Principals' Perceptions of Online Learning Post-Pandemic in Small Virginia School Divisions

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Abstract

The purpose of this qualitative study was to identify the perception of school principals in school divisions with a student population of fewer than 2,500 as of June 2022, within the Commonwealth of Virginia regarding their school's use of online learning post-pandemic. School principals' perceptions regarding online learning can impact future implementation practices when global pandemics do not require the use of online learning. A qualitative study was conducted to analyze the perceptions and attitudes of principals. The research questions were: 1) How do principals in small school divisions perceive their school division's size as impacting decisions about online learning? 2) How have principals of small school divisions institutionalized online learning post-pandemic? 3) What perceptions do principals in small school divisions have about online learning post-pandemic? The research included building principals from elementary, middle, and high schools in small Virginia school divisions to better understand how the different age levels impact decisions regarding online learning. Interviews were conducted individually with eight interview questions. The findings suggest that online learning has not increased in the rate of use since the pandemic. Regarding principals' perceptions regarding online learning note concerns about the effects on their students. Particularly, 67% of elementary principals expressed concerns regarding the ability of younger students to gain foundation fine motor skills through online learning. Overall, principal participants agreed that there is a place for online learning to provide additional educational opportunities and access for their students when used in specific situations and circumstances.

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General Audience Abstract

The purpose of this study was to identify the perceptions of school principals regarding the use of online learning post-pandemic in Virginia school divisions with a student population of fewer than 2,500 as of June 2022. School principals' perceptions regarding online learning can impact the future implementation practices of online learning when global pandemics do not require the use of online learning. A qualitative study, which collects data about people's perceptions, was conducted to analyze the attitudes of principals regarding the use of online learning in public schools. The research questions were: 1) How do principals in small school divisions perceive their school division's size as impacting decisions about online learning? 2) How have principals of small school divisions institutionalized online learning post-pandemic? 3) What perceptions do principals in small school divisions have about online learning post-pandemic? The research included Building principals from elementary, middle, and high schools in school divisions to better understand the different age levels that impact online learning decisions, particularly in school divisions that may have used online learning. Interviews were conducted individually with eight interview questions. The findings suggest that online learning has not increased in the rate of use since the pandemic and the widespread use of online learning. Principals' perceptions regarding online learning note significant concerns about the effects on their students, particularly elementary principals. Although there was a consensus of concern regarding online learning, the participants agreed overall that there is a place for online learning, and it does provide additional educational opportunities for their students when used in specific situations and circumstances.

Dedication

When I dreamed my wildest dreams for myself and my future and landed on pursuing my doctoral degree, not once did my loving and supportive husband doubt me. Instead, like all things, he was 100% all in behind me. Tim, you have been a rock of steadfast support through all things, especially these last three years. Helping with the kids, protecting time for me to work, and ultimately believing in me, even when I do not believe in myself. Your dedication to me and our family shines in everything that you do. I could not imagine my life without you and am so thankful to have you as the center of my life and our family.

I am beyond grateful for Declan, Victoria, and Margaret, as you three are my entire world. When I was growing up, I knew that the thing I wanted to be most in life was a mother, and the three of you have and continue to give me so much love and happiness. There is so much to be thankful for: Declan, your caring and gentle spirit, Victoria, your honest and vigorous love of life, and Margaret, your smart and cheerful energy. Having each of you was the smartest thing I ever did. Completing this doctoral program was the bravest thing I ever did. For what felt like the first time in my life, I bet on myself. This is what I dream for each of you. It is easy for me as a mother to recognize the special talents of my children as there are many, but sometimes believing in oneself can be the hardest thing. What I dream for you to do is to believe in yourself, I believe in you, and know that you are amazing, unique, and the most marvelous people I know. Be brave, be bold, and believe in yourself.

I am eternally grateful for my parents and siblings and the support that they provided for me and my family, especially during this journey. My parents quickly became chauffeurs, chefs, caregivers, maids, and general support never complaining to support our family. We could never

do half of everything we have done without your help and support. Thank you for your words of wisdom, encouragement, and love. I love and appreciate all that you have done for me.

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Chapter 1

Introduction

The Institute of Educational Sciences (De Brey et al., 2021) and the U.S. Department of Education (2017a) have reported that enrollment in online learning in public schooling continues to grow. De Brey et al. (2021) found between 2013-2018 there was a 39 percent increase in enrollment of fully virtual online learning in grades K-12. Online learning presents the opportunity for students to access education regardless of location or situation (Shraim & Khlaif, 2010). Researcher Blomeyer (2002) stated that online learning "isn't about digital technologies any more than classroom teaching is about chalkboards. E-learning is about people and about using technology systems to support constructive social interactions, including human learning" (p. 12).

Online learning happens in more than one way. Learning can take place asynchronously, meaning that students are working at their own pace without meeting as a class simultaneously (Bernard et al., 2004). Asynchronous education is not new; learning in a non-traditional setting such as online learning is rooted in correspondence and distance education dating back to the mid-1980s (Bernard et al., 2004). Students can complete required classes using fully online platforms, where all meetings and work are completed via the internet and/or a learning management system (Picciano & Seaman, 2009). Students engage in online learning through a hybrid or blended model, which uses a combination of in-person learning as well as learning using the internet to complete any given coursework (Picciano & Seaman, 2009). For this study, the term online learning was used to describe when a student is connected to the instructional material via the internet with the intention of learning. This type of learning could be led by a teacher or self-paced by the student (Means et al., 2014).

Statement of the Problem

In the spring of 2020, the novel coronavirus pandemic, COVID-19, pushed students into online learning environments as communities across the country instituted strategies for mitigating the spread of the virus and continuing with daily life during the pandemic (An, 2020; Brinkmann et al., 2021; Bonk, 2020; Jiao & Lissitz, 2020; Middleton, 2020; Wyse et al., 2020). The U.S. Census Bureau—using the Household Pulse survey—found that 93% of households with school-aged children reported their children engaging in some form of online learning in August 2020 (McElrath, 2020). By February of 2021, the NCES (2022) found that only 35% of students were attending in-person instruction. With the onset of COVID-19, public schools across the globe shifted to online learning as a means of necessity instead of based on pedagogical research (Bonk, 2020).

When COVID-19 forced schools to close in-person learning and classes were moved to online platforms, schools identified the learning as remote learning (
Bonk, 2020). Remote learning was intended to separate itself from the deliberately designed online learning that had been growing in popularity over the last twenty years. Researchers Hodges et al. (2020) referred to the COVID-19 strategies in 2020 as emergency remote teaching to further delineate the differences between well-planned online learning experiences and the strategies set into motion in the spring of 2020. Engzell et al. (2020) indicated that school systems will be battling significant learning gaps due to the emergency use of online learning during COVID-19; the online instruction during this time lacked the intentionality of previously used online learning models.

From December of 2021 through February of 2022, the NCES collected data from schools across the country, finding that 99% of students had returned to in-person learning (De

Bray et al., 2021). With the return to in-person learning environments, administrators are faced with decisions about how online learning would be incorporated, if at all, into students' education post-pandemic (Bonk, 2020). The emergency use of online learning during the pandemic has made it difficult for research to accurately determine the effectiveness of online learning models in meeting the educational needs of students due to the varying use and fidelity of implementation of online learning programs during the COVID-19 pandemic. Research needs to reevaluate online learning to ensure it is still an effective tool. Principals play a crucial role in the implementation and effectiveness of instruction programs as instructional leaders, therefor understanding these leaders' perspectives about the modality can help determine whether online learning will continue at the same pace as pre-pandemic.

Purpose of the Study

The purpose of this qualitative study was to identify the perception of school principals in small school divisions within the Commonwealth of Virginia regarding their school's use of online learning post-pandemic. The emergency use of online learning during school shutdowns due to COVID-19 was out of necessity and mandated by government officials (Bonk, 2020); however, as students return to the classroom, the future of online learning is now being questioned (Aguilar et al., 2021). Research indicates that smaller school divisions were more likely to have used online learning prior to COVID-19 (Sheninger, 2019). This study examined the perceptions of principals in small school divisions to understand how online learning may be used as an instructional platform for student learning post-pandemic.

Research Questions

In order to determine the perceptions of school principals in school divisions with a student population of fewer than 2,500 as of June 2022, the following questions were designed to

guide this research:

1. How do principals in small school divisions perceive their school division's smaller size impacting their decisions about the use of online learning post-pandemic?
2. How have principals in small school divisions institutionalized online learning post-pandemic?
3. What are the perceptions that school principals in small school divisions have about online learning post-pandemic?

Overview of the Study

This study was designed to explore the perceptions of principals regarding the use of online learning post-pandemic as students are returning to in-person learning in most schools. This chapter defines online learning and familiarizes the reader with the explanation for the research. The conceptual framework guiding this study identifies the evolution of online learning prior to the pandemic, the use of online learning during the pandemic, and identifies the unknown use of online learning post-pandemic as students return to in-person learning. Key terms are defined to provide clarity and background for this study. This chapter also includes the delimitations and limitations associated with this research and concludes with a summary of this study.

This qualitative research used an interview methodology to analyze perceptions of K-12 principals. Interviews with principals serving elementary, middle, and high schools in small school divisions across the Commonwealth of Virginia were conducted to gain an understanding of their perceptions regarding the use of online learning. This research focused on principals' intentions related to how they plan to incorporate online learning, if at all, in their school buildings as instructional leaders. Online learning was used in mass for the first time in K-12

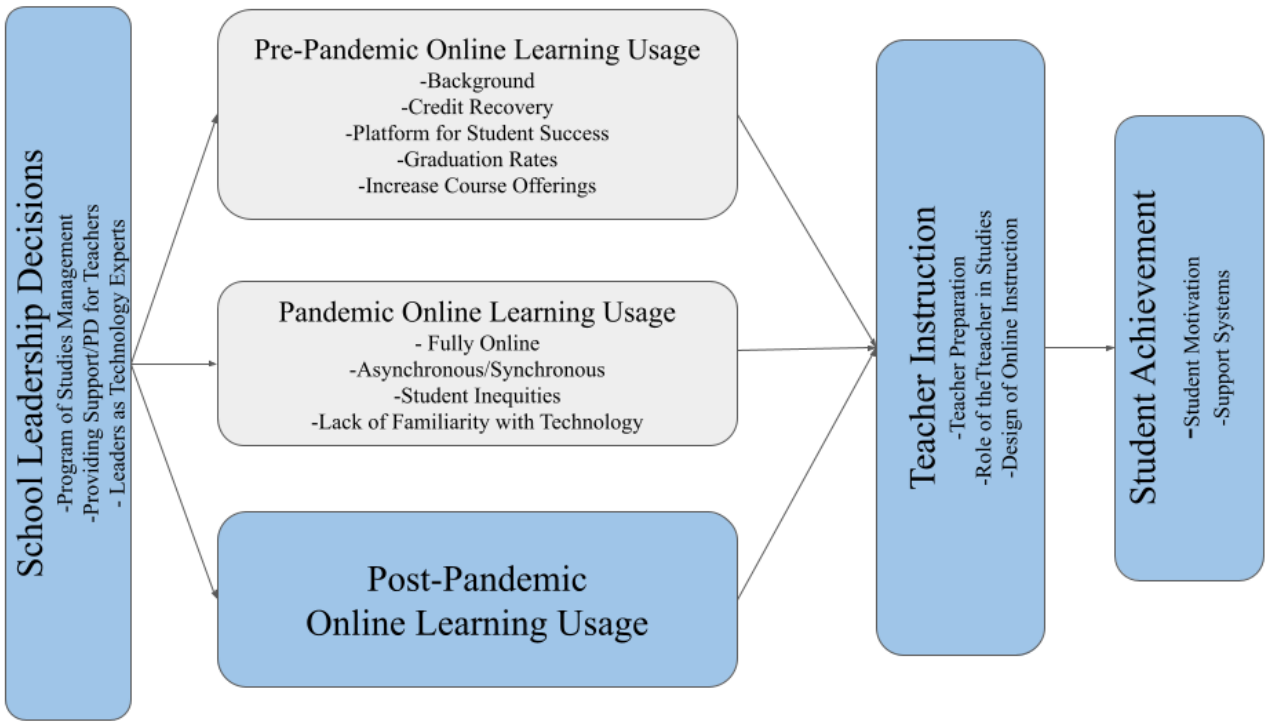
education as a result of the COVID-19 pandemic and perceptions from students and teachers were mixed (Dietz, 2002; Liu & Cavanaugh, 2011, Mann et al., 2021; Means et al., 2014; Sheninger, 2019). This study aimed to identify school principals' perceptions regarding online learning and how they envision the use of online learning moving forward.

Conceptual Framework

Figure 1 illustrates the conceptual framework guiding this study. The conceptual framework depicts connections between school leaders' decisions about the use of online learning being directly impacted by time and situation.

Figure 1

Conceptual Framework – School Leadership Decisions Relating to Online Learning and Student Achievement



The conceptual framework demonstrates the connection between school leadership decisions and

student achievement. The model reflects the different periods of time in which online learning has been implemented. For the purpose of this study, the areas shaded blue were the focus. As illustrated in the conceptual framework, online learning was used prior to COVID-19. During this time, online learning options filled the specific needs of schools. The time period in which online learning was used in K-12 schools in the center of the chart was out of necessity and required by government order; online learning served a purpose during the COVID-19 pandemic relating to student learning (Hodges et al., 2020). Student learning and achievement in an online setting was dependent on teacher planning and instruction. Teacher planning and instruction are directly related to the situational use of online learning and ultimately the leadership of their school principals. The conceptual framework was developed to illustrate the different time periods in which online learning was used in K-12 public educational settings.

Definition of Terms

Asynchronous Instruction refers to the online style of learning where students work at their own pace without meeting as a class simultaneously (Bernard et al., 2004).

Blended learning is a style of teaching where schools host in-person learning as well as online learning components in a blended situation (Gulosino & Miron, 2017).

Credit Recovery refers to any program that allows students an additional opportunity to demonstrate mastery of a course after failing the course in a traditional setting without having to completely retake the course (Means et al., 2014).

Digital Immigrants, oftentimes adults, are people who have learned technology later in life, and often find the use of technology less intuitive than if they had grown up with technology integrated into their daily lives (Prensky, 2001a).

Digital Natives are those people who were born in a digital world, being raised as “native

speakers" of all things technology, and often find technology to be intuitive and part of their "native tongue" (Prensky, 2001a).

Emergency online learning can be defined as the use of online learning due to the COVID-19 mass closures of schools, as this form of learning lacked the intentional planning and preparation for students, teachers, administrators, and families alike (Bonk, 2020).

Inequities in a Digital Setting can include but are not limited to, students not having reliable internet access (An, 2020) and access to effective instruction while learning online (Rose & Blomeyer, 2007).

Online Learning is the learning that takes place when a student is connected to the instructional material via the internet with the intention of learning. This type of learning could be led by a teacher or self-paced by the student (Means et al., 2014).

Synchronous Instruction is a model of online learning that happens when students and teachers meet on online platforms in real time for instruction, often engaging in real time discussion and interactions (LaFrance & Beck, 2014).

Virtual Learning refers to instantaneous 2-way communication, distance education, e-learning, online learning, and even mobile or m-learning. Virtual learning can be summarized as all forms of learning that take place outside of a traditional brick-and-mortar schoolhouse (Bernard et al., 2004).

Limitations and Delimitations

Limitations are the aspects of findings that the researcher cannot control. This study's focus was on specific school divisions in the Commonwealth of Virginia. The school divisions were selected based on a student population of fewer than 2,500 as of June 2022. Interviews were conducted with school principals who agreed to participate. Some smaller school divisions

were located in suburban areas, while other school divisions were in rural areas, which could potentially impact participants' perspectives. Participants included in this study did not replicate all perceptions about the use of online learning and were limited to their honest feedback.

Delimitations stem directly from the choices made by the researcher. This study focused on school principals throughout the K-12 level of public education in the Commonwealth of Virginia. Pre-K and post-secondary school settings were not considered. Private and charter schools were also not included in this research. Additionally, this study focused on school divisions with a student population of fewer than 2,500 as of June 2022, which inherently did not include large or urban schools. This study was designed to focus on the perceptions of school principals and did not include the perceptions of teachers, students, or other stakeholders.

Organization of the Study

This study contains five chapters. The first chapter outlines the reasoning for this research. Chapter 2 reviews the literature surrounding the historical use and effectiveness of online learning before the pandemic, as well as during the pandemic. The review of literature noted topics relating to online learning in need of further research. Chapter 3 contains details about the design and methodology of this study. Chapter 4 presents the data collected and analyzed in this research. Finally, Chapter 5 provides a summary of the findings and implications identified in the study. Chapter 5 also includes recommendations associated with the study’s findings.

Chapter 2

Literature Review

Online learning is designed as an opportunity for students to access learning when they are not physically present at school (Means et al., 2014). The creation of K-12 online schools came out of three specific needs: 1) online schools could offer more advanced and specialized coursework; 2) online schooling provided families who wished to homeschool a viable curriculum with support from highly qualified teachers; and 3) students who were in need of credit recovery to maintain on-time graduation could get it (Means et al., 2014). In 2018, 19% of all K-12 schools offered comprehensive online coursework and grew to 21% in the 2019 school year (Taie & Goldring, 2019). As online learning became more mainstream, Michigan, Florida, Virginia, Arkansas, and Alabama sequentially added requirements for students to take at least one online course prior to high school graduation with the intention of increasing student familiarity with this learning modality (Means et al., 2014). While online learning in K-12 education is growing, there has been little conclusive research into learning outcomes and the success of online learning (Dietz, 2002; LaFrance & Beck, 2014; Lin et al., 2017).

There may be many reasons that schools choose to use online learning to meet the needs of their students; however, Means et al. (2014) identified four common reasons why online learning is desirable at the K-12 level. These reasons include 1) increased access to technology provides familiarity that aids the incorporation of technology in all aspects of daily life; 2) assimilation of technology in all aspects of daily life has made states and schools consider the importance of teaching students the vital life skill–navigating online learning platforms; 3) online learning is more cost effective than more traditional learning models, which may provide opportunities for increased student-teacher ratios; and 4) online learning may allow for more

opportunities to expose students to course content. Schools and families may be drawn to online learning for different reasons; however, the U.S. Department of Education (2017a) found that a common theme in this modality of instruction is opportunity and options.

In 2020, with the outbreak of COVID-19, K-12 schools were forced to embrace online learning on a broader scale than ever before. Schools shifted to online learning for the health and safety of students and staff as schools across the Commonwealth of Virginia were mandated by Governor Northam to close their doors for the remainder of the 2019-2020 academic school year (Exec. Order No. 53, 2020). At the start of the pandemic, Education Week (2020) reported that 48 of the 50 states recommended or mandated school closures, impacting some 50.8 million students across the country.

Search Process

The purpose of this qualitative study was to identify the perception of school principals in small school divisions within the Commonwealth of Virginia regarding their school's use of online learning post-pandemic. The research process began on EBSCO searching terms such as *online learning*, *virtual learning*, *distance learning*, *K-12 education*, *inequities*, *coronavirus*, and *infrastructure* both individually and in combination with one another, as appropriate. The initial searches focused more on the actual topic of online instruction in a K-12 setting in peer-reviewed journals published between 2010 and the present, and ultimately expanded to include subtopics such as equity, COVID-19, and leadership. The searches on online learning and K-12 education exclusively resulted in 270 articles, and many of those articles actually did not fit the criteria searched as many articles related to medical training and education or virtual reality. The search for *distance learning in K-12 education* netted 193 results. When searching *online learning and K-12 education* resulted in 55 articles. Much of the literature identified centered around the rise

of online learning in the 21st century. Oftentimes, this research cited data that were irrelevant as the technology and student demographics of online learning are constantly changing. The researcher started gathering literature in the Fall of 2020 and continued through the beginning of 2023. As schools began returning back to in-person learning in the 2021-2022 school year, there was an increase in the amount of literature surrounding online learning.

Background

Online learning can look and function differently depending on how the technology being used drives the direction of instruction (Means et al., 2009; Picciano & Seaman, 2009). Through the advent of technology and the ability to have instantaneous 2-way communication, distance education began to morph into e-learning, cyber learning, virtual learning, online learning, and even mobile or m-learning (Bernard et al., 2004; Means et al., 2014). A key difference between distance learning in the 1980s and online learning in the 21st century is that distance learning did not inherently intend for interactions between the teacher and student, instead online learning is a more updated and complete model of education that exists outside of a traditional brick and mortar learning situation (Means et al., 2014).

Not all K-12 school divisions are the same, and some schools face challenges in being able to offer a variety of courses for their students, especially schools that are smaller in size (Sheninger, 2019). Online learning can support smaller schools that are geographically challenged and isolated by increasing the variety of course offerings (Christensen et al., 2008; Huett et al., 2008; LaFrance & Beck, 2014). According to Blomeyer (2002), online learning could allow students to take different, and often more advanced coursework while providing students with additional opportunities using different online programs in smaller schools.

Emergency Online Teaching

As a result of COVID-19 pandemic, school systems across the country began school closures, with 48 of the 50 states recommended or mandated those closures (Education Week, 2020). Schools toggled to online learning to meet their student's educational needs during those closures. Schools used online learning in this emergency situation without intentional planning and preparation (Bonk, 2020). For this study, the online learning that took place during the widespread school closures due to COVID-19 will be referred to as emergency online learning to differentiate between intentional online learning which may have taken place before the nationwide school closures due to COVID-19 and implemented with fidelity.

Teacher Perceptions of Emergency Online Learning

The COVID-19 pandemic changed the way instruction took place and quickly forced teachers into the world of online learning (An, 2020). In their mixed methods study, An et al. (2021) gathered teachers' feelings and perceptions regarding the use of online learning during the pandemic. The researchers collected survey and interview data from 107 teachers in 25 different states in the United States. An et al. found that the majority of teachers, approximately 80% of participants, felt they had the knowledge and skill set to toggle to online learning. An et al. furthered the feelings of teachers' preparedness for teaching online and their own skill set; No correlation between teacher confidence level and the teachers' age or years of teaching experience were identified (An et al., 2021).

In contrast, Middleton (2020) found that students within the same subject area and school often experienced a variety of instruction as teachers' abilities and comfort levels varied. Teachers often cited a lack of experience or knowledge in online learning to be able to prepare adequate instruction. Middleton (2020) concluded that "this difference [in instruction] may be

due to a lack of knowledge of evidence-based pedagogical approaches to teaching online, lack of knowledge of technology…" (p. 42).

Teachers need support in online learning instruction. The research of Tawfik et al. (2021) attempted to address the support teachers needed to be successful in the use of online learning by interviewing six teachers (n = 6) from a K-12 school using semi-structured questions. Tawfik et al. found that teachers desired three main things from administrators, "(a) need for clear policies and communication of those policies; (b) provision of space and autonomy to allow teachers to lead the problem-solving process; and (c) technological support and training" (p. 925). Teachers want and need direction from their administrators. In a study conducted by Francom et al. (2021), 388 teachers from Mississippi and South Dakota were surveyed. Francom et al. found concerns from teachers, noting that 27% of teachers wanted additional professional development and training (n = 76) and 13.5% of teachers wanted clearer expectations from school administrators about online learning (n = 38).

The Virginia Department of Education (VDOE; 2021) created a variety of policies for the use of online learning including their most comprehensive policy called Supporting Virtual Teaching. This VDOE policy was intended to demonstrate how schools can support online learning and teaching to help provide effective guidance for teachers and school administrators when developing virtual learning models. The Supporting Virtual Teaching policy also referenced other entities such as the National Standards for Quality to help continue developing meaningful online learning models for students The National Standards for Quality Online Courses, Online Teaching and Online Programs was designed to provide guidance for K-12 instruction happening in an online platform. Members from across the country and a range of contributing organizations have been working to develop guidance since 2007 and continuously

update and revise based on research and field experiences (2022). This virtual teaching policy was intended to support all student learning, especially the use of a new platform for instruction that has the potential to overlook certain populations (e.g., students with disabilities, English language learners [ELLs]). The VDOE (2021) and its Supporting Virtual Teaching policy also provided guidance on how to support special populations of students provided by researchers from the Accessible Educational Materials Center and the Colorín Colorado's Guide for Distance Learning for ELLs: Needs Assessment.

Supporting Student Learning and Equity

At its inception, online learning was believed to be a great equalizer. Blomeyer (2002) noted that online learning had the ability to level the playing field by allowing students to access courses and educational opportunities that were not traditionally found in K-12 schools. The U.S. Department of Education (2017b) continued this sentiment stating online learning is "bringing equity to learning through technology" (p. 20). The research of Hastings (2013) noted the development and expansion of online learning by Governor Bob McDonnell of Virginia in 2010 was intended to promote equity and provide students with additional opportunities for access to their learning through his initiative *The Opportunity to Learn*. The emergency widespread use of virtual learning due to the COVID-19 pandemic created a more complex situation as schools recognized that not all students would have the same capabilities and access to technology, and accommodations had to be made to support all students (Bonk, 2020). The emergency use of online learning uncovered the digital inequities that were still widespread across the United States; many students did not have reliable and consistent internet access. When referring to digital inequity, this not only includes equitable access to technology but also access to effective instruction while online (Rose & Blomeyer, 2007). There are many different types of

complications students may face while they are learning from home. Bonk (2020) noted students participating in online learning often struggled with barriers such as shared resources in their homes including sharing Wi-Fi access with siblings or parents, which made online learning difficult.

Not all students have the same access to technology, especially in a synchronous digital setting. Hogan and Sathy (2020) suggested teachers provide recordings of synchronous sessions to help students stay connected who cannot attend live sessions. Recordings can be an effective accommodation for providing equitable access to learning materials. Inequity in online learning encompasses more than just access to technology. Mann et al. (2021) compiled data from the National Center for Education Statistics and each respective state department of education to evaluate course enrollment, student performance, and student demographics of 62,910 student cases. The researchers found students with specific characteristics—such as students who qualified for free and reduced lunch, male students, students with emotional disturbances, students with other health impairments, and students with disabilities—often struggled most with online courses. The conclusion from the 62,910 student cases analyzed by Mann et al. (2021) found digital inequity was happening on three separate levels related to the digital divide—access, skills, and use.

Inequities in education and online learning often include the inequities of the home, which include the educational background of students' parents and the types of academic support students may or may not have at their disposal (Villegas-Ch et al., 2020). In the United Kingdom, researchers Andrew et al. (2021) conducted research on 4,000 parents of children between the ages of 4–15 years during the early onset of the COVID-19 pandemic. This research focused on the disparities between economically disadvantaged and advantaged families.

Andrew et al. found that the poorest families spent less time at home learning, and online learning taking place in a home puts those students at a significant disadvantage in educational gains. Specifically, only 47% of the poorest families reported that schools provided additional support and access to their teachers for support in their education, as compared to 64% of students from more well-off families. The study found that economically disadvantaged students spent approximately 30% less time learning at home as reported by their parents, and it was calculated that it would result in at least 15 full school days lost of educational instruction by the return to school in the Fall of 2020 (Andrew et al., 2021). Further reiterating the notion that access to technology is one of several inequalities with online learning, Jiao and Lissitz (2020) noted, "computers and the internet can be obtained by throwing money at the problem" (p. 46). Understanding students can be disadvantaged financially and academically in their home lives can directly impact their success in online learning and is likely a roadblock preventing some schools from adopting online learning policies (Andrew et al., 2020).

Also exploring the topic in Europe, researchers Engzell et al. (2020) evaluated data from approximately 350,000 students in the Netherlands. The Netherlands was chosen for this research due to its short and complete lockdown that lasted 8 weeks–with the technology available and integrated prior to the emergency use of online learning. Engzell et al. looked at projections of academic loss as a result of the COVID-19 pandemic and schools moving to online learning. Their research indicated that most projections of academic loss are incredibly conservative compared to what they could measure, showing that students lost on average three percentile points. Engzell et al. believe that the learning loss at three percentile points is conservative. Measuring academic losses and gains of students from the COVID-19 pandemic is important; however, the use of online learning during the pandemic should not be an inherent

indication that all online learning is an ineffective delivery model for K-12 education (Bonk, 2020). Bonk argues that developing, planning, and implementing online learning is complex and what schools did as a result of the pandemic can sometimes be described as not a true reflection of online learning.

Effectiveness of Online Learning

A benefit of utilizing asynchronous learning—or learning that takes place by students at their own pace without meeting simultaneously with a teacher or class—was that students worked at their own pace during their mastery of the material while accessing teacher provided materials and support (Bernard et al., 2004). Asynchronous instructional time plays a crucial role in online learning by providing students with the opportunity to complete an in-depth dive into the content utilizing the different technological tools available without the pressure of matching pace with their peers (Hetherington, 2020).

Online learning can also be completed in a synchronous model where students and teachers meet in real time for instruction using online meeting platforms (LaFrance & Beck, 2014). Synchronous work in an online learning environment can allow students an opportunity to ask questions and communicate with peers and their teachers (Hetherington, 2020). Researchers have also found that students who are more timid and often too afraid to share or answer questions in a face-to-face setting are more willing to share in an online setting because of the sense of anonymity (Huett et al., 2008); however, there are challenges when planning synchronous learning. According to a teacher participant in Hetherington's (2020) study, students can experience *PowerPoint fatigue* when constantly attending synchronous online learning where a teacher just talks and lectures to the student.

Researchers Schwartz et al. (2020) investigated the administration of online learning in

school divisions that previously needed distance learning in emergency situations to meet the needs of their students, particularly referencing the use of online learning due to hurricane-related school closings. Using 13 focus groups of superintendents, principals, teachers, and school representatives to collect data, Schwartz et al. found that school principals preferred synchronous online learning to an asynchronous offline learning model. Participants viewed the synchronous model as an opportunity for more meaningful interaction between the teacher and students but also agreed that offline materials and asynchronous work helped connect educational opportunities with those who struggled with internet access, especially in times of emergencies (Schwartz et al., 2020).

Researchers Means et al. (2009) found that online learning was more effective when being used in a credit recovery situation than traditional face-to-face recovery programs. Blomeyer (2002) touted that online learning was originally intended to improve graduation rates as well as provide additional opportunities for K-12 students who may not have access to a wide variety of course offerings based on their school's demographics and location. Although online learning was intended to improve graduation rates in many schools implementing the learning model, research of graduation rates in exclusively online schools indicated those schools have not increased graduation rates; their graduation rates are below the national average (Gulosino & Miron, 2017). Gulosino and Miron evaluated graduation rates of online schools as well as blended schools from 35 states in the United States. Their research found that graduation rates in 2014-2015 averaged 40.6% for full-time online schools and 37.4%, for blended online learning programs. Gulosino and Miron found that graduation rates in online programs fall below the national average of 81% of traditional in-person schools in the United States. Additionally, research by Roblyer (2006) found that students enrolled in online learning platforms cited that

the deeper teacher-student relationship and effective communication in online learning can be an effective deterrent to reduce student dropout rates.

Student Satisfaction with Online Learning

A meta-analysis of data compiled from 1985-2002 suggested that early versions of online learning delivered a small increase in student learning compared to traditional in-person instruction (Bernard et al., 2004). To further examine the impact of online learning, Zheng et al. (2016) completed a meta-analysis of 96 studies evaluating the benefits of online instruction and student learning. This meta-analysis identified several key themes in online learning and the integration of technology into student learning. Zheng et al. found that the use of online instruction improved student achievement scores in English, writing, science, and mathematics; mathematics had the largest increase in student achievement. Overall, the researchers determined that ongoing feedback, opportunities for additional practice, and more in-depth real-world work with learning material in an online setting resulted in higher student achievement (Zheng et al., 2016).

Online learning has been considered a positive option for some because of the potential for more meaningful interactions between students and teachers. Lin et al. (2017) conducted research with 1,593 students enrolled in high school leveled World Languages classes on an online platform. Lin et al. found that online learning students generally had an above average intrinsic motivation, as online learning utilizes student-centered practice, thus creating stronger student learning outcomes. The research indicated that student learning was no longer a one-way flow of information during the learning process, rather, the online learning model allowed for more learner-content interaction (Lin et al., 2017).

Schools cannot assume that all students will be successful in online learning as this

setting can be seen as a dumping ground for problem students (Huett et al., 2008). The assumption that all students will find success in online learning is flawed and a disservice to students who are struggling. Schools cannot assume online learning will work for everyone (Huett et al., 2008). A key factor that can predict students' ability to demonstrate mastery is based on the digital readiness of the students and their households (Aguilar et al., 2021). The connection between internet and technology readiness and student success in an online learning environment is significant and must be addressed before students set out to work in an online setting by preparing them with appropriate support (Aguilar et al., 2021). Siko and Barbour (2022) conducted research in a graduate-level course utilizing course evaluations by the students as well as student blogs. Siko and Barbour found that teachers indicated their prior knowledge of technology and how to use that technology to support student learning was weak.

Smith (2013) conducted research evaluating the effectiveness of online learning and student performance in New Zealand. Students from three classes were removed from face-to-face learning and transitioned to online learning. After evaluating student academic progress using school division-approved essay assessments, Smith discovered no significant difference between student achievement in face-to-face and online learning. This finding does not mandate that online learning is just as effective as traditional face-to-face learning. Rather, Smith's research does indicate that there may be a larger correlation between student success and the methodology of the delivery of instruction.

Common Findings in Effective Online Learning

Like all teaching and learning strategies, educators seek to determine the effectiveness of online learning on students' academic achievement. Evaluating the effectiveness of online learning is needed by policymakers to determine which practices should be used in the future

(Means et al., 2009). Mandates by policymakers often demonstrate a lack of understanding about online learning programs; policymakers may not fully comprehend the differences between online learning and their understanding of more traditional school settings and *brick and mortar learning* (Huett et al., 2008). Additional research is needed to develop a deeper understanding of what elements make online learning effective to aid decision making for sustainable change within education (Picciano et al., 2010). This research may support policymakers in understanding the type of policies and practices that would best support students and schools with online learning opportunities.

Researchers Liu and Cavanaugh (2011), as well as Dietz (2002), found that the amount of time a student spent logged into the learning management system served as an early predictor of student success when using online learning. These researchers found that the more students participated in and took an ownership role in their learning, the more likely those students were going to find online learning as an effective method to master content. Liu and Cavanaugh completed research that evaluated K-12 students' success in an online learning environment during the 2007-2008 school year in 15 high school credit courses with a total of 1,794 students. Liu and Cavanaugh were attempting to determine which factors had the greatest significant correlation in an attempt to provide guidance on what practices teachers could engage in to support student learning best and develop a guideline for best practices in an online setting. Liu and Cavanaugh found that the variable that held the greatest significant effect on student achievement in online learning was the amount of time the student engaged with the learning management system. The researchers continued to draw that piece out by saying they were able to determine the more ways that teachers engaged and kept their students' attention in the learning management system, which would result in stronger academic achievement (Liu &

Cavanaugh, 2011). This research can be viewed as a continuation of the research done by Dietz (2002), which evaluated the academic success of postsecondary students in an online learning platform. Dietz originally found that the amount of time a student spent on the early learning management systems engaged with the materials and coursework the professor provided resulted in a more significant relationship in student achievement.

Another indicator of student success is student satisfaction. Student satisfaction in online learning also plays an important role in overall student success in online learning (Chang & Smith, 2008). Chang and Smith conducted a survey of 949 students enrolled in a post-secondary online class. The survey data indicated that students who enjoy specific online learning classes often found greater academic success, showing that 94% of participants indicated they were satisfied with the course, and a positive significant relationship existed between students' scores and student course satisfaction. While Chang and Smith's research indicated students' perceptions have a direct impact on their academic success, students in the survey were post-secondary students, the same perceptions may or may not be found in K-12 students.

The Role of the Educator

Teachers have an important role in schools and the research of Kieschnick (2017) noted that the introduction and embedding of technology did not change the role of the teacher. Kieschnick (2017) stated, "Technology is awesome. Teachers are better" (p. 6). Researchers Dikkers et al. (2013) provide additional research exploring the teacher and student experience with North Carolina's Virtual Public School. This online school employs 350 teachers and serves approximately 50,000 students in Grades 6-12 but focuses predominantly on course offerings for students in Grades 9-12. The courses offered virtually range from credit recovery to Advanced Placement. Dikkers et al. developed a survey for teachers and students to explore the role

educators play in an online learning experience. All teachers were invited to participate in the survey with approximately 54% of the teachers' submitting responses. Students were selected to participate in the survey based on whether they had completed more than 1 year in the online program. In all, Dikkers et al. surveyed 174 students.

Dikkers et al.'s (2013) research from such a large online learning platform had several key findings. A profound discovery was that the role of the instructor was key in providing a quality instructional experience. In fact, the researchers found that 91% of students believed their teachers played a significant role in their success in completing the online course. Not only did strong teacher leadership provide meaningful instructional opportunities, but another key finding of Dikkers et al. was that an important element of student success was focused on helping build a sense of community even while online. The North Carolina Virtual Public Schools teachers used a variety of methods to help students connect with teachers and peers including using emoticons during discussion posts or chats and being more readily accessible to students in a variety of modalities to build that connection (Dikkers et al., 2013).

Communications and Online Learning

Communication has been cited by many researchers as playing a crucial role in the success of online learning. Kachel et al. (2005) recognized the role of communication stating, "learning is communication, and nothing appears to be more important in learning online than consistent and ongoing communication" (p. 14). Similarly, the multiple-case-study research by Sangrá and González-Sanmamed (2010) was conducted in Spain to determine what role technology and communication via technology impacted student learning. The researchers gathered questionnaires from 1,222 teachers across the region and were able to identify that maintaining communication between teachers and students was integral in improving the overall

effectiveness of online learning, especially in those schools that had more holistically implemented technology into their instructional strategies (Sangrá & González-Sanmamed, 2010). Additional research by Hawkins et al. (2013) evaluated the use of communication by teachers and students in online learning at Utah's Electronic High School, where 66 high school credit classes were provided to 46,089 students from 2008-2009, during the time of the study. The researchers gathered 2,269 surveys of the students attending the high school. Hawkins et al. were able to identify that maintaining communication between students and teachers cannot be based on quantity alone but must also encompass meaningful and high-quality communication to be effective for student learning and student completion of online courses. Additionally, in North Carolina Virtual Public School, Oliver et al. (2009) surveyed 1,648 students to gather feedback regarding the online learning program. The researchers found that students (n = 87) expect and desire quick responses and feedback from assignments from their teachers and found this an integral part of their online learning process as well as providing additional opportunities to explain content (Oliver et al., 2009).

Purposeful communication can also come in the form of timely feedback on assignments and providing immediate feedback in chats to better guide instruction (Kachel et al., 2005). This feedback can also be reciprocal and provide students an opportunity to share their own feedback about their learning and how the lessons are working for them (Bonk, 2020). Feedback on student learning can also include individual teacher feedback built into activities during the online lessons, providing the teacher an opportunity to share how the entire group or class is managing the material (Hetherington, 2020). The relationship between teachers and students is important, and in an online setting, that relationship is used to establish effective lines of communication.

The role of communication in online learning is not exclusive to teacher and student interactions. Communication extends to the relationship's students are able to form with each other. Johnson et al. (2014) conducted research from the virtual school West Coast Online School surveying three teachers, three administrators, two data coaches, three caregivers, and three students. The research found that what was missing in this online learning program was the ability to connect students. One parent noted,

> What is missing, thought, and I wish would happen is the need to connect the kids in the classroom where the actual learning is going on because we had a moderator and the kids want to chat in the chat box but when you're younger like [REDACTED], you don't really know what to say. (Johnson et al., 2014, p. 12-13)

Providing opportunities for K-12 students to connect with each other in an online setting has been found to reduce dropout rates (Johnson et al., 2014).

Online learning can help encourage a sense of community when the class does not meet in the same room through the development of a curriculum that facilitates engagement through virtual group work, project-based learning, and student discussions (Boling et al., 2012). Researchers Oliver et al. (2009), who studied the North Carolina Virtual Public School, found that students wanted additional opportunities to interact with peers in online settings; one student stated, "more interaction with the other students would enhance the learning process" (p. 34). Digital resources that allow classes to be live streamed also aid in the development of a sense of community and connectedness during online learning (Bonk, 2020). As technology continues to develop and improve, resources such as Zoom, Microsoft Teams, and Google Meets have provided opportunities for teachers and students to meet in real-time and maintain those lines of communication (Bonk, 2020).

Designing Online Learning

Online learning is inherently different, and the planning and design of the instruction should also reflect those differences. Prensky (2001a) stated that teachers and schools cannot assume that teaching in the same modalities as they are used to in face-to-face instruction will translate while using technology. Teachers must adapt the way they teach to help students learn in a way that works better for them, in a very student-centered design (Prensky, 2001a). One-way schools can create the optimal learning situation while online is by using a learning management system that centralizes all elements of instruction. A university in Ecuador was the subject of Villegas-Ch et al.'s (2020) research, which focused on the use of an effective learning management system integrated into online learning courses. The research gathered data from the learning management system, and Hadoop to evaluate student engagement with online learning as well as predict student success and course completion. Villegas-Ch et al. found that learning management systems allowed students to be able to access all elements of learning in one location while providing teachers a location to provide personalized monitoring of student progress.

For students in K-12 education to find online learning manageable, teachers should create learning modules that are divided into parts that are smaller and easier for students to work on independently (Kachel et al., 2005). While breaking the work into manageable parts, teachers should also create opportunities for students to reflect and think critically about problem-solving and their learning—opportunities like these are few and far between in digital learning and critical for helping students develop meaningful learning (Prensky, 2001b).

Additional elements of online learning that should be considered in the developmental stages include addressing formative and summative assessments. Designing assessments in a

digital environment can be challenging with researchers Jiao and Lissitz (2020) stating, "students' motivation to cheat might not be high, but their motivation to learn may be low" (p. 46). Developing meaningful assessments to help students acknowledge their learning and master content can help students increase their understanding of the path to mastery of the material. The researchers suggested that assessments can function in an online setting by moving to a less linear model than what was commonly found in a traditional face-to-face academic setting. Instead, Jiao and Lissitz suggested allowing assessments to be markers students meet, at their pace, before moving on to the next unit or module. Jiao and Lissitz contend that using assessments as markers may fit more naturally in an online learning environment and benefit students by allowing them to work at a pace that better suits their learning styles.

Despite school administrators' greater familiarity with leading in a traditional setting, strong leadership is vital in an online setting as well. Taylor and McNair's (2018) study was small and focused on three schools that had just started an online program. Their research suggested that online learning may be overlooked as something that does not require the same infrastructure as traditional settings and could save school divisions money; however, "[school] divisions need to recognize that building an online school will take the same amount of effort and resources as sustaining a brick-and-mortar site, if not more" (Taylor & McNair, 2018, p. 323). One of Taylor and McNair's most important findings was that what made for a strong educational program in an online setting was not the latest technology, rather the focus on the human element was what drove success for student learning. Their research also found that

> Virtual schools that had strong systems planning, management, and leadership dealt with fewer problems and obstacles than other schools that identified as struggling in those areas. In other words, systems planning, management and leadership are strong indicators

of initial and long-term stability in a virtual school. (Taylor & McNair, 2018, p. 323)

Their research on new online programs solidifies the importance of an administrator in facilitating a strong program for online students.

Digital Natives v. Digital Immigrants

Each new school year, teachers inherit a new set of students each with their set of skills and challenges. However, as technology becomes more integrated into society's daily lives, students are becoming more mismatched with the current American educational system (Prensky, 2001a); schools should recognize and address the differences in today's students. Prensky has become a central researcher of all things digital learning and coined the phraseology of *digital native* to mark the sizable difference between the students of today from those of generations past. A digital native, as defined by Prensky, are those who were born in a digital world, being raised as native speakers of all things technology. In contrast, many adults might identify as a *digital immigrant*, or someone who has had to learn technology later in life and often find technology less intuitive. Prensky (2001a) pointed out the importance of the drastic changes in students stating, "A really big discontinuity has taken place. One might even call this a 'singularity'–an event which changes things so fundamentally that there is absolutely no going back" (p. 1). Demonstrating the significant differences in technological capabilities between digital natives and digital immigrants, Andrew et al. (2020) found that 60% of parents of primary school students felt they were unable to successfully access the technology to adequately assist their children in learning.

Today's students have grown up with the access and normalcy of technology, and educators must adapt their instructional procedures to account for this change (Prensky, 2001a). Noting the importance of learners with increased knowledge of technology can better help

teachers prepare and use new educational strategies. Digital natives thrive on multitasking and instantaneous acknowledgment; they fundamentally–even biologically– process information differently (Prensky, 2001b). Students from the digital age have proven to be able to multitask like no student group before. When evaluating children in his research, Prensky discovered that 5-year-olds playing with toys while watching a film and 5-year-olds who just watched a film with no distractions had the same results and takeaways from the film. This indication of a digital native's ability to focus in different ways can often be a difficult thing for older generations to accept but is something that must be addressed for teachers to adapt to and meet students' learning needs (Prensky, 2001b).

As teachers prepare for new students and develop learning lessons that meaningfully incorporate digital learning, school leaders should acknowledge that it would be unfair to assume teachers already have the pedagogical knowledge to effectively complete the task (Kachel et al., 2005). Teachers must take on the role of learner to be prepared for this academic shift (Liu, 2007). Prensky (2001a) correlated the experience of today's teachers with that of an immigrant, he observed that today's teachers are digital immigrants as they learn and adapt to the new culture and society around technology. "Digital Immigrants learn–like all immigrants, some better than others–to adapt to their environment" (Prensky, 2001a, p. 3). Like the immigrants Prensky referenced, not all teachers have the same set of expertise, experience, and learning capabilities as the others, which makes this transition in teaching strategies and approaches even more difficult. This cultural difference between digital natives and digital immigrants must be addressed for schools to appropriately design the most current form of instruction for the ever-changing students they serve. Digital natives are unlikely to change to meet their teacher's deficits; the onus of change falls upon the digital immigrant educators to continue growing to

meet the changing needs of students (Prensky, 2001a). A statement from a teacher participant in Covington's (2012) study provided a common sentiment felt by teachers. The teacher said, "sometimes adding technology is not necessarily better for students. It takes time for us to learn this new stuff" (Covington, 2012, p. 58). The lack of familiarity with technology can create more tension and struggle for digital immigrants in education.

The investigation into today's students and the role of changing technology continues. Sheninger's (2019) research furthers the research started by Prensky (2001a) looking at how education and technology continue to develop. Sheninger proposed that the growth in technology is more consequential than has been recognized. Sheninger (2019) believed,

> We are in the first few days of the next Industrial Revolution and that the coming age will systematically shift the way we live, work, and connect to and with one another. It will affect the very essence of the way humans experience the world. (p. 2)

The changes technology has brought to education provide many areas for research to ensure educators adequately meet the needs of the students they serve.

Professional Development for Teachers

In addition to rethinking the structure and organization of learning lessons when presented digitally, other researchers have examined the role teachers play in supporting students in an online learning environment. Oliver et al. (2009) evaluated the online learning program in North Carolina and found that students identified their teachers as playing a significant part in their learning. Students in this research provided specific suggestions that their teachers could do to help their learning, including a student who requested the teacher could have "used the chat room to discuss what we were learning" (Oliver et al., 2009, p. 33). The research noted that students identified their need for teacher support through specific attention to tracking their

progress toward content mastery. Oliver et al. found students wanted example problems and exercises to review new content more than what was provided during their virtual instruction. One student said, “Had I had access to a greater number of examples related to the math concepts, I feel as if I could have caught on to concepts quicker” (Oliver et al., 2009, p. 33). Consistently, students recognize and acknowledge the role of teachers as a major factor in their success in online learning.

Recognizing that teachers play such an important role in the success of students, especially in online learning, teachers need to be well versed and prepared to fulfill this substantial role. As adult learners–potentially novice technology learners, teachers have specific professional development needs to aid their successful administration of online learning opportunities for students (Liu, 2007). While teaching an online course, teachers become more than the facilitators of content (Dikkers et al., 2013). Teachers also work on developing a community, in addition to creating traditional classroom culture, and need robust professional development to make that a reality. Research has also found that teachers are often learning new technologies for the first time while also implementing them and may have different comfort levels while navigating new learning platforms (Boling et al., 2012). With the increase in online learning in education, teachers need support, specialized professional development, and training to help them be successful in the profession (Bonk, 2020).

Developing, planning, and executing an online course can be challenging for many educators. As education professionals across the globe use computers and technology in their lesson plans and instructional practices, Abrego and Pankake (2010) found that the use of a computer does not instantaneously translate to success in online learning. Additionally, planning an hour of online instruction can take up to 200 times longer compared to planning a traditional

in-person lesson for teachers (Blomeyer, 2002). One explanation for the additional time required for preparing lessons in an online setting was noted by Boling et al. (2012) in their research which acknowledged that teachers are also learners and must become familiar with technology on top of their content. One reason online learning preparation takes so much longer is teachers are no longer playing the role of being the content expert, but now with online learning teachers also must have a deep understanding of technology (Bonk, 2020) as well as understand the behavior and psyche of the students on top of their content (Huett et al., 2008; Saade et al.,2007). Researchers Huett et al. (2008) suggest school divisions will need to hire instructional designers to facilitate the transition to online learning and provide support, so teachers do not have to be both content and technology experts if online learning is going to work effectively.

Developing professional development that is helpful for teachers in online or blended environments is critical. Philipsen et al. (2019) conducted a meta-aggregate review and suggested that professional development centered on online learning for instructional planning should be comprehensive and provide teachers with specific feedback aimed toward growing their capacity to provide good online instruction. Beyond providing effective professional development, Philipsen et al. also found that teachers needed to be allowed to grapple with their educational philosophies, and identities as teachers, and develop an understanding of how online learning fits with what they already believe (Philipsen et al., 2019). Researchers Dikkers et al. (2013) encourage school principals to not only recognize the significance and role of the teacher in successful online learning but also to help build staff capacity to facilitate a sense of community while providing engaging instruction. Professional development for administrators was a key recommendation from the research of Dikkers et al. Professional development for administrators enables these leaders to provide meaningful training for staff to foster growth in

the biggest component of student success. Dikkers et al. (2013) recommend professional development focusing on “time management, community-building, and connectedness in online environments” (p. 166).

Administrators Leading the Learning

Principals are responsible for all aspects of schools. Bottoms and O’Neil (2001) state that one of their most important roles is as the *chief learning officer*, as principals are foremost instructional leaders. Researchers DiPaola and Hoy (2012) acknowledge that principals as instructional leaders know that there is no easy or quick fix to improving instruction, however, it is a long-term goal and mission of any school leader. The role of administration when online learning is being implemented can look different; however, the job of being an instructional leader becomes more crucial. As instructional leaders, administrators must become well versed in a new realm of classroom management and curriculum design (LaFrance& Beck, 2014). Liu (2007) found many administrators wanted to provide support to their teachers but often did not have enough expertise with the technology or other strategies to be meaningful leaders in this area. Ultimately, administrators must become experts in the pedagogical aspects of online learning to be effective leaders and guide teachers in the successful creation and implementation of lasting learning experiences for students (Abrego & Pankake, 2010; LaFrance& Beck, 2014). Technology is always changing, and all administrators must commit to being lifelong learners to find success in new platforms (Bonk, 2020).

Summary of Review of Literature

Access to the internet has continued to grow, along with online learning, in K-12 education (Kieschnick, 2017). Online learning can serve different purposes for students and schools, including the facilitation of credit recovery (Means et al., 2009) and increased

graduation rates (Gulosino & Miron, 2017). The use of online learning can also increase the types of courses offered by schools (Mann et al., 2021; Means et al., 2014; Sheninger, 2019). Students today are Digital Natives, whereas most teachers are Digital Immigrants, and this divide in technological experience and comfort presents most schools with another hurdle that must be overcome to effectively teach (Prensky, 2001a). School principals should acknowledge this technology divide and provide effective support and professional development for teachers who are learning this new learning platform so they can better educate their students (Dikkers et al., 2013). Teachers need new and specialized professional development to help teachers as they prepare to bridge this gap (Bonk, 2020). School leadership also needs to ensure they are providing ongoing training in these new methods of delivery of instruction for teachers to feel more prepared (Brinkmann et al., 2021; Ersin & Atay, 2021). Even though students may be Digital Natives, they need support and strategies to find success in an online environment. Not all students have equal access to laptops, computers, and even the internet (Bonk, 2020). Brinkmann et al. (2021) and Cash et al. (2020) found that school leadership identified a lack of internet access as profoundly impacting teaching and learning. Students working from home may also not have the same access to academic support within the home as their families' educational backgrounds can vary (Villegas-Ch et al., 2020).

In conclusion, additional research in online learning is needed as this newly expanded platform for learning has found itself at the center of K-12 education as a result of the novel coronavirus. Bonk (2020) stated that the emergency use of online learning may push schools into making systemic changes of more comprehensive use of technology. Research is needed in many central elements of online learning for this educational platform to continue to evolve and appropriately serve the needs of the students, and research is needed to guide policymakers and

administrators (Dietz, 2002; LaFrance& Beck, 2014; Lin et al.,2017). Research should be focused on how teachers can be assisted in the planning and navigation of the technological tools as researchers resoundingly agree that teachers consistently struggle to maintain expertise in both content and technology (Prensky, 2001a). Research is also needed on how to use the newest 21st century tools effectively and how those tools can be used equitably across all ages, abilities, and demographics (Bonk, 2020; Means et al., 2014). Researcher Kieschnick (2017) warned that "too much attention was paid to the bright shiny technologies, and not enough attention was paid to instruction strategies, pedagogy, and academic goals that teachers apply to instruction" (p. 7). Researcher Middleton (2020) identified the need for future research in online learning must be adjusted to account for the sudden implementation of online learning stating, "additional research to examine the impact of the significant deviation from the prior classroom norms which much of the data and research have been based upon" (p. 43). These research suggestions provide a wide variety of potential research topics. This study focused on the perceptions of principals regarding the use of online learning to determine the potential of them supporting, continuing, or increasing the use of online learning.

Chapter 3

Methodology

The purpose of this qualitative study was to identify the perception of school principals in small school divisions within the Commonwealth of Virginia regarding their school's use of online learning post-pandemic. Prior to the COVID-19 pandemic, online learning numbers had been increasing in enrollment across the United States (De Brey et al., 2021; U.S. Department of Education, 2017a). In the Spring of 2020, the COVID-19 pandemic drastically impacted K-12 public education as 48 of the 50 states either required or recommended school closures, pushing schools to utilize online learning to teach students (Education Week, 2020). Schools utilized online learning en masse for the first time in an emergency setting (An, 2020). Since February 2022, 99% of students have returned to in-person learning (Institute of Education Sciences, 2022). Research indicates that perceptions of online learning were mixed among students and teachers alike (Dietz, 2002; Liu & Cavanaugh, 2011, Mann et al., 2021; Means et al., 2014; Sheninger, 2019). As most students have returned to in-person learning, school principals have the opportunity to plan for the future use of online learning to meet the needs of the students they serve. This study aimed to gain a better understanding of the perceptions of school principals regarding the use of online learning to meet the instructional needs of students post-pandemic. This chapter outlines the research design and methodology for this study, which begins with providing the purpose and focus of the research. This chapter also identifies the rationale for the research design, the role of the researcher, the selection process for intended participants, and the procedures for data collection and analysis.

Purpose of Study

The purpose of this qualitative study was to identify the perceptions of school principals

in small school divisions within the Commonwealth of Virginia regarding their school's use of online learning post-pandemic. School principals wear many hats and one of those includes being an instructional leader. School principals act as *chief learning officers* for their schools as they lead the learning (Bottoms & O'Neil, 2001). The principal as the instructional leader of the school has become an important role for 21st-century leaders (Hallinger et al., 2020). Understanding principals' perceptions of online learning is important because principals, as instructional leaders, mold and develop the types of instruction that take place within their school building.

Methodology and Research Design

This basic qualitative study was conducted using semi-structured interview questions with study participants. The participants identified for this research were school principals of elementary, middle, secondary and high schools in school divisions within the Commonwealth of Virginia with a student population of fewer than 2,500 as of June 2022. Merriam and Tisdell (2016) explained that qualitative research can be a beneficial research model because of these four key characteristics: "the focus is on process, understanding, and meaning; the researcher is the primary instrument of data collection and analysis; the process is inductive; and the product is richly descriptive" (p. 15). In this study, the researcher was the primary instrument used to collect data from interviews conducted with school principals to gain their perspectives and perceptions about the use of online learning post-pandemic in their schools. With the intent to collect the thoughts and opinions of principals about their experiences and perceptions about online learning, the researcher in this study conducted one-on-one interviews with each participating principal using semi-structured questions.

Research Questions

To gain a better understanding of principals' perceptions of online learning and the intended future use of this instructional model, the researcher sought to answer the following research questions:

1. How do principals in small school divisions perceive their school division's smaller size impacting their decisions about the use of online learning?
2. How have principals in small school divisions institutionalized online learning post-pandemic?
3. What are the perceptions that school principals in small school divisions have about online learning post-pandemic?

Data Needed

Merriam and Tisdell (2016) identify one-on-one interviews as a valuable tool for collecting qualitative data so that the researcher can learn the participants' authentic perspectives. The researcher held one-on-one, recorded interviews with three to four principals at each grade level: elementary, middle, secondary and high school respectively. The qualitative data collected focused on the principals' perceptions, as well as the current and intended use, of online learning in their schools.

Participant Selection

School principals of Grades K-12 were the participant group for this study. School principals invited to participate were identified based on the size of their school divisions as this research focused on the perceptions of school principals in school divisions with a student population of fewer than 2,500 as of June 2022. Research indicates that often smaller school divisions have historically used online learning to supplement course offerings (Sheninger,

2019), thus smaller divisions were likely able to provide a specific viewpoint regarding the use of online learning before and after the COVID-19 pandemic and forced school closures. Placing the focus on school divisions with smaller student populations allowed the study to evaluate the perceptions of online learning in schools that may have used this learning model prior to the COVID-19 pandemic.

The VDOE (2022) provides a detailed student enrollment log, which was used to identify potential school divisions that fit the student population parameter identified in this study. As of June 2022, there were 132 school divisions within the Commonwealth of Virginia; of these school divisions, 48 had a student population of fewer than 2,500 as of June 2022 (see Appendix A). Student enrollment logs from the VDOE provided the list of school divisions within the Commonwealth of Virginia that fit the student population parameter for this study. The VDOE (2009) had available a chart describing all of the school divisions' locale settings which include rural (remote, distant, fringe), town (distant, remote), suburb (small, large), and city (small, medium, large).

A solicitation email requesting school principals' participation in this study was emailed to the superintendent of each of the 48 school divisions meeting the student population parameter established for this study. Of the 48 requests made, one school division superintendent declined participation, and two school divisions merged for the 2022-2023 school year thus exceeding student enrollment limitations for the research. Of the remaining superintendents, 3 of them had directly coordinated voluntary participation with their principals. Therefore, 134 school principals of elementary, middle, and high schools within the 42 remaining small school divisions were sent a solicitation email providing background on this research and invited them to participate in the study.

Research Design

The use of interviews to collect data is a principle part of qualitative research (Merriam & Tisdell, 2016). Interviews can be conducted in groups or conducted one on one with the purpose of finding out the personal perspectives of interviewees and collecting information that could not be obtained through observation. The researcher followed a procedure to vet, test, and adjust interview questions prior to the interview process beginning. Questions were developed, screened, and tested with school principals that would not be part of this study for feedback and question validity. The process of pilot testing the interview questions developed for this research allowed the researcher to test the validity of each interview question to determine the alignment of the answers to the research questions guiding this study. Feedback provided during the pilot interviews presented an opportunity for changes to be made to avoid closed questions and create an opportunity for further discussion and input by study participants. The semi-structured, open-ended questions were developed based on Creswell's (2014) model. Table 1 illustrates the alignment of each interview question with this study's research questions.

Table 1

Alignment of Research and Interview Questions for Data Collection

Research Question	Interview Question
How do principals in small school divisions perceive their school division's smaller size impacting their decisions about the use of online learning post-pandemic?	What are the demographics like in your school and school division? How does your school's size impact your decision to use online learning, if at all?
How have principals in small school divisions institutionalized online learning post-pandemic?	How does your school use online learning, if at all, post-pandemic? Do you, or your school division, mandate the use of online learning at all? How does your school's use of online learning compare to usage during and before the pandemic? What type of continuing professional development surrounding online learning does your school offer for teachers?
What are the perceptions that school principals in small school divisions have about online learning post-pandemic?	What impact, positive or negative, do you believe online learning has on your students? When utilizing online learning, what do you perceive as the difference between students who are able to demonstrate mastery and find success and those who do not? Are there specific barriers for your students that prevent them from finding the same outcomes, if so, what are they? In your opinion, is there a place for online learning in schools post-pandemic? Why or why not?

Data Collection Treatment Procedures and Management

The researcher earned her CITI in the fall of 2020 through Virginia Polytechnic Institute and State University (Virginia Tech; see Appendix B). The researcher submitted the Virginia Tech Institutional Review Board's (IRB) protocol form on September 30, 2022, and received

confirmation of approval on October 10, 2022 (see Appendix C). In addition, the procedures for conducting research within the small school divisions identified for this study were reviewed. Permission was sought from the school divisions requiring approval before contacting school principals as potential participants.

Upon receiving IRB approval to conduct this research, the researcher collected email addresses for 48 school superintendents from the school divisions' websites, whose student populations were fewer than 2,500 as of June 2022. Potential participants were then emailed a solicitation email (see Appendix D) as well as the study information sheet (see Appendix E) once their email addresses were located on their websites in school divisions with a student population of fewer than 2,500 as of June 2022. After initial contact with the superintendents, 3 responded that specific principals were already contacted and in agreement to participate, additionally, 12 of the superintendents gave permission for their principals to be emailed. The researcher sent emails to 134 principals. Of the 134 emails sent, 2 principals emailed a decline to the research, 11 principals' emails bounced back as their emails were not valid, 2 principals no longer worked in the buildings as listed per the website, 106 principals did not respond, and 13 principals agreed to participate in the interview for the research. Ultimately, 3 participants were not interviewed because they never confirmed participation and interview time and dates after multiple attempts from the researcher to establish those times. Data collection took place during November and early December of 2022.

Data were collected using semi-structured, open-ended questions in one-on-one interviews. Participants were given the option to participate in the interview either in person or over the virtual platform of Zoom. Eight of the ten participants requested a virtual interview, and 2 of the participants requested an in-person interview at their respective schools. Interviews were

audio and video recorded with the participant's permission and uploaded to a password-protected Google Drive account on a password-protected computer. The two participants who interviewed in person also agreed to the audio of their interview being recorded on the same Zoom platform as Zoom provided the initial transcription service. All interviews were recorded to the password-protected cloud account belonging to the researcher. The proofread and verified audio transcript was then inserted to a Google Sheets document. There are no physical copies of any interview documentation to protect the anonymity of participants throughout the data analysis process.

Data Analysis Techniques

Transcripts of each interview conducted were analyzed to identify key themes and central ideas. Creswell (2014) presents a hierarchical approach to the analysis of qualitative data in a multi-step process that provides the opportunity to identify themes, generalizations, and coding for qualitative findings. Creswell states that this linear approach should not be one directional and the stages between the steps should be interrelated.

The analytic process used with the qualitative interviews in this study included transcribing each interview using Zoom’s audio transcript function, followed by corrections made by the researcher as needed to the original transcript. The researcher then reviewed each transcript for accuracy. The finalized transcripts were sent to the participating principals to verify accuracy. One of the principals did provide a written response expanding upon the answers to a question as additional information was recalled and asked to be included in the transcript. Next, the transcripts were read in totality, evaluating participant validity and overall sense of meaning. The coding process included breaking the answers into individual interview questions, creating more manageable parts and manually identifying and assigning a code by the researcher. Creswell (2014) recommends the potential for an overall code as well as specific code per

answer to gain a description of the participants' answers. After each individual interview, the statements were read to identify key points as well as the main ideas of each thought per question. The individual questions were highlighted to identify specific thoughts that stood out as the overall theme of the answer. Creswell (2014) recommends that the last step of validation and reliability happen throughout the coding process to evaluate and re-evaluate the reliability of the data provided. Once all participants had all been interviewed, the researcher went through each question to identify similarities between the answers. Once similar themes were identified and grouped based on common themes, the researcher then began labeling responses to each question with a corresponding code that would be utilized to build data tables tracking the frequency of responses from the participants.

Methodology Summary

This study was designed to investigate the perception of school principals regarding the use of online learning post-pandemic. This qualitative research included interviews with principals from school divisions in the Commonwealth of Virginia with a student population of fewer than 2,500 as of June 2022. Data were collected, analyzed, and coded to identify central themes to answer the research questions guiding this study.

Chapter 4

Findings

The purpose of this qualitative study was to identify the perception of school principals in small school divisions within the Commonwealth of Virginia regarding their school's use of online learning post-pandemic. The purpose of Chapter 4 is to present the research results along with an analysis of the data collected in this study. Data were gathered through interviews with participants and analyzed through qualitative procedures. The design of this study used open-ended, semi-structured questions to gather the perceptions of 10 school principals regarding the use of online learning post-pandemic. The principals lead schools with various K-12 grade level settings within Virginia school divisions with a student population of 2,500 or fewer as of June 2022. This chapter begins with a description of the data collection procedures and the selected school division's demographic information followed by participants' profiles. Interview data, frequency, and an overall summary of the data analyses are also shared.

Data Collection Procedures

A total of 48 superintendents and 134 building principals were emailed the researcher's solicitation email (see Appendix D) and the study information sheet (see Appendix E). The potential participants were instructed to contact the researcher via email in order to participate in the interview. Interviews were scheduled at the participants' convenience. Interviews took place both virtually and in person, per the participant's preference and request. The interviews were digitally recorded and transcribed using the Zoom transcription process and validated by the researcher. Data from the interviews are presented by interview questions and a summary of the data is shared following each interview question. The data collected about building principal perceptions of online learning are also displayed in tables for each interview question. The tables

provide the frequency with which principals discussed various components and common themes included in each interview question.

Profile of the Participants

This study was conducted within Virginia school divisions with a student population of 2,500 or fewer as of June 2022. Research indicates that smaller school divisions were more likely to have used online learning prior to COVID-19 (Sheninger, 2019); thus, principals in these smaller school divisions were the targeted participants of this study to determine their perceptions regarding the use of online learning for the future. The participants' general information is cataloged in Table 2.

Table 2

Profile of Study Participants

Code	Gender	School level	Grades levels
H1	Male	High school	8-12
H2	Male	High school	9-12
H3	Male	High school	9-12
M1	Male	Middle school	6-8
M2	Female	Middle school	5-8
M3	Male	Middle school	6-8
S1	Male	Secondary school	6-12
E1	Male	Elementary school	PK-4
E2	Female	Elementary school	PK-2
E3	Male	Elementary school	K-5

Collected Data by Research Questions and Aligned Interview Questions

Data collected from the 10 principal participants in this study are organized by research question and each associated interview question in the following sections. The data are described with relevant statistics provided as appropriate. Additionally, tables are included to present the data in an organized, structured manner. The interview questions, which are structured to answer the research question, are in the same order as presented to the participants.

Research Question 1 and Aligned Interview Questions

How do principals in small school divisions perceive their school division's smaller size impacting their decisions about the use of online learning? The first interview question was used to collect demographic data from study participants. These data provided additional insights in the development of emerging themes. The intent of the second interview question was to identify how principals in small school divisions perceive their school and school division's size as impacting their decisions regarding online learning. Interview Questions 1 focused on collecting information to answer Research Question 1.

Interview Question 1: School Division Demographic Information. Interview Question 1 sought to gather demographic data from the participants; responses are shown in Table 3. A higher proportion of participants were from rural school settings (70%, $n = 7$) compared to suburban (20%, $n = 2$) or town (10%, $n = 1$) school settings. One middle school principal classified their school as being located in a small city; however, the VDOE (2009) describes the school division as a town, and Table 3 reflects that classification. For the 2019-2020 school year, Virginia reported an average of 45.1% of students qualified for free and reduced lunch (NCES, 2021). Four participants (40%, $n = 4$) noted that their schools had higher than average rates of students who qualified for free and reduced lunch, and two of them stated that the number of

students who qualify for free and reduced lunches has increased this year from previous years. Three principals noted that during the 2021-2022 school year, all students qualified for free and reduced lunch making it harder to gauge the percentage increase from last year to this year regarding the number of students who qualified for free and reduced lunch.

Table 3

Participants' School Division Demographics

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
School setting											
Rural	X	X			X	X	X	X		X	7
Suburban			X	X					X		2
Town			X	X							1
Student demographics											
Free & reduced		X			X			X		X	4

Interview Question 2: School Division Size Impacting Decisions. Interview Question 2 asked principals if their schools' small size directly impacted their decisions regarding the use of online learning and the principals' responses are cataloged in Table 4. The majority of principals interviewed did not believe their school's size impacted their decisions about the use of online learning (80%, $n = 8$). One high school principal stated, "I don't think it's really about the size that impacts our decisions with online learning. I think it's more of a staff concern" (H3, *l*11). Another elementary principal agreed that size was less of a contributing factor by saying "I don't know that size is really a contribution. It's more the age of the children, and the developmental appropriateness of using it in that way… learning in our classrooms is much more hands on" (E2, *l*11).

There were two principals who stated that the size did impact their choices for the use of online learning. One high school principal stated, "I think our size allows…for it to be used when needed" (H2, *l*11). Another high school principal felt that their school size allowed them to be more connected to the needs and wants of their community and stated,

> A small community like ours, we pride ourselves on having those in-person, face-to-face interactions. Our community has been used to that since the days of the Civil War and we're not changing. We're proud in our school division. We're proud that we're not changing. (H1, *l*11)

Table 4

Principal Responses About the School Division Size Impacting Online Learning Decisions

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
Yes, the small size of their school division impacted online learning decisions	X	X									2
No, the small size of their school division impacted online learning decision			X	X	X	X	X	X	X	X	8

The first two interview questions were designed to gather data surrounding the Research Question1: How do principals in small school divisions perceive their school division's smaller size impacting their decisions about the use of online learning? Principals were asked about their demographics and school size and if principals believed that their school size directly impacted their decision making regarding the use of online learning. Table 5 displays the findings for Research Question 1.

Table 5

Principals Responses About How the Small Size of Their School Impacts Online Learning Decisions

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
School setting											
Rural	X	X			X	X	X	X		X	7
Suburban			X	X					X		2
Town			X	X							1
School size and decision											
Yes, the small size of their school division impacted online learning decisions	X	X									2
No, the small size of their school division impacted online learning decision			X	X	X	X	X	X	X	X	8

Research Question 2 and Aligned Interview Questions

How have principals in small school divisions institutionalized online learning post-pandemic? The second research question intends to identify how principals in small school divisions have institutionalized online learning post-pandemic and why they decided to pursue that direction. Interview questions 3, 4 and 5 aim to collect information from the participants to answer this research question.

Interview Question 3: Current Use of Online Learning. The current use of online learning in the participants' schools was the focus of the Interview Question 3 and the responses are found in Table 6. The most frequent use of online learning at the time of the interview was to increase course offerings (40%, $n = 4$). Four of the 7 (57%, $n = 4$) secondary schools – including

high school, middle school, and combined secondary schools – used online learning to increase course offerings. One high school principal stated,

> Being a high school that's 8th-12th grade with 330 students, there are some classes that we just don't offer. We don't offer advanced physics… so the classes that students want to take to get an Advanced Studies diploma have to be done on Virtual Virginia. (H1, *l*7)

A middle school principal noted, "We didn't have any foreign language applicants, no one applied. We have a French opening and a Spanish opening with zero applicants. So, we had to move to Virtual Virginia" (M3, *l*7). The secondary principal interviewed agreed and stated,

> The other piece about size is that we don't have a tremendous amount of offerings, so to provide variety in our program of studies we've steadily over the years increased the number of students who are taking classes through Virtual Virginia. (S1, *l*7)

Four of the school principals noted that online learning was currently being used for emergency learning, such as asynchronous days for inclement weather, etc. (40%, *n* = 4). An elementary principal stated,

> The way we use online learning is if there is a virtual learning day that has been provided by the division or acknowledged by the division, our students have access to a choice board on Canvas. Our teachers also do a Google Meet, kind of as an open office hours. Those are both optional components of the virtual learning day. (ES2, *l*7)

There were four principals (40%, *n* = 4) who stated that the use of online learning was minimal and limited to fewer than 10 students in their building who were exclusively online students. One elementary principal stated, "I had one student who used it [online learning] because she was undergoing cancer treatment" (E3, *l*7). Another high school principal stated, "We have four students out of 536 [students] who are fully virtual" (H2, *l*7).

The second part of Interview Question 3 centered around whether the school division mandated the use of online learning at all. None of the principals (0%, *n* = 0) stated that their school division mandated online learning; however, five principals (50%, *n* = 5) stated that the lack of internet access limited the use of online learning, which prevented the school divisions from mandating any online learning or blended learning components. Two of the principals (20%, *n* = 2) stated that there was no component or element of online learning currently in use in their schools or divisions.

Table 6

Principal Responses About Current Uses of Online Learning

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
School use of online learning											
Increase course offerings	X		X			X	X				4
Credit recovery			X		X						2
Supplement instruction		X									1
Emergency days			X		X			X	X		4
Minimal online use				X			X			X	3
No online instruction				X				X			2
Internet access creates a barrier to mandated online learning	X	X			X	X				X	5

Interview Question 4: Online Learning Now v. Pre-Pandemic. Interview Question 4 asked principals to compare their schools' use of online learning currently to use prior to the pandemic and the emergency state-wide use of online learning and the principals' responses are documented in Table 7. The majority of participants stated that their online learning use

remained at the same rate of frequency as previously to the COVID-19 pandemic (80%, *n* = 8). One middle school principal stated, "Online learning is currently about the same, but use of technology is much greater" (M1, *l*15). Another middle school principal volunteered that "now that the tool [online learning] they can use has been used so frequently, they used to be terrified of it, is more accessible" (M2, *l*15). According to a high school principal, the use of online learning has increased. The high school principal stated the use of online learning was

> way different [than] before the pandemic, really the only online learning we provided was the Virtual Virginia for the classes that we can't offer. In house, we still do that, but post-pandemic we're kind of getting back on that track with some extra variants. (H3, *l*15)

Table 7

Principal Responses About Current Online Learning Use Compared to Pre-Pandemic

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
Online learning used at the same rate as pre-pandemic	X	X		X	X	X		X	X	X	8
Online learning used at a higher rate than pre-pandemic			X				X				2
Online learning used at the lower rate than pre-pandemic											0

Interview Question 5: Professional Development Surrounding Online Learning. The fifth interview question asked principals about the types of continuing professional development their schools offered for teachers surrounding online. The two most common responses were that the schools were not offering continuing professional development for teachers regarding online learning (40%, *n* = 4), and professional development was offered on an individual needs basis

(40%, *n* = 4). The secondary principal who stated they were not offering professional development surrounding online learning stated, “I don’t think we did any [professional development surrounding online learning] this year. We’ve spent most of our professional development on two things, social-emotional learning, and trauma-informed care” (S1, *l*19). A middle school principal stated, “We don’t really offer any professional development on online learning. The teachers don’t like doing online learning just because it is what it is. We don’t really offer a lot of professional development on that” (M3, *l*19). Another middle school principal had a similar sentiment saying, “we don’t have an online learning program and don’t have any intention of going back to that unless it’s in a limited format” (M1, *l*19).

Four principals stated that they offered professional development surrounding online learning based on individual teacher needs. One high school principal said, “we hired 15 new faculty members this year, so we’re back at that surface level when it comes to professional development” (H2, *l*19). An elementary principal stated, “our IT department is really good. They offer to assist teachers who have any need with planning lessons or even communicating to their class” (E1, *l*19).

Two principals stated that the only professional development being offered that covered online learning centered around the use of Canvas (20%, *n* = 2). One high school principal stated,

> Canvas is not going anywhere. I feel that Canvas is here to stay. Although we don’t offer virtual learning, we still have classes through Canvas. I’ve seen it with my teachers that I want them to use Canvas as a repository, to place things where students can grab information and resources quickly. And in the event that we needed to go into pandemic mode or our school was closed down for multiple days, we want it to be a seamless

> transition for students to be familiar with Canvas so they could go to that if we absolutely needed it. (H1, *l*19)

Another high school principal also had similar thoughts about Canvas stating, "During the pandemic, it was a[n] emergency trial by fire…now we've learned from that…[Canvas] as a learning management system that's gonna stick because of the pandemic" (H3, *l*19). One principal stated that the only professional development being offered centered around blended learning instead of online learning. Table 8 provides a summary of principal responses related to professional development opportunities provided to teachers.

Table 8

Principal Responses About the Continuing Professional Development Offered for Online Learning

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
No professional development regarding online learning	X			X		X	X				4
Professional development offered based on individual teacher needs		X			X			X		X	4
Professional development offered surrounding Canvas	X		X								2
Professional development offered on blended learning									X		1

Interview Questions 3, 4, and 5 were designed to gather data to address. Research Question 2: How have principals in small school divisions institutionalized online learning post-pandemic? Principals were asked how their school's use of online learning compared to the usage of this learning model before and during the COVID-19 pandemic, their school's current

use of online learning, as well as if their school divisions mandated the use of online learning post-pandemic, and finally what types of continuing professional development surrounding online learning their school offered for teachers. The findings associated with Research Question 2 are summarized in Table 9.

Table 9

Principal Responses About How Schools Have Institutionalized Online Learning Post-Pandemic and Why

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
School use of online learning											
Increase course offerings	X		X			X	X				4
Credit recovery			X		X						2
Emergency days			X		X			X	X		4
Minimal online use				X			X			X	3
No online instruction				X				X			2
Internet access creates a barrier to mandated online learning	X	X			X	X				X	5
Professional development											
No professional development regarding online learning	X			X		X	X				4
Professional development based on individual teacher needs		X			X			X		X	4

Research Question 3 and Aligned Interview Questions

What are the perceptions that school principals in small school divisions have about online learning post-pandemic? The third research question intends to identify principals'

perceptions regarding the use of online learning post-pandemic. Interview Questions 6, 7, and 8 aim to collect information from the participants to answer this research question.

Interview Question 6: Perception About the Impact of Online Learning. Interview Question 6 was designed to gather principals' perceptions on the impact online learning has had on their students and principals' responses are documented in Table 10. The respondents shared different thoughts about online learning, however, the majority of participants' perceptions of online learning was negative. The principals that believed online learning netted a negative effect (30%, *n* = 3), and those principals who believed online learning had a mixed effect but mostly negative (30%, *n* = 3) on student learning together were the majority. One high school principal who felt the overall impact of online learning was negative for his students said,

> For the students, it [online learning] works for, it's great…for our particular high school, our students were not being successful at a clip of about 99% of our students that were online were not successful during the pandemic. That's not a model that we want to go with looking at our data. (H1, *l*23)

Another high school principal who felt online learning had a negative impact on students' learning said, "We're putting kids in front of a screen …what is the long-term effects of the screen time for folks" (H2, *l*23). The high school principal continued on the topic and said, "Another negative is we have brought out, even more, the lack of internet [access] and now it's the have and have nots" (H2, *l*23). The concerns about student learning while using online learning continued with a middle school principal stating, "certainly the special education students are not finding any mastery [when using online learning] ... in general they [students with disabilities] hurt the most" (M2, *l*23). The secondary principal added concerns about online learning for their students by stating that online learning

> provides options for students. I think there are a handful of kids who do really well with it…Then, I think, some of our kids, it's just kind of a hot mess. Those kids also tend to require way more structure and way more reminding…they don't always get that extra customer service in the virtual setting. (S1, *l*23)

The same secondary principal did note mixed feelings about the impact of online learning stating that a positive effect of online learning directly reflected that "the world is changing for them to know that technology is important for different new jobs that we haven't even created yet" (S1, *l*23).

Three principals shared thoughts that online learning had a positive effect on student learning (30%, *n* = 3). The high school principal said,

> the positive thing [about online learning] it does prepare them for if they have any postsecondary goals of going to school. There's a lot of online classes options that kind of gives you flexibility if you're working or have other obligations. (H3, *l*23)

The high school principal who thought online learning had a positive impact on students also noted that students who had a negative experience often played a part in their experience stating, "some [students] did not take it seriously" (H3, *l*23). An elementary principal noted mixed feelings regarding the use of online learning stating, "The positive is that it is keeping some of those [students] engaged… when they just can't physically be in the building at this level" (E2, *l*23).

Only one principal believed that, when carried out with fidelity, online learning had a neutral effect on student learning (10%, *n* = 1). The principal's perception was that online learning requires significant work to be done with fidelity to support students' learning. A middle school principal said, "I think that if it's done really really well, it can have a neutral

effect, as in not better or worse than in person, but I think it's really hard to get it to that" (M1, *l*23).

Table 10

Principal Responses About the Impact of Online Learning on Students

Online Learning Impact	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
Positive			X						X	X	3
Negative					X	X		X			3
Neutral				X							1
Mixed – mostly negative	X	X					X				3

Interview Question 7: Perceptions About Student Differences in Online Learning.

Interview Question 7 focused on understanding principals' perceptions about the difference between students who find success in online learning and those who do not. Principal responses to this interview question are documented in Table 11. The participants hold a variety of ideas of what the differences are between students who find success and those who do not. The majority of participants (50%, $n = 5$) stated that internal factors were often the differences between students who found success in online learning and those who did not. One high school principal said, "I think to be a successful online student, you have to be very disciplined. You have to have a lot of will and you have to have a lot of grit" (H1, *l*27). Another similar sentiment was shared by a high school principal stating, "I think the biggest difference would be just how they [students] apply themselves, definitely how they take accountability for their own learning…you have to be a driven, motivated, self-advocating type of student to be successful" (H3, *l*27). A middle school principal stated that students who prefer online learning to in-person learning

often found success, “There was a very small group of kids that flourish in online, these would be students that prefer to avoid peer-to-peer interaction” (M1, *l*27).

Five principals (50%, *n* = 5), including two who noted internal factors, believed that external factors impacted student success. One high school principal stated that a factor that helped students find success in online learning was student familiarity and previous access to online learning in small doses. The high school principal stated,

> You see who has had the opportunity to work with technology and see these items, and I can see most importantly the teachers that are taking the time to make sure the kids are finding out what they need to understand. (H2, *l*27)

A middle school principal who thought external factors helped students find success in online learning stated,

> if you have a lot of support at home… That's really the key, if there’s somebody at home that’s going to make sure you’re online or can answer your question when you’re stuck…we just have to have some sort of support to go with it. (M2, *l*27)

The secondary principal who thought both internal and external factors contributed to student success stated that “our relatively intrinsically motivated students…tend to do pretty well with the virtual setup” (S1, *l*27). However, he continued to say those students without those internal driving forces could be supported externally as they have done in their combined secondary school; “we have kind of a virtual class built into the day, with a Virtual Virginia Mentor, so he logs into their Virtual Virginia and it’s kind of the in-house harasser to make sure they get all their stuff” (S1, *l*27).

Two principals (20%, *n* = 2) stated that they would not be able to identify a clear indicator or predictor of which students would be able to find success. One middle school principal stated,

> I've been very surprised by who is taking well to online learning, and mostly it's the high school level…you just never know with kids. Some kids you think will do well on virtual and can't stand it. Some kids who you think will struggle, take to it like a duck to water. I wish I had an easy answer because that would make my life a lot easier. (M3, *l*27)

An elementary principal shared a similar feeling, "that's probably pretty hard to answer just because…online learning should be used for the mastery of skills, and not for initial instruction" (E2, *l*27).

The second part of Interview Question 7 asked participants about what specific barriers prevented their students from finding the same success. Principal responses are documented in Table 11. Two principals (20%, *n* = 2) were able to identify specific barriers and concerns about accessing online learning. One high school principal stated concern, "historically underrepresented groups…those groups of students need in person instruction…the structure of school, and the day, and the ritual of school, they are used to it" (H1, *l*27). Another barrier that was a concern about online learning and students with disabilities, as she did for the previous question, was shared by a middle school principal when she said, "online learning, I do not believe, benefits students who struggle with executive functioning skills" (M2, *l*23).

Table 11

Principal Perceptions About What Makes Students Successful in Online Learning

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
Internal											
Intrinsic motivation											
Student preference	X		X	X	X		X				5
Self-discipline			X	X							2
External	X		X		X						3
Parental involvement											
Students w/access					X			X			2
Built in structure		X									1
Teachers who support							X			X	2
No predictors for success		X					X				2
Students who struggle						X			X		2
Minority groups											
Students with disabilities	X										1
	X				X						2

Interview Question 8: Perceptions About Future of Online Learning. Interview Question 8 asked principals' perceptions regarding online learning. Principals' responses are cataloged in Table 12. The majority of participants (80%, $n = 8$) agreed that online learning should have a place in K-12 public education. One high school principal noted that there is a place for online learning by saying "Yes, there is a place, but that place is very niche students that require it [online learning] academically. Students that have demonstrated that they can

handle an online course" (H1, *l*31). A middle school principal noted that "I think it's a small place, I think it's niche and I could see online learning not delivered by [name] Middle School, but delivered by Virtual Virginia, as being a great tool for a student for one reason or another" (M1, *l*31). Another situation that has facilitated the need for online learning is teacher shortages. One middle school principal stated, "We have a teacher shortage, so we have our history teacher online and using proximity learning" (M2, *l*31). Similarly, a secondary principal noted that online learning helps "our course offerings. I think it's beneficial for meeting needs for students" (S1, *l*31).

One high school principal stated that online learning can be beneficial to help students for short term situations,

> I think that there's a place for the online and it's more of a transition, not a standalone. We have students with anxiety, depression, and things that they just can't overcome, and maybe the in-person is not their favorable environment (H3, *l*31).

A high school principal cited the need for online learning to support students with medical needs, he stated, "I would agree that for those who have medically necessary that it is a positive" (H2, *l*31). Another high school principal agreed, "A lot of schools will save money on homebound teachers. You almost don't need them anymore" (H1, *l*31).

Another reason cited by participants is the use of online learning for credit recovery. One middle school principal stated,

> There's a place for online learning, and that's generally the recovery students that have already been through a class. They benefit because they don't have to sit through a whole class again and are at a point where they might get something done. (M2, *l*31)

Another middle school principal agreed with the use of online learning for credit recovery saying, “[online learning] helps them stay on track” (M3, *l*31).

Two principals did not believe there was a place for online learning in K-12 public schools (20%, *n* = 2). One elementary principal was able to draw on his experience from another division as well as his work in his school saying, “I was the virtual principal in another division…I saw how many people failed when it was just online” (E1, *l*31). That elementary principal continued,

> [learning] can’t be solely online because we need that report piece in order for them [students] to feel that connection to the learning. They don’t care what you know until they know that you care. I feel like that’s harder to do if it's go…watch your video. (E1, *l*31)

The other elementary principal who did not see a place for online learning was also an elementary principal who stated, “there’s some foundational skills, some fine motor skills, some attention skills, that are just not there because of much time they spent doing online things” (E2, *l*31). Her concern about the use of online learning at the elementary level continued, “Online learning has a tendency to isolate children to ‘I’m learning with the computer and I’m not interfacing and interacting with other people’” (E2, *l*31).

Table 12

Principal Perceptions About Whether There is a Place for Online Learning

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
Yes	X	X	X	X	X	X	X			X	8
Niche group of students	X			X			X				3
Teacher shortages				X			X				2
Medical placement	X			X			X				6
Credit recovery					X	X					2
No								X	X		2

The interview questions 6, 7, and 8 were designed to gather data surrounding the Research Question 3: What are the perceptions that school principals in small school divisions have about online learning post-pandemic? Principals were asked what impact online learning has had on their students, what kinds of students found success in online learning as well as what barriers existed, and finally if principals believed there was a place for online learning in K-12 education. The findings for Research Question 3 are summarized in Table 13.

Table 13

Principal Perceptions Regarding Online Learning Post-Pandemic

Principal Responses	H1	H2	H3	M1	M2	M3	S1	E1	E2	E3	Frequency
Student impact											
Positive			X						X	X	3
Negative					X	X		X			3
Neutral				X							1
Mixed – mostly negative	X	X					X				3
Internal factors for success											
Intrinsic motivation	X		X	X	X		X				5
Student preference			X	X							2
Self-discipline	X		X		X						3
External factors for success											
Parental involvement					X			X			2
Built in structure							X			X	2
Teachers who support		X					X				2
No predictors for success						X			X		2
Students who struggle											
Minority groups	X										1
Students with disabilities	X				X						2
Place for online learning											
Yes	X	X	X	X	X	X	X			X	8
Niche group of students	X			X			X				3
Teacher shortages				X			X				2
Medical placement	X		X	X	X	X	X				6
Credit recovery					X	X					2
No								X	X		2

Principal participants had mixed opinions regarding the positive or negative impact online learning may have on student learning. The majority of participants expressed their belief that online learning had a negative impact or was more likely to have negative than positive impact on their students. Principals noted that students who often found success with online learning had internal factors such as intrinsic motivated, self-discipline, and a preference for less social school setting. Some of the external factors that helped students find success included parental involvement, structure built into the course, and teachers providing ongoing support. Principal responses noted that most participants believe that there is a place for online learning in K-12 schools. Principals noted specific instances in which online learning was beneficial for student learning by increasing student access to education (e.g., students out of the building with medical needs and courses not offered in-person due to staffing or teacher certification). However, principals' perceptions varied based on the age of the students that they serve, with elementary principals finding less benefit for their students using online learning.

Summary of Data

Conducting interviews with building principals allowed for a collection of qualitative data that provided insight into principals' perceptions regarding online learning. The research questions developed for this study were best answered by collecting principal perceptions in one-on-one interviews. Interviews were conducted with 10 principals from schools within Virginia school divisions with a student population of 2,500 students or fewer as of June 2022. As interviews were conducted, data were then categorized and coded based on principals' responses to each interview question to identify common themes and findings. Responses from each interview were transcribed and then inserted into a spreadsheet. Those responses compiled into tables based on interview questions allowed the researcher to identify themes and commonalities

from the data for findings. Majority of participants (70%, *n* = 7) were from rural settings, with the remaining participants in suburban (20%, *n* = 2) or a town (10%, *n* = 1) setting. Overwhelmingly participants (80%, *n* = 8) did not believe that their school size directly impacted their decision regarding the use of online learning. Principals stated that there was a variety of reasons why their schools were using online learning. Reasons included: to increase course offerings (40%, *n* = 4), for credit recovery purposes (20%, *n* = 2), to supplement instruction (10%, *n* = 1), for emergency days (40%, *n* = 4). Some participants (30%, *n* = 3) noted that online learning only was used minimally, while other schools (20%, *n* = 2) reported no online instruction. Majority of participants (80%, *n* = 8) reported that their school was using online learning at the same rate as pre-pandemic. Schools (40%, *n* = 4) are not providing ongoing professional development surrounding online learning, with a few participants (40%, *n* = 4) noting specific examples of professional development surrounding technology instruction in the classroom. Most principals (60%, *n* = 6) had concerns about negative impacts of online learning for their students. Principals noted both internal and external factors that increased student performance in online learning. Half of the participants (50%, *n* = 5) noted intrinsic motivation as the most frequent factor that successful online learners had in common. Majority of participants (80%, *n* = 8) believed that there is a place for online learning in schools. The specific findings and implications are discussed further in Chapter 5.

Chapter 5

Findings, Implications and Future Research

The purpose of this study was to identify the perceptions of school principals regarding the use of online learning post-pandemic in Virginia school divisions with a student population of fewer than 2,500 as of June 2022. This study was designed to gain an understanding of principals' perceptions as instructional leaders and work to develop the types of instruction that takes place within their schools. Gaining an understanding of principals' perceptions gives a glimpse into the types of choices they may make.

Summary of Findings

As technology continues to evolve, the use of technology in K-12 education continues to grow (Kieschnick, 2017). Researcher Christensen et al. (2008) projected that by 2019 50% of all high school coursework would be delivered online, while online learning has not grown this significantly it has continued to grow. Online learning can provide schools and students with opportunities and increased access to education (Mann et al., 2021; Means et al., 2014; Sheninger, 2019). In the Spring of 2020, schools across the globe shifted to online learning as a result of mitigation strategies to prevent the spread of COVID-19 (An, 2020). The purpose of this study was to identify the perceptions of school principals regarding the use of online learning post-pandemic in Virginia school divisions with a student population of fewer than 2,500 as of June 2022. Three research questions were developed to guide this study. They were as follows:

1. How do principals in small school divisions perceive their school division’s smaller size impacting their decisions about the use of online learning post-pandemic?
2. How have principals in small school divisions institutionalized online learning post-

pandemic?

The qualitative methodology of research (Merriam & Tisdell, 2016) collected data from participants in semi-structured open-ended interviews was selected to gain principals' perspectives regarding the use of online learning post-pandemic.

Finding 1

Internet connectivity and reliability was a barrier to the use and implementation of online learning. Half of the study participants stated that internet access was a major factor when considering the use of online learning in their schools (see Table 6). The majority of principals were from school divisions that are described as rural (n = 7). One of the high school principals commented on the impact of their rural community and stated, "The downfall is because we are so rural, we did not mandate it [online learning] because of internet connectivity. For example, I don't have internet in my own home, we can't get it there" (H2, *l*7). This statement is indicative that internet access is about more than whether families can afford access to the internet.

Rather the infrastructure for internet access is lacking in rural communities, thus preventing the use of online learning with fidelity. Similar findings were identified by An (2020), Bonk (2020), Brinkmann et al. (2021), Hogan and Sathy (2020), Kieschnick, 2017), and Mann et al. (2021). This study found connectivity was a barrier, similarly Bonk's (2020) survey research indicated teachers identified connectivity as an issue as well. These bodies of research found that access to reliable internet directly impacted the use of online learning.

Finding 2

Principals report that schools are using online learning with a similar frequency post-pandemic as pre-pandemic. The majority of participants (n = 8) stated that the rate at

which their school was using online learning has remained relatively the same in the post-pandemic setting as compared to the pre-pandemic setting (see Table 7). Only two principals, both at the secondary level, stated that there had been a change within the use of online learning, sharing that there had been an increase post-pandemic. The secondary principal stated, "We are growing pretty steadily in the number of students who are using it [online learning]. I would say we're probably doubled if not triple the number of classes that we're buying from Virtual Virginia right now" (S1, *l*15).

One middle school principal specified that the pandemic did not change the amount of online learning taking place, but did impact teaching and learning by saying,

> Online learning is currently about the same, but the use of technology is much greater. The pandemic happened overnight, and suddenly [online learning] became the only means of delivering instruction…so I think what you see is fluency and common use of the Chromebook tools, Google classroom, Google docs, and slides, and all sorts of other online learning tools. (M1, *l*15)

Another middle school principal continued the sentiment that teachers' use of technology during the pandemic increased teacher fluency by stating, "the tools they can use that they used to be terrified of is more accessible" (M2, *l*15). The COVID-19 pandemic forced schools to implement wide scaled online learning (An, 2020). Research indicated that smaller schools are more likely to use online learning to extend course offerings (Blomeyer, 2002; Huett et al., 2008; LaFrance & Beck, 2014; Sheninger, 2019). However, this research indicates that COVID-19 online learning has not increased the use of online learning in school divisions in Virginia with student populations of 2,500 or fewer.

Finding 3

Principals do not perceive their school size as directly impacting their decisions regarding the use of online learning. The majority of participants (*n* = 8) stated that their school size did not impact their decisions regarding the implementation of online learning (see Table 4). All of the participants were from school divisions with student populations of fewer than 2,500 as of June 2022. The literature surrounding the use of online learning suggested that smaller schools often utilized online learning (Sheninger, 2019) to supplement course offerings (Huett et al., 2008; LaFrance & Beck, 2014) or allow students the ability to take more advanced coursework (Blomeyer, 2002). The principals from smaller schools that did not acknowledge their size as impacting their decisions often discussed other barriers that influenced their decisions instead of their size. One middle school principal adamantly stated, “It doesn’t. It’s really more about that accessibility outside of school” (M2, *l*11). Another principal stated, “I don’t think it’s really about the size that impacts our decisions with virtual learning. I think it’s more of a staff concern” (H3, *l*11).

Finding 4

Principals indicate that schools are not providing ongoing professional development surrounding online learning. The majority of participants were not providing ongoing professional development regarding exclusively online learning (*n* = 6) (see Table 8). None of the participants noted offering whole staff professional development regarding online learning. Some of the principals noted that they offered professional development that could include online learning components on an individual basis based on teacher requests; however, upon further discussion, most principals spoke about professional development surrounding online learning components and tools, but not exclusive online learning. One high school principal

stated, “We do a lot of professional development around different apps and things that would enhance that type of learning” (H3, *l*19). An elementary principal shared a similar sentiment stating, “We are working to learn the online platforms and how best to utilize it” (E3, *l*19). Another elementary principal shared a similar perspective, “Our IT department is really good. They offer to assist teachers who have any needs with planning lessons” (E1, *l*19). The last elementary principal stated, “We’ve had some opportunities for division-wide professional development on blended learning that we’re continuing to try to again use to the best of our ability” (E2, *l*19). All of these examples surround supporting teachers in implementing technology in their classroom instruction; however, in these situations, there is not professional development surrounding online learning, but rather professional development surrounding using technology instructional strategies. Research from Bonk (2020) indicates teachers who are delivering online instruction must receive new and specialized professional development. Professional development surrounding online learning must be continuing (Brinkmann et al., 2021; Ersin & Atay, 2021).

Finding 5

Principals do not perceive online learning as being positive for their students. The majority of participants (*n* = 6) identified that online learning had a negative impact on their students (see Table 10). There were principals who shared that there may be instances where online learning works positively for specific students; however, overall, it is not something that they think works for the majority of their students (*n* = 3). One high school principal said,

> For the students that it works for its great. For the students that it doesn’t work for, it’s not helpful at all, and the statistics for our particular high school, our students, were not being successful at a clip of about 99 percent. Our students were not being successful

during the pandemic. (H1, *l*23)

Another high school principal was able to identify both positives and negatives to online learning for their student saying,

> It [online learning] starts to prepare some of our students for university…because they're using Canvas. But the negatives, we're putting kids in front of a screen…and it has brought out, even more, the lack of internet and now it's the have and have nots again. (H2, *l*23)

There were three principals who identified that online learning had a positive impact on their students. One of those principals only referenced the blended learning components, and the positive viewpoints expressed may have been skewed by this narrow interpretation of online learning. The elementary principal stated,

> I think it [online learning] is a very positive thing for our students right now because of how individualized programs are. Now I think the educational market of technology they really stepped in to fill some gaps and it allows teachers different online programs, tailored to the students. (E3, *l*23)

Research by Smith (2013) indicated that online learning and in person learning had similar outcomes when it came to student success. Researchers Lin et al. (2017) found that online learning can encourage student motivation as learning is inherently student-centered. It is important to understand that the pandemic's use of online learning has been considered by researchers Bonk (2020) as emergency online learning, without the pedagogical planning and implementation of genuine online learning.

Finding 6

Principals' perceptions differ about factors that influence student success with

online learning. Half of the participants (*n* = 5) stated that students who were successful were often those students who were intrinsically motivated and had internal characteristics and qualities. Half of the participants (*n* = 5) stated that students who were successful often had external factors that contributed to their success (see Table 11). Two of those principals cited both internal and external factors as impacting student success. Two principals stated that there were no predictors for student success and principals were often surprised by which students were successful or not. Previous research by Dikkers et al. (2013) indicated students who had strong time-management skills and a sense of community and connectedness on an online platform were more likely to find success in online learning. The secondary principal did indicate a similar perspective and stated, "I think our relatively, intrinsically motivated to have a level of structure in their likes and kind of manage themselves" (S1, *l*27). Researchers agree that external support can help students using online learning, some of those strategies include teachers tracking student progress toward mastery (Oliver et al., 2009). Researchers Liu and Cavanaugh (2011) and Dietz (2002) in that the amount of time students spend engaged in online learning is an early predictor of student success in online learning.

Finding 7

Principals perceive that there is a place for online learning in public education. The majority of principals (*n* = 8) believe there is a place for online learning in K-12 education (see Table 12). The reasons why principals believe there is a place for online learning varies. The majority of principals (*n* = 6) stated that online learning provided access for students. One middle school principal stated,

> There are some students who have very serious issues in general. There are kids who struggle to be in a regular class environment. There are kids who struggle to do anything

> in a large crowd. I think online is a good opportunity, especially at the high school level for kids to still get their credit or stay on track. (M3, *l*31)

A high school principal shared a similar sentiment by saying," students get in certain situations whether they go out on medical leave or surgery or something like that. Situations like that there's a place for the online, it's more of a transition to, not a standalone" (H3, *l*31). Additionally, another high school principal stated, "For those who have medically necessary that it [online learning] is a positive. But I think until the infrastructure is there again, it's going to be a battle of haves and have-nots" (H2, *l*31). The perception that online learning has a place for those who cannot attend continued with a middle school principal. "There's a place, it's a small place. I think its niche… [online learning] is a great tool for a student who for one reason or another can't physically attend class" (M1, *l*31).

Finding 8

Elementary principals expressed less optimism about the benefits of online learning for students than secondary. Of the three elementary principals interviewed, two of the three did not believe there is a place for online learning (see Table 12). One of the elementary principals said, "I had a negative experience with my students. There's a place for it but it can't be solely online because we need that rapport piece in order for them to feel that connection to the learning" (E1, *l*31). Another elementary principal shared concern stating,

> I think that there's some foundational skills, some fine motor skills, some attentional skills that are just not here because of how much time they spent doing online things. I'm a huge person for hands on learning. See it, touch it, move it. You can't do that online. Online learning has a tendency to isolate children to 'I'm learning with the computer and I'm not interfacing and interacting with other people'. At this point the social piece of

> that for my kids here at this age they don't know how-to carry-on conversations. They don't know how to take turns. They don't know how to ask for help, and this is just perpetuating that when all they're doing is looking at the screen. (E2, *l*31)

The third elementary principal agreed that there was a place for online learning, however, the principal's interpretation of online learning appeared to be skewed to a more blended learning application. The principal said

> I would say absolutely because how we utilize it in our tiered instruction. It's become a tool in that toolbox. I know that not every teacher uses it every day, but in the course of a week, I would say, every teacher in my building does something online with the kids in their classroom instruction. (E3, *l*31)

Because this elementary principal included a blended learning model in their perspective for the use of online learning in the future, it is hard to assume this perspective as a generalized belief that this elementary principal supported whole online learning versus a blended learning teaching model.

Discussion of Findings

The findings from this research corroborated previous research in that internet connectivity and reliability limit the use of online learning with fidelity. Principals in this study shared significant infrastructure concerns regarding access for students and families to consistently access online learning directly, limiting schools' ability to use online instruction, especially in rural settings. Studies have indicated that online learning is an alternative delivery method of instruction for K-12 students that has continued to grow (Kieschnick, 2017). As a result of the COVID-19 pandemic, online learning expanded at a rate not previously seen in education (An, 2020). A hypothesis could have been that extensive use of online learning due to

COVID-19, along with the steadily increased use of online learning prior to the pandemic, may have resulted in principals stating an increase in the use of online learning. However, this study found that schools overwhelmingly returned back to previous use of online learning with only two participants stating their schools saw an increase in the use of online learning.

An interesting finding that directly contradicted previously reviewed literature was that principals do not perceive their size as impacting their decision in the implementation of online learning. Previous research has indicated that smaller schools utilize online learning to supplement instruction and increase course offerings (Blomeyer, 2002; Huett et al., 2008; LaFrance & Beck, 2014; Sheninger, 2019). Most principals often cited other factors besides size that impacted their decisions regarding online learning. Another finding showed that schools are not providing ongoing professional development regarding online learning. Of the participants' schools, those who used online learning outsourced those courses through other outside vendors and therefore did not need to provide ongoing professional development. Principals' perceptions regarding online learning's effects on their students overall from a negative perspective. Principals did acknowledge that some students did benefit from the opportunity to access education from outside the school building, however, most felt online learning was more out of necessity than preference.

This research found less consensus regarding what made students more successful with online learning. Principals believe that there is a place for online learning in K-12 public education. It was unanimous among secondary principals that there is value for students having access to online education—often as an alternative to traditional in person learning. In contrast to secondary principals unanimously agreeing that online learning is a meaningful part of K-12

education, elementary principals disagreed. Only one of the three elementary principal participants said there was a place for online learning.

Implications

School administrators and policymakers might consider the findings of this study to better understand how building level practitioners perceive the use of online learning in K-12 schools. School divisions can consider the findings when supporting and developing online learning programs in school divisions with a student population of 2,500 or fewer. The implications of this study were based on the findings of the research and should be considered in preparing for the use and implementation of online learning.

Implication 1

School divisions and government agencies should ensure access to high-speed internet infrastructure in rural areas so that online learning can be used with fidelity. The findings of this study add supporting evidence that the lack of consistent access to high-speed internet is a constant barrier to schools using online learning. This implication is associated with Finding 1, that internet access makes the use of online learning hard for schools to utilize. The challenge that rural schools face with a lack of consistent access to high-speed internet prevents the use of online learning as a learning tool for schools in remote locations.

Implication 2

If school divisions want to increase online usage, school divisions should consider alternative specific strategies as the pandemic usage of online learning has not impacted current post-pandemic online use. Based on the historical implementation and increased use of online during the COVID-19 pandemic, this research intended to determine if the rate of use of online learning in K-12 schools would be impacted in small schools. This implication is

associated with Finding 2, which stated that online learning is happening at a similar use rate as before the pandemic. This study found that principals reported similar use of online learning post-pandemic as compared to pre-pandemic regardless of their increased use during the pandemic. Online learning in small schools continued to increase the availability of course offerings at the secondary level.

Implication 3

Schools and school divisions should investigate the use of online learning by school divisions regardless of size to identify effective practices and supports. This implication is associated with Finding 3, which stated that principals do not perceive their size as impacting their decision to use online learning. The findings of this study suggest that principals do not consider their size as impacting their decisions regarding online learning and instead look to other factors that impact their decisions regarding the use of online learning.

Implication 4

If school divisions want to increase or improve online learning, school divisions should consider providing professional development at a more consistent frequency. This study found that schools were not using professional development surrounding online learning in their schools. This implication is in association with Finding 4, which stated that schools are not providing ongoing professional development surrounding online learning this school year. This may be considered appropriate because many of the respondents have utilized online learning by using outside sources, such as Virtual Virginia or APEX to facilitate the online learning. These schools and teachers within their schools were not leading the online instruction, thus professional development surrounding online learning may not have been appropriate. If online

learning continues to grow or school divisions want to increase its use, specific professional development surrounding best practices for online instruction must be done.

Implication 5

If online learning continues, schools and school leaders should evaluate the effect on student learning as well as establish norms that support students and teachers using online learning. This study found that principals do not perceive online learning as positive for their students as noted in Finding 5. The majority of participants noted that, overall, there was a negative impact on students with the use of online learning. If online learning is to continue in K-12 education, this research would indicate that leaders must evaluate how online learning is directly impacting their own students as well as what best practices should be utilized by their teachers to support this learning platform. There is research that identifies the positives of online learning. Thus, it is important to distinguish and delineate between both types of online learning implementation and distinguish which pieces work for students on a long-term basis. One high school principal also referenced dissatisfaction from the community regarding online learning when he stated, "we pride ourselves on having those in-person face-to-face interactions and our community has been used to that since the days of the Civil War, and we're not changing…We're proud that we're not changing" (H1, *l*11). Not only would there need to be support for students and teachers if online learning was intended to grow but also the community and families would need to be considered to ensure all stakeholders were on the same page.

Implication 6

School and school division leaders should develop or expand external support for students to be successful in online learning. Half of the principals stated that external factors often contributed to students finding success in online learning as noted in Finding 6. Although it

was not a majority of participants, external support established by school administrators can benefit students. The secondary principal noted a strategy that was effective included hiring a mentor to monitor student progress as well as helping develop strategies for time management as an effective external strategy to support students in online learning (S1, *l*27). If online learning is to be used, the research and this study concur that support should be built in to support students in this modality.

Implication 7

Schools and school divisions should continue to evaluate and implement when online learning can support student learning, as online learning may not be appropriate for all students. This finding is associated with Finding 7 from this study which indicated a majority of principals believed there was a place for online learning in K-12 education. This finding is relevant especially because the majority of the same participants indicated an overall negative feeling about the effects of online learning on their students. It is important to note that all of the secondary principals agreed that online learning has a valuable place in education, particularly on an individual basis. This research continues to find value in the opportunities that online learning can provide. While principals did not acknowledge the value of online learning in widespread use, there was a consensus of support focused especially on individual situations.

Implication 8

School divisions should investigate alternatives to online learning for elementary-aged students to support student learning when in-person instruction is not an option. This study found that elementary principals were not optimistic about the future use of online learning for elementary-aged students. This implication is associated with Finding 8, that the elementary principals that participated did not see a place for online learning in the future of K-12 education

as they cited numerous concerns with the educational practice. The one elementary principal who did support online learning was unintentionally not describing online learning, but rather described support for a blended learning model where teachers incorporated technology into daily instruction to help individualize the instruction students received. Due to the underwhelming support for online learning at an elementary school level, it is imperative that alternatives to online instruction be considered when students are unable to attend in-person instruction. Online learning was utilized in the Spring of 2020 and was the first time widespread online learning took place at all levels of K-12 education. The experiences the participants shared in this study indicate that online learning is not something principals think should be sustained for elementary-aged students.

Recommendations for Further Research

The research questions from this study focused on the perceptions of building principals and provided an interesting perspective regarding the implementation of online learning in school divisions with student populations of 2,500 or fewer as of June 2022. This research intentionally selected those smaller schools in the Commonwealth of Virginia to gain a perspective based on research that smaller schools are more likely to utilize online learning to supplement instruction (Sheninger, 2019). The next step in the research process would be to consider alternative school divisions as principals cited that larger school divisions had the capability and funding to be able to fund free standing online learning programs (H1, *l*23). If the principal's perceptions are accurate this may indicate an increase in online learning in larger school divisions and a shift from previous literature. If larger school divisions are using online learning, it may be because of reasons other than to increase course offerings and address teacher

shortages found in smaller schools. Expanding the study to compare larger school divisions would expand the research in a way that encompasses a larger scale.

Another extension of this study would be a quantitative investigation of the use of online learning. This study focused exclusively on the perception and feelings of principals in a qualitative study and did not ask for quantitative data to support those perceptions. Principals cited overwhelmingly that schools were using online learning at the same rate as pre-pandemic. This reporting is not corroborated by use data, and this research could be expanded by collecting and evaluating use data.

Further research could include an expanded definition of online learning to intentionally include blended learning when students use both in-person and online methods of learning. Multiple principals included positive feedback from the introduction to a more comprehensive use of technology in the classroom as a result of COVID online emergency learning. Based on the interviews in this study, it would appear there could be a correlation between the increased use of technology for in-person instruction and increased use during COVID-19. Principals noted overall new confidence in technology use due to emergency online learning. One principal stated when referring to online management systems "now that the tool they can use, that they used to be terrified of is more accessible" (M2, *l*15). The increased use of online instructional tools from COVID emergency online learning may result in increased use of technology in a blended learning model.

Chapter Summary

This qualitative study gathered and evaluated the perceptions of principals regarding the use of online learning post-pandemic in Virginia school divisions with a student population of 2,500 or fewer as of June 2022. The findings of this study identified consensus regarding the

continued use of online learning post-pandemic. Principals collectively noted concerns with the widespread continued use of online learning as the majority of participants had concerns about the negative impacts of online learning. Regardless of those concerns, the majority of respondents agreed that there was a place for online learning continuing in K-12 education, particularly for students who are unable to attend school in person when it comes to medical and emotional concerns.

Reflections

The COVID-19 pandemic pushed schools into online learning in an unprecedented fashion. This study was intending to determine if that mandatory widespread use impacted principals' perceptions of the continued use of online learning. When the researcher began this research, a personal hypothesis began to emerge surrounding the idea that online learning would revolutionize K-12 education. While it was clear that teachers, students and families became more familiar with technology enhanced instructional practices, the overall sentiment from principals included negative connotations and a desire to move back to fully in-person learning, and the use of online learning to continue at the same limited rate as before. While the researcher did not anticipate that online learning would work for every student at every age, the assumption was easy to arrive at that there would be a significant increase in school use of online learning. This theory was disproved by this study. Additionally, the respondents' perceptions of online learning indicate that if further widespread school closures would happen, many would be hesitant to use online learning as a long-term solution. Most principals noted comfort in short-term emergency closures accompanied by online learning, however, this research would indicate resistance to long term school closures.

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Appendix A

School Division Listing

Student Population	School division
178	Highland County Public Schools
476	Lexington Public Schools
502	Bath County Public Schools
513	Craig County Public Schools
528	Charles City County Public Schools
625	Colonial Beach Public Schools
657	Surry County Public Schools
719	Bland County Public Schools
753	Rappahannock County Public Schools
813	West Point Public Schools
828	Norton Public Schools
867	King and Queen County
887	Buena Vista Public Schools
903	Mathews County Public Schools
963	Covington Public Schools
975	Sussex County Public Schools
992	Franklin City
1002	Lancaster County Public Schools
1181	Northumberland County Public Schools
1202	Middlesex County Public Schools
1208	Cumberland County Public Schools
1350	Northampton County Public Schools
1350	Richmond County Public Schools
1354	Galax Public Schools
1393	Essex County Public Schools
1419	Brunswick County

Student Population	School division
1530	Grayson County Public Schools
1531	Westmoreland County Public Schools
1538	Nelson County Public Schools
1607	Lunenburg County Public Schools
1619	Madison County Public Schools
1635	Amelia County Public Schools
1702	Charlotte County
1776	Floyd County Public Schools
1817	Martinsville Public Schools
1824	Nottoway County
1833	Clarke County Public Schools
1911	Allegheny County
1914	Prince Edward County Public Schools
1933	Buckingham County Public Schools
1965	Dickenson County
1983	King William County Public Schools
2037	Greensville County Public Schools
2056	Poquoson Public Schools
2200	Bristol City
2338	Appomattox County Public Schools
2427	Buchanan County
2493	Falls Church Public Schools

Appendix B

CITI Certificate

CITI PROGRAM

Completion Date 11-Sep-2020
Expiration Date 11-Sep-2023
Record ID 38395151

This is to certify that:

Irene Winchester

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Social & Behavioral Research
(Curriculum Group)
Social & Behavioral Research
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Virginia Polytechnic Institute & State University (Virginia Tech)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?we2562cad-ea38-486a-a4af-9035b1b787be-38395151

Appendix C

IRB Approval

VIRGINIA TECH

Division of Scholarly Integrity and Research Compliance
Institutional Review Board
North End Center, Suite 4120 (MC 0497)
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732
irb@vt.edu
http://www.research.vt.edu/sirc/hrpp

MEMORANDUM

DATE: October 10, 2022

TO: Carol S Cash, Irene Patricia Winchester

FROM: Virginia Tech Institutional Review Board (FWA00000572)

PROTOCOL TITLE: Principals' Perceptions of Online Learning Post-Pandemic in Small Virginia School Districts

IRB NUMBER: **22-827**

Effective October 10, 2022, the Virginia Tech Human Research Protection Program (HRPP) determined that this protocol meets the criteria for exemption from IRB review under 45 CFR 46.104 (d) category(ies) 2(ii).

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit an amendment to the HRPP for a determination.

This exempt determination does not apply to any collaborating institution(s). The Virginia Tech HRPP and IRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

https://secure.research.vt.edu/external/irb/responsibilities.htm

(Please review responsibilities before beginning your research.)

PROTOCOL INFORMATION:

Determined As: **Exempt, under 45 CFR 46.104(d) category(ies) 2(ii)**
Protocol Determination Date: **October 10, 2022**

ASSOCIATED FUNDING:

The table on the following page indicates whether grant proposals are related to this protocol, and which of the listed proposals, if any, have been compared to this protocol, if required.

Appendix D

Solicitation Email

Email subject line: Principals Perceptions Regarding Online Learning

Dear Prospective Participant,

My name is Irene Winchester. I am a doctoral candidate at Virginia Tech in Educational Leadership and Policy Studies. I am conducting research to analyze administrators' perspectives regarding the use of online learning in K-12 schools post-pandemic as most students have returned to in-person instruction (IRB 22-827). The intention is to capture the reactions of administrators as they face unprecedented challenges in school leadership and their thoughts on how they want to see online learning used, if at all.

I am looking for participants for my research. Participants can volunteer to take part in a short interview, either in person over Zoom consisting of eight questions. There is minimum risk involved in participating in this research. It will not be possible to identify you as the person who provided any specific information for the research. If you are willing to participate, please respond to this email with preference of in-person or Zoom interviews.

Thank you for your time and participation in this research. If you have any questions concerning the research, you can contact me at (757)755-0335. This research has been reviewed by the Human Research Protection Program of Virginia Tech. If you have any questions about your rights as a research participant, or concerns or complaints about the research, you may contact the Virginia Tech HRPP at irb@vt.edu or (540)-231-3732.

Thank you for your assistance.

Irene Winchester

Appendix E

Study Information Sheet

Information Sheet for Participation in Research Study

Principal Investigator: Irene Winchester, 757-755-0335, irenepw@vt.edu

IRB # and Title of Study: IRB-22-827
Principals' Perceptions of Online Learning Post-Pandemic

You are invited to participate in a research study. This form includes information about the study and contact information if you have any questions.

I am a doctoral candidate at Virginia Tech, and I am conducting research as part of my coursework. You are invited to participate in this research study because you are a principal in a Virginia school division with fewer than 2,500 students as of June 2022. The researcher will be collecting information in order to evaluate principals' perceptions of online learning post-pandemic. The results of these findings could help determine the future direction online learning will have in K-12 schools.

WHAT SHOULD I KNOW?
If you decide to participate in this study, you will be contacted by Irene Winchester to schedule a 20 minute online audio/video interview session using Zoom software. Irene Winchester will ask you a series of questions and make note of your responses. Interviews will be recorded and transcribed and sent to you to confirm accuracy.

The interview should take approximately 20 minutes of your time and will include questions such as:

1. *What impact do you believe online learning has on your students?*
2. *How does your school's size impact your decision of use of online learning, if at all?*
3. *How does your school use online learning, if at all, post-pandemic?*
4. *How does your school's use of online learning compare to usage during and before the pandemic?*

We do not anticipate any risks from completing this study.

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

CONFIDENTIALITY
We will do our best to protect the confidentiality of the information we gather from you, but we cannot guarantee 100% confidentiality.

Any data collected during this research will be kept confidential by the researcher. Your interview will be video/audio recorded and then transcribed. The researcher will code the transcript using a pseudonym (false name). The transcription will be stored until a successful defense of the dissertation and then destroyed. The video/audio file will be deleted after the transcription has been confirmed by the participant.

WHO CAN I TALK TO?

If you have any questions or concerns about the research, please feel free to contact Irene Winchester (757-755-0335) or Carol Cash, EdD.(ccash48@vt.edu). You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research participant, contact the Virginia Tech HRPP Office at 540-231-3732 (irb@vt.edu).