teachers based on the VDOE Teacher Performance Evaluation Standards and the work of Paul Bambrick-Santoyo. Trained over 100 administrators effective implementation through a series of hands-on workshops
- Led efforts to create the HCS 5C's Rubric with a team of curriculum leaders, teacher specialists, and teachers, to be used with HCS performance assessments in order to assess communication, collaboration, critical thinking, creative thinking, and citizenship
- Conducted frequent school walkthroughs with division leadership in order to give feedback on the implementation of the taught curriculum and its alignment with the written and assessment curriculum
- Developed and delivered training to curriculum writers and new teachers on how to design formative and summative assessments, including traditional assessments, performance assessments, and technology integration
- Co-led the Eat, Drink, and Google training series on Google Apps for administrators and administrative assistants
- Created the currently-used HCS School Learning Plan and maintained the School Learning Plan warehouse
- Created and maintained the Administrator Launchpad, a one-stop-shop of information and instructional resources for administrators

- Supervised the work of several CITTs during the Summer of 2018, to include revamping the CIA HQ into new Google Sites, updating all the Google Classrooms for the 2018-2019 school year, and reviewing summer curriculum writing
- Collaborated with the Professional Learning team to design a three-year division-wide professional development plan with mission, vision, and goals for Hampton City Schools
- Collaborate with Curriculum & Instruction leaders, administrators, and the Division Leadership Team to design effective professional development based on HCS data, needs, and initiatives
- Managed day-to-day operations of the Title II grant and budget, including developing travel and materials budgets for division departments

Old Dominion University January, 2017 - May, 2017
Adjunct Professor, Learning Theories and Professional Development

- Designed and taught a course for the HCS Ed.S Leadership Cohort focused on Adult Learning Theories, the work of Thomas Guskey, the gradual release model, in order to teach students how to develop online, in-person, and blended professional development

Stronge & Associates July, 2016 – Jan., 2021
Independent Consultant

- Updated the state-wide Academic Review tool with new Standards of Learning and research, including the development of a new Achievement Gap Tool of indicators to help schools better understand how to close the Achievement Gap
- Designed a complete evaluation system for the Virginia Department of Education's School Division Review Tool, including the areas of Academics & Student Success, Community Relations & Communications, Human Resource Leadership, Leadership & Governance, and Operations & Support Services—including rubrics, instructions, and training presentations
- Used Camtasia to record multiple webinars, including voice-over work and editing

Stronge & Associates April, 2012 – July, 2014
Director of Innovation and Development Newport News, VA

College of William & Mary April., 2012 – Sept., 2013
Research Associate Williamsburg, VA

- Led project for grant-funded teacher effectiveness video library through Miami-Dade County Public Schools
  - Developing and refining budgets, creating and implementing timelines, collaborating with contractors for videography work, and leading a team to create realistic simulations for both administrative certification and improvements in teacher effectiveness
- Designed a complete system for the Virginia Department of Education's Academic Review process to evaluate the alignment and quality of the Written, Taught, and Tested curriculum in districts and schools—including rubrics, instructions, presentations, and online training videos. (See

http://www.doe.virginia.gov/support/school_improvement/academic_reviews/index.shtml for example work)
    - Designed follow-up training videos on Unpacking Standards and Planning Lessons, Aligning Unit Tests and Backwards Design Instruction, Providing Effective Feedback (to Teachers), and High Yield Strategies. (See http://www.doe.virginia.gov/support/school_improvement/academic_reviews/training/index.shtml for example work)
    - Developed engaging, hands-on training on the Stronge Teacher and Leader Effectiveness Evaluation System, based on national and state policies and guidelines for divisions and states (Virginia, Arizona, Wisconsin, Texas, New Jersey)
    - Received accolades from districts and participants regarding clarity, relevance, and engaging nature of presentations; requested by several districts for follow-up training
- Developed extensive materials for and delivered training on Student Achievement Goal-Setting for Virginia and other states and countries
    - Developed day-long presentations on: Using Student Achievement Goal-Setting Data to Evaluate and Improve Instruction; Choosing or Creating Valid and Reliable Assessments; Using Data for Instructional Purposes; Strategies for Administrators in Providing Feedback to Teachers During the Goal-Setting Process
    - Created a session evaluation system used for constant design and delivery improvement that became standard for all trainers

Newport News Public Schools July 2011 – April 2012
Supervisor of Employee Development, K-12 Newport News, VA

- Coordinated division professional development to emphasize career and college readiness skills
    - Originated, designed, and facilitated the University of Employee Development approach, which allowed curriculum-, administrator-, and teacher-leaders to both create and attend optional professional development areas around their own areas of interest
    - Revised the process for division professional development authorization to allow for greater flexibility while also emphasizing sustainability of professional development efforts
- Collaboratively developed and presented a multi-subject curriculum writing conference that included emphasis on Understanding by Design, career and college readiness skills, and performance assessments

Instructional Coach for Elementary Social Studies and Science, K-5 November 2010 – June 2011

- Wrote curriculum and assessments for elementary social studies and sciences (grades K-5); trained and supervised curriculum writing teams for social studies and science
- Developed and led project to write a third grade integrated curriculum emphasizing performance assessments, college and career skills, and service learning in all core content areas

- Provided coaching services (co-teaching, model teaching, observation and feedback, and resource acquisition) for teachers throughout the district

Technology Integration Specialist ● Lee Hall and Yates Elementary August, 2010 – October, 2010

- Collaborated with teachers to design and deliver lessons for grades K-5 on a variety of subjects; delivered professional development sessions on integrating technology into classrooms

Third and Fourth Grade Teacher ● Briarfield and Lee Hall Elementary July, 2004 – June, 2010

- 2005-2008: History Lead Teacher (2005-2006, Briarfield Elementary; 2006-2008, Lee Hall Elementary)
- 2006: Participated in SOL Assessment Review Committee, Third Grade Social Studies, Virginia Department of Education
- 2007-2008, 2009-2010 Fourth grade Lead Teacher for Lee Hall Elementary