

An Investigation Into the Perceptions of Middle School Teachers Regarding How Education
Leaders Supported Them to Effectively Teach Online During a Global Pandemic

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ABSTRACT

This research study focused on middle school teacher perceptions and experiences regarding how education leaders supported them in the transition to online teaching during a global pandemic. The research question was *how did education leaders support middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic*. A survey was sent to 90 middle school teachers who taught English, mathematics, science, or social studies in an online learning modality during the Covid-19 pandemic.

Fourteen teachers completed the survey and from the survey respondents 6 teachers participated in a 1:1 virtual interview. A data analysis process was used to analyze the teacher participants' survey and interview responses regarding how education leaders supported them in the transition to online teaching during the pandemic. The survey results showed 73% of the teachers perceived the principal was supportive in the transition while 80% of teachers perceived the grade-level administrators were supportive. In the interview analysis 100% of the teachers believed leaders were supportive. For professional development received, 60% of teachers surveyed and 83% of the interviewees felt they received enough professional development. Teachers expressed the need for additional professional development in the interviews which was 83% while only 60% of teachers surveyed wanted the additional training. Teachers were asked if leadership effectively supported them in teaching online. Eighty percent of teachers surveyed perceived the support provided by leaders was effective for teaching online. Of the interviewees, 100% felt the principal support was effective and 83% felt the grade-level administrator support was effective.

Findings suggest that listening to teachers' issues, concerns, and suggestions, being positive, supportive, assisting in parent communication, monitoring poor student attendance, and

providing professional development for online teaching were critical for teachers' effectiveness in the transition to online teaching. The findings of this study provided for a better understanding of how education leaders supported teachers during a global crisis. The information obtained can provide a significant contribution for education leaders and teachers in the development of virtual course curriculum and instructional strategies in the K-12 online learning modality.

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GENERAL AUDIENCE ABSTRACT

This study investigated the middle school teachers' perceptions and experiences regarding how education leaders provided support to them in the transition to online teaching during a global pandemic. Supporting research on education leadership support, teacher perceptions, online teaching, and Covid-19 is included. The researcher conducted this study to determine how the education leaders supported teachers during the transition to effectively teach online. The research question was *how did education leaders support middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic?*

A survey was sent to 90 middle school teachers who taught English, mathematics, science, or social studies in an online learning modality during the pandemic. Fourteen teachers completed the survey and from the survey respondents 6 teachers participated in a 1:1 virtual interview. A data analysis process was used to analyze the teacher participants' survey and interview responses regarding how education leaders supported them in the transition to online teaching during the pandemic. Findings suggest that listening to teachers' issues, concerns and suggestions, being positive and supportive, assisting in parent communication, monitoring poor student attendance, and providing teacher professional development for online teaching were critical for teachers to be effective in the transition to online teaching.

DEDICATIONS

I dedicate this dissertation to my grandmother and uncle, Lessie Mae Jones and Thomas Paul Gutzwiller. My grandmother and uncle served as an inspiration for me throughout my childhood. They always taught me that I could achieve any goal I set for myself as long as I stay focused. Although you are not here on Earth, I know that you are watching over me and very proud.

To my dad, David, who always believes in me in anything I do. His work ethic, love, and support for his family, and desire to help everyone always encourages me to do more in my life. Thanks, Dad, for being my dad, my best friend, my hero, and my biggest supporter. To my life partner, Andre', who has been my foundation since day one of starting this journey. You have witnessed each day the sacrifice and effort this venture has required. Your love, support, and encouragement, personally and professionally, means more to me than you will ever know. Thank you for always believing in me, pushing me to succeed, and being there every day!

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Chapter 1: Introduction to the Study

Overview of the Study

This investigation was of middle school teachers' experiences and perceptions regarding how education leaders provided support for them in the transition to online teaching during the Covid-19 pandemic. The interest in middle school teachers' perceptions and experiences of how education leaders provided support for them to teach English, mathematics, science or social studies online, effectively, during a global pandemic guided this study. The motivating force driving this study was how teachers delivered instruction changed literally overnight in the K-12 public school domain.. As an administrator of an alternative program that supported K-12 students, I found myself very much invested in these changes and would like to know how teachers perceived them. I believe it is my responsibility to add to the research for how teachers' perceived support from education leaders in the transition to online instruction during the Covid-19. It is my hope that the teachers' experiences and perceptions can make for significant contributions to educators in the development of course curriculum for the online learning modality.

Organization of Study

This study is divided into five chapters. Chapter 1 is arranged around the following topics: statement of the problem, purpose and justification of the study, research question, definition of terms, the researcher's assumptions and worldview, limitations and delimitations, and the chapter summary. Chapter 2 is a literature review of middle school teachers' perceptions and experiences regarding how education leaders provided support for them in the transition, during the Covid-19 pandemic, to online teaching, teacher efficacy, professional development, principal leadership, education policy, and online teaching. The literature review was wide

ranging but limited for the K-12 environment due to a greater amount of the literature focusing on higher education. Chapter 3 provides the framework of the methodology for the study. It summarizes the research design, participants, setting, collection of data, study timeline, instrument design and validity, and data management and analysis.

Statement of the Problem

In K-12 public education, education leaders focus on overall student achievement and what each school must do so all students can achieve. Accountability in public schools was linked to the No Child Left Behind (NCLB) Act of 2001 for student performance. According to Sanzo et al. (2011), “The role of the principal in ensuring the schools continually meet AYP [Adequate Yearly Progress] and state accreditation standards is vital because it is the school leader who sets the tone for all activities in the school” (p. 32). In March of 2020, the governor of Virginia, Ralph Northam, issued executive order 53 which closed all K-12 public and private schools (Northam, 2020). Northam explained in executive order 53 that education leaders’ focus will shift quickly to equal access to the curriculum for all students because of the Covid-19 pandemic and school closures (Northam, 2020). Change begins with the building principal. It is essential for a leader to change his or her beliefs and educational designs for instructional modalities to student success. Studies have concluded that teacher beliefs and perceptions influence curriculum development, classroom instruction, student ability, student participation, and content topic importance (Fulmer & Turner 2013; Gregoire, 2003; Haney et al., 2002). Teachers perceive instructional strategies differently than other stakeholders, but the pedagogy for online teaching is based on current traditions of the face-to-face classrooms (Archambault & Crippen, 2009). In the research and according to the National Council for Accreditation of

Teacher Education (NCATE), skills and knowledge required for online teaching are not listed or defined in the same way as they are face-to-face teaching (Kennedy & Archambault, 2012).

Distance education began long ago with major changes occurring in the 1960s and 70s (Wedemeyer & Najem, 1969). However, in the 2020-2021 school year because of the Covid-19 pandemic, student equity and equal access to curriculum became the focus of education leaders (Northam, 2020). Distance education or online teaching was the only way education leaders and teachers could provide equal access to the curriculum for all students.

Purpose and Justification of the Study

The study examined the challenges of middle school teachers' perceptions and experiences regarding how principals developed and supported teachers to teach online. The specific purpose of this study was to investigate middle school teachers' perceptions and experiences regarding how education leaders supported them in the transition to online teaching during a global pandemic. The researcher explored teacher perceptions and experiences regarding how leaders supported middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic.

The target sample was middle school grades 6 through 8 English, mathematics, science, and social studies teachers that taught online instruction in the 2020-2021 academic year. The researcher analyzed survey and interview responses to identify common themes revealed by the teachers from their perspectives and experiences of teaching the content and students online. The aim of this study is to increase significant information to the literature for education leaders to provide support to teachers in different learning modalities for the K-12 environment. Overall, the teacher perceptions and experiences of education leadership support via the online learning modality was a lens for this study.

Research Question

The research question was how did education leaders support middle school teachers to effectively teach English, mathematics, science, and social students online during the pandemic?

Definitions of Terms

This study includes key words and definitions. Table 1 provides the definitions of terms used throughout this study.

Table 1

Definition of Terms

Term	Definition
<i>Covid-19</i>	A disease caused by the SARS-CoV-2 virus that results in respiratory issues for a person (World Health Organization, 2021)
<i>Distance education/ Online teaching</i>	An educational program that includes a variety of educational activities, instruments, and resources that are implemented via the Internet. Most of the curriculum is instructed online and separation of the student and instructor exists (<i>A review of K-12 online, blended, and digital learning 2020 SNAPSHOT THE ANNUAL REPORT OF THE DIGITAL LEARNING COLLABORATIVE</i> , 2020).
<i>Face-to-face teaching</i>	Teaching that takes place in a brick-and-mortar classroom with meaningful interaction among the members of the classroom (Malik & Rizvi, 2018)
<i>Pandemic</i>	An epidemic (a rise in the number of cases) of a disease that has affected many mass number of people in several countries and continents (Centers for Disease Control and Prevention, 2021)
<i>Perception</i>	The way of understanding or interpreting one's impression of a situation; mental images a teacher has about students (IRIS Center, 2021)
<i>Support</i>	The modern definition is to hold the weight of a person to prevent him or her from failing (Mariani, 1997)
<i>Teacher Self-Efficacy</i>	A teacher's own beliefs in his/her ability to perform tasks (Brinkmann, 2019)

Researcher's Assumptions and Worldview

Philosophical assumptions guide the development and interpretation of qualitative research (Creswell & Poth, 2018). The first research assumption is from the epistemological which Creswell & Poth (2018) describes as evidence that is subjective and based on the individual views of the participants. The assumption was teachers were deficient in the required skills and knowledge to teach English, mathematics, science, and social studies online, effectively. Research has explained that in the K-12 environment, online instruction has been limited to remediation, credit recovery, or advanced courses of students that had scheduling issues (NCES, 2018). Online programs such as Compass and Virtual Virginia promote loading videos and completing assignments, which is asynchronous work and not a form of direct instruction. Transitioning from concrete to pictorial to abstract concepts did not happen in the online environment as it did in the classroom. This lack of transitioning between concepts was mainly due to the lack of professional development provided to teachers. To prepare students for the next century, it is essential for school divisions to employ teachers with the knowledge and skills to integrate technology into the curriculum and make learning happen. Creswell and Poth (2018), describes the ontological as the researcher explores the process of identifying themes from teachers' perceptions and experiences of education leadership support during the transition to online learning.

In this qualitative study, the researcher analyzed middle school teachers' perceptions and experiences of how education leaders provided support for them in the transition to online teaching during a global pandemic. This topic was approached by using practical and logical responses versus any philosophical theories. This focus point is based on the research results instead of the constraints of the data (Creswell & Poth, 2018). The researcher was a direct,

uncomplicated, and sensible individual who only focused on the results. Personal emotions were not a hindering factor in any part of the study.

Limitations/Delimitations

This study only considered the perceptions and experiences of middle school teachers who taught English, mathematics, science or social studies online. The perceptions or experiences of health and physical education, family and consumer science, art, or foreign language teacher were not considered. The research was restricted to one school in rural southwest Virginia.

The researcher served as the division homebound coordinator and the coordinator of the alternative program that supported the school in which the study took place. However, the researcher did not supervise or evaluate any of the potential participants so all were able to speak freely about their experiences and perceptions without regard to their positions within the school. Prior to the interviews, the protocol was refined through a pilot test with two colleagues to ensure validity of questions asked. The data collected were used to investigate the teachers' perceptions and experiences about leader support of the transition to online teaching during the pandemic.

The main focus for this study was based on teachers' perceptions and experiences of leadership support for transition to online teaching because of the Covid-19 pandemic as well as the academic choice of different learning modalities for children in K-12 public education. The participants who were considered for selection of the study became online teachers in the K-12 environment, not by choice of their own, but because of the Covid-19 pandemic. The school division required teachers to implement online instruction to give all students access to the curriculum while schools closed.

One limitation of this study is the lack of previous research regarding online teaching in the K-12 environment. The pandemic was just beginning, at the time of this research, for the transition to online teaching in the K-12 environment. In the early 1990s, Merchant et al. (1994) shared that online learning environments in the K-12 classrooms were educational games and other simulations. Although the National Center for Education Services (NCES) (2018) reported that over 55% of students enrolled in public schools were scheduled for online classes, these classes were mainly for credit recovery, graduation requirements, or advanced placement classes. Another limitation for this approach is a qualitative analysis is a full, comprehensive interpretation (Atieno, 2009). In the qualitative approach, frequencies of the themes or language is not identified and should receive the same amount of analyzation as quantitative data (Atieno, 2009).

Summary

The study was an investigation of middle school teachers' perceptions and experiences regarding how education leaders provided support for them in the transition to online teaching during a global pandemic. The interest in whether teachers' perceptions and experiences of education leader support is essential for teachers to teach effectively online guided this study. I observed many education leaders and teachers shift the K-12 traditional face-to-face classrooms to online classrooms in less than three months during the pandemic. It is my hope that these teachers' experiences and perceptions of education leader support for the transition to online teaching will make significant contributions for future education leaders and teachers in developing the online curriculums and instructional strategies for the online learning modality.

Chapter 2: A Review of Literature

Introduction

This research focused on teacher perceptions and experiences of how education leaders supported them to teach, effectively, online. The purpose of this study was to investigate middle school teachers' perceptions and experiences of how education leaders provided support for them in the transition to online teaching during a global pandemic. The research question was how did education leaders support middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic?

The focus of this literature review was to discover the most applicable research on leadership support of middle school teachers in transitioning to the online learning modality during an emergency. While reviewing the literature, it was determined the topic of leadership support of teachers transitioning to the online learning modality during the Covid-19 pandemic has only been studied by a few researchers over the past two years. Research for the online learning modality, prior to the pandemic was focused mostly on the post-secondary level and limited for the K-12 environment.

Search Processes and Criteria

The literature was reviewed based on the results of searches using the following keywords: *distance learning, distance education, digital learning, digital education, remote learning, remote education, online learning, online teaching, teacher self-efficacy, leadership support, pandemic, and Covid-19*. From September 2020-May 2021, the researcher used the Virginia Tech remote library's ProQuest, EBSCO, ERIC, and Teacher Reference Center from EBSCOHOST to locate academic journal articles, books and chapters, case studies, and government documents. In the beginning searches, the results were over 30,000, focused

primarily on higher education, spanning over 80 decades. The search was narrowed and focused on results within the years 2000-2021 using the key terms *distance education*, *distance learning*, *virtual learning*, *online learning*, *online teaching*, *face-to-face teaching*, *support*, *pandemic*, and *teacher self-efficacy*. Table 2 organizes these search results. The same databases and types of sources were used for these terms; however, the period used for *traditional learning* and *face-to-face learning* was 1965 to 2020 and for *Covid-19* and *pandemic* the period used was 2020-2021.

Table 2

Search Criteria for Literature Review

Search Term	Database	Years	Results
Distance Education	EBSCO	1981-2020	22,076
Distance Education	EBSCO	2000-2020	20,433
	ERIC	2000-2021	14,047
	Teacher Reference Center	2000-2020	2,2728
Distance Education AND K-12	EBSCO	2000-2020	367
	ERIC	2000-2021	294
	Teacher Reference Center	2000-2020	70
Distance Education OR Virtual Learning AND K-12	EBSCO	2000-2020	457
	ERIC	2000-2021	367
	Teacher Reference Center	2000-2020	93
Virtual Learning	EBSCO	2000-2020	4,365
	ERIC	2000-2021	2,623
	Teacher Reference Center	2000-2020	676
Virtual Learning AND K-12	EBSCO	2000-2020	114
	ERIC	2000-2021	106
	Teacher Reference Center	2000-2020	24
Online Learning	EBSCO	2000-2020	33,853
	ERIC	2000-2021	27,020
	Teacher Reference Center	2000-2020	4,333
Online Learning AND K-12	EBSCO	2000-2020	853
	ERIC	2000-2021	861
	Teacher Reference Center	2000-2020	182

Online Learning OR Virtual Learning and K-12	EBSCO	2000-2020	910
	ERIC	2000-2021	894
	Teacher Reference Center	2000-2020	195
Online Learning OR Virtual Learning OR Distance Learning OR Digital Learning OR Remote Learning Or Remote Education OR Distance Education OR Online Education OR Virtual Education AND K-12 OR elementary school OR middle school OR high school OR secondary school OR 9-12 OR 6-8 OR 7-9	EBSCO	2000-2020	4,554
	ERIC	2000-2021	13,180
	Teacher Reference Center	2000-2020	1,203
Online Learning OR Virtual Learning OR Distance Learning OR Digital Learning OR Remote Learning Or Remote Education OR Distance Education OR Online Education OR Virtual Education AND K-12 OR elementary school OR middle school OR high school OR secondary school OR 9-12 OR 6-8 OR 7-9	EBSCO	2000-2020	208
	ERIC	2000-2021	1,181
	Teacher Reference Center	2000-2020	19
Online Learning OR Virtual Learning OR Distance Learning OR Digital Learning OR Remote Learning Or Remote Education OR Distance Education OR Online Education OR Virtual Education AND K-12 OR elementary school OR middle school OR high school OR secondary school OR 9-12 OR 6-8 OR 7-9 AND teacher preparation OR teacher perception	EBSCO	2000-2020	8
	ERIC	2000-2021	18
	Teacher Reference Center	2000-2020	0
Online Learning OR Virtual Learning OR Distance Learning OR Digital Learning OR Remote Learning Or Remote Education OR Distance Education OR Online Education OR Virtual Education AND K-12 OR elementary school OR middle school OR high school OR secondary school OR 9-12 OR 6-8 OR 7-9 AND NCLB Act	EBSCO	2020-2021	50
Online Teaching During Covid-19	ERIC		24

	Teacher Reference Center		24
Online Teaching During Covid-19 AND K-12	EBSCO	2020-2021	0
	ERIC		0
	Teacher Reference Center		0
Online Teaching During Covid-19 AND K-12 AND leadership support	EBSCO	2020-2021	0
	ERIC		0
	Teacher Reference Center		5

In addition to the above searches, other keywords added to the search were *teacher perceptions, and online teaching during Covid-19* to view additional literature on the topic. After the search concluded, the first 30 sources were reviewed from the databases by reading the abstracts of each to determine the importance of the research. The researcher read 43 peer reviewed articles in its entirety, four chapters from three-chapter books, and five government reports from the Internet. A literature review table (Appendix A) was created to organize the research and to follow the similar themes of the literature.

Methods Used in Sources

A variety of research methods were used to research middle school teacher perceptions and experiences of how education leader supported them in the transition to online teaching during the pandemic. Most of the sources were qualitative case studies that used interviews to collect data regarding support of teachers, online teaching, and instructional strategies implemented by education leaders before and during the pandemic. Three articles were teacher reflections during the academic school year of 2020-2021. These studies provided a deeper understanding of teacher perceptions of online teaching during a crisis.

Covid-19 Pandemic

The United States (U.S.) was incredibly impacted by the Covid-19 pandemic at the beginning of 2020. The World Health Organization (WHO) defines Covid-19 virus as “an infectious disease caused by the SARS-CoV-2 virus” (World Health Organization, 2021). The highly contagious virus caused major restrictions across the nation, forced schools to close, and forced businesses to close and have employees to work from home (Altan & Dowman, 2021; Middleton, 2020). Education leaders were forced to have teachers develop and transition to a new type of teaching method that most had not experienced (Middleton, 2020). On March 13, 2020, the governor of Virginia, Ralph Northam, made an announcement that all Virginia K-12 public and private schools would close for two weeks, and then a few days later, for the remainder of the 2019-2020 school year, all K-12 private and public schools were closed. As the government put strict guidelines in place, such as 6 feet of social distance between students, mandatory mask wearing of all school personnel and students, and capping the number of people allowed in a group, education leaders made the decision to transition to online teaching for the beginning of the 2020-2021 school year.

History of Online Education

Distance education, distance learning, digital learning, e-learning, virtual learning, online learning, and remote learning are often used interchangeably. These terms are synonymous with two exceptions that expands in meaning. *Distance education* is defined (Schlosser & Simonson, 2010) as educational programs where the student, instructor, and educational institution are separated, but the student has access to the educational resources of the institution. It has also been defined as the learning group being separated from the instructor but telecommunications connecting the learner, resources, and instructor (Rakes & Dunn, 2015;

Rice, 2006; Schlosser & Simonson, 2010). *Distance learning* is instruction that is synchronous or asynchronous learning. These types of learning involve communication through computer technology requiring a personal computer, internet, and educational software (Rakes & Dunn, 2015). Mullen (2020) defines *asynchronous learning* as “self-paced learning in a text-based environment without the live presence of a teacher or the constraints of time, place, and classroom” (pg. 671). *Synchronous learning* is the opposite in which the learning takes places online but with live instruction from a teacher (Mullen, 2020).

Distance education began centuries ago but major changes occurred in the 1960s and 1970s at the University of Wisconsin with the Articulated Instructional Media (AIM) project (Wedemeyer & Najem, 1969). In the late 1960s, the University of Wisconsin developed a unique approach for distance learning.

A special sequence of interdisciplinary advanced courses in humanities, social studies, and sciences as an expansion of the school’s residence freshman-sophomore Integrated Liberal Studies Program. The courses were offered through a combination of quick sessions, off-campus seminars, and independent study, amplified by tele-lectures, radio-television, programmed material and mobile laboratories and libraries. (Wedemeyer & Najem, 1969, p. 13)

The AIM project was the “first successful attempt to apply a systems approach to an alternative instructional delivery mode that was experiencing rapid changes because of technological advancements” (Emmerson, 2004, p. 3). Technology continued to improve with the development and use of satellite communication by National Aeronautics and Space Administration (NASA) and satellite network use by the University of Alaska in the mid-1970s

(Emmerson, 2004). For the next 25 years, telecommunications, satellite communications, and direct broadband systems continued to be used for distance learning across the United States.

Technology integration in K-12 classrooms was minimal. Merchant et al. (2014) explained that K-12 classrooms used desktop online learning modalities in the early 1990s that included games and other simulations. Technology has advanced since the 1990s and the research showed the use of avatars by online users increased student engagement and satisfaction (Dickey, 2005; Hew & Cheung, 2010). The NCES (2018) reported over 55% of all students enrolled in public schools were scheduled for online courses. Students across the U.S. enrolled in online courses to take advanced placement classes, recover credit to prevent dropping out, or abide by school requirements for graduation. Roblyer (2006) found that “virtual programs are more complicated and reflect the challenge of creating effective learning environments, virtual or otherwise” (Roblyer, 2006, p. 32). The research reviewed (Fulmer & Turner, 2013; Gregoire, 2003; Hattie, 2015; Hattie & Zierer, 2019; Newmann, 1992; Roblyer, 2006; Sanzo et al., 2011) concerned distance education, teacher perceptions, and student participation for K-12 in a blended environment and for higher education.

The online learning modality has provided benefits for students, as shown in the research, from offering personalized learning opportunities, allowing students to recover credits from courses in which they were not successful, and providing interactive learning modes based on student needs (Barbour & Reeves, 2009; Rakes & Dunn, 2015; Rice, 2006; Watson, et al. 2004). Further the research described online learning as flexible to meet scheduling demands due to advance studies, health conditions, or other student issues (Barbour & Reeves, 2009; Rice, 2006). Rice (2006), also stated that virtual learning offers enrichment, remediation, or tutoring opportunities depending on student needs. Because of the pandemic, a rapid movement to online

learning and equal access to the curriculum by all students became the primary concern for education leaders.

Online Teaching

Although distance education and online education have existed since the early 60's in the U.S., there are gaps in the research and literature for K-12 education regarding how to teach online (Arbego & Pankake, 2010; Fulmer & Turner, 2013; Gregoire, 2003; Lewis, 2009; McFarlane, 2011; Rakes & Dunn, 2015; Rice, 2006; Schlosser & Simonson, 2010; Walker, 2019). Virtual Virginia, an online platform thru the Virginia Department of Education (VDOE), has offered courses for secondary level students since the early 1980s (Virtual Virginia, 2021). Through the Virginia Satellite Education Network (VSEN), Virtual Virginia enrolled students in advance placement courses and/or foreign language courses because of the lack of qualified teachers of these courses in several areas of the state (Virtual Virginia, 2021). K-12 online education has emerged to 21st-century learning as a legitimate form of education that is growing exponentially (Archambault & Crippen, 2009). As of 2011, Kennedy and Archambault (2012) indicated that school districts in all 50 states were offering at least one online course and completion of an online course was considered a graduation requirement. In March 2020, because of the global pandemic, teachers in the U.S. were trying to determine how to transform their face-to-face classrooms, lessons, and activities to their online formats. Currently all elementary and secondary students, in the United States and across the globe, may enroll in different Advanced Placement, foreign language, core classes, computer science, and health and physical education courses (Virtual Virginia, 2021).

In the U.S., state departments have teacher certification programs and processes, such as student teaching requirements, subject content exams and pedagogy tests, for teachers in K-12

public schools. NCATE requires that teachers have skills and knowledge to include social justice, responsibility, academic honesty, professionalism, fairness, equity, caring, and empathy (NCATE, 2021). Classroom management, motivation, teaching strategies, and specifically designed instruction are other skills that effective teachers possess to maintain an effective learning environment (NCATE, 2021).

Studies have concluded that teacher beliefs and perceptions influence reforms, curriculum development, classroom instruction, student ability, and content topic importance (Haney et al., 2002; Guskey, 2002). Teachers perceive instructional strategies differently than other stakeholders, but the pedagogy for online teaching is based on current traditions of the face-to-face classrooms (Archambault & Crippen, 2009). In the research and according to NCATE, skills and knowledge required for online teaching are not that same as they are for face-to-face teaching (Kennedy & Archambault, 2012). An elementary teacher reflected a great challenge was “the lack of face-to-face time with students, which resulted in the inability to interpret how the students were feeling or think about certain tasks” (Salerni, 2021, p. ii). Online teaching is significantly different from face-to-face instruction and requires different professional development for teacher (Dolighan & Owen, 2021).

Effective instruction has been referred to as challenging instruction or challenging activities. This type of instruction has been found through research as beneficial and successful for the student learning process (Baumeister, 1992; Fulmer & Turner, 2013). *Challenging* refers to tasks that match or are slightly beyond the student’s ability, and adjusting the amount of work is not considered a challenge for students (Baumeister, 1992). When students have opportunities to construct knowledge rather than regurgitate information, the teacher has engaged them in a challenging activity (Fulmer & Turner, 2013; Newmann, 1992). Teachers perceive that

implementing challenging instruction is not possible for procedural content (Fulmer & Turner 2013; Gregoire, 2003; Newmann, 1992). Self-confidence, motivation, and self-beliefs of learning strategies may inhibit teachers from implementing new learning strategies. Haney et al. (2002) “determined that relationship patterns existed between teacher beliefs and classroom practices” (p. 172).

Burdens on teachers evolve from numerous variables, including, exclusive expectation tests, perceptions, parents, and self-viability. Research has shown that teachers are apprehensive to integrate technology into the classroom because of their own insufficient knowledge about technology, resistance to change and innovation, and lack of support from education leaders (Dolighan & Owen, 2021). Math instructors are more averse to executing new strategies if they have deficient knowledge and identify a lack of student understanding from assessment responses (Santagata, 2009). Teachers struggle to implement new instructional strategies because of their own understandings of certain concepts (Gregoire, 2003). According to Picciano and Seaman (2007), educators believe that online learning is not as effective as face-to-face learning.

Technology

During the Covid-19 emergency transition to the online modality, technology became a necessity for teachers and students. However, classrooms have not had full technology integration because of challenges to teachers and education leaders (Bingham, 2021). The research reviewed showed teachers, who use technology in the classroom, only support traditional or face-to-face classroom practices and not online teaching (Cuban et al., 2001). The inexperienced teachers were more open to integrating technology but lack the training or resources to fully implement the strategies (Cutri et al., 2020; Tondeur et al., 2017) The experienced teachers were likely to resist the change due their beliefs that their practices they

have used for many years are more effective than a new instructional initiative (Orlando, 2014). Bingham (2021) explained in her research that leadership support and teacher integration of technology that “aspects of distributed leadership, including professionalization, shared leadership, and structured collaboration helped facilitate schoolwide technology integration” (p.12). In the transition, to online teaching, educators were scrambling trying to determine how students would have access to the curriculum and communicate with teachers.

In the 2020-2021 school year because of the Covid-19 pandemic, student equity and equal access to the curriculum became the focus of education leaders (Northam, 2020). Distance education or online teaching was the only way education leaders and teachers could provide equal access to the curriculum for all students. Although state policies follow the non-discrimination laws, the research explained that states have difficulty in addressing the equal access pieces of online education programs (Watson et al., 2005). The report further described some states have addressed inequities for online learning but not for equity regarding individualized student needs. Watson et al. (2004) further reported that statewide programs provide some accommodations in the online instruction; however, there are no guidelines or policies specifically for the online learning modality.

Teacher Self-Efficacy

Albert Bandura’s self-efficacy theory describes *self-efficacy* as the confidence in one’s ability to influence one’s motivation, behavior, and social environment (Bandura, 1986). *Teacher self-efficacy* is defined as “a teacher’s own beliefs in his/her ability to perform tasks” (Brinkmann, 2019). Research studies have concluded teachers’ perception regarding how much he or she can accomplish affects student learning. This is because of the impact the teacher’s viewpoint has on instructional strategies and choices (Guskey, 1988; Ross, 1998).

In time, the positives, and negatives, of the face-to-face or online classrooms lie with the teachers. Studies have indicated there are relationships between teacher efficacy and classroom environments that have positive, high-achieving atmosphere (Wolters & Daugherty, 2007; Ryan et al. 2015). Fackler and Malmberg (2016) completed an empirical study that concluded a relationship between teacher efficacy and student achievement.

In an online classroom, examining teachers' level of self-efficacy increases the importance of understanding the value of teachers' performance. Teachers' direct behaviors affect abilities to achieve different education goals and teachers demonstrate determination and will power to overcome adversity (Bandura, 1977). Teacher self-efficacy is affected by his/her experiences, abilities, and perceptions. Han and Patterson (2020) explored in a case study a teacher's curriculum design processes, knowledge, and beliefs of online teaching. Their analysis showed how a teacher's reflective practice, beliefs, and technology knowledge affected online teaching success for that teacher. The research concluded teacher knowledge and skills are a critical factor in creating lessons online, and those lessons depend on the teacher's knowledge of technology as well as his/her perceptions in the online curriculum being effective (Han & Patterson, 2020). Cutri et al. (2020) concluded that if teachers are willing to try new things could be evidence that teacher efforts in a rapid transition to online teaching in an emergency such as Covid-19 would be positive and successful. School policies, administrators, teacher goals, parents, and colleagues can also affect a teacher's sense of self-efficacy. Another conclusion from Cutri et al. (2020) was teachers felt as though they became first year teachers again. One teacher explained the quick transition resulted in the lack of feeling prepared. The ability to understand how teachers' perceptions affect student participation and attendance involves observing the online classroom environment. Teachers lacked technology knowledge and how to

teach online synchronously so the result was less instruction and more independent work for students (Cutri et al., 2020; Hans & Patterson, 2020). In the quick transition to online teaching during an emergency lessens the readiness of teachers in the ability to effectively teach and emphasizes the importance of education leader support.

Educational Leadership

Principal responsibilities have changed from those of an operation manager to those of an instructional leader just as classrooms have changed from one-room schoolhouses to 21st-century middle schools and science, technology, engineering, and mathematics (STEM) academies. Accountability in public schools was linked to the No Child Left Behind (NCLB) Act of 2001 for student performance. According to Sanzo et al. (2011), “the role of the principal in ensuring the schools continually meet AYP [Adequate Yearly Progress] and state accreditation standards is vital because it is the school leader who sets the tone for all activities in the school” (p. 32). Change begins with the building principal. Studies have shown that education leaders who are transformational leaders have more success with pedagogic innovations because they can influence teacher beliefs, strategies, and improve the willingness to change and accept change (Fullan, 2001; Kass, 2013). It is essential for a leader to alter his or her beliefs and educational designs for different instructional modalities when teachers look for direction, for student success, and in emergencies such as a pandemic (Fullan, 2001; Masry-Herzallah & Stavisky, 2021).

Leadership affects teachers and builds culture. Much research reveals that principal leadership strongly shapes and influences school outcomes significantly but indirectly (Sebastian et al. 2019). Kass (2013) noted that an effective *transformational* leader is expected to applaud and stress accomplishments, boost morale, encourage teacher confidence, earmark funds, allow

teacher flexibility in the curriculum, promote a learning atmosphere, and motivate the staff to work together to achieve a common goal. Leithwood et al. (2020) identified the four categories of core leadership that have considerable effects on teacher performance: (1) setting directions, (2) building relationships and developing people, (3) developing the organization to support desired practices, and (4) improving the teaching and learning program. Parkes and Thomas (2007) described that these practices allow schools to move to effective school leadership practices from a cause-and-effect approach found in many studies. Sanzo et al. (2011) explained that the first category of *setting directions* simply means principals carry the burden to motivate colleagues and principals are the most influential people (p. 33). According to Leithwood et al. (2020), the principal creates the high-performance expectations as well as communicates the school's vision and goals. The second category is building relationships and developing people, which is the most critical. Sanzo et al. (2011) revealed that all principals in the study expressed that providing meaningful professional development and support to their faculty is essential. In one study, an education leader said he or she needed to “sort through my emotions before I could connect with the team of teachers, I am responsible for leading” (Cash et al. 2020).

Leithwood et al. (2020) indicated that motivated people know what they want, and search for ways to accomplish it. The researcher explained

“People are motivated by what they are good at. Proficiency and experiences are the most powerful sources of efficacy. So, building capacity leading to a sense of mastery is highly motivational. Principals must build trusting relationships with and among staff, parents and students” (p. 8).

In *developing the organization*, the third category, the research supported the importance of collaborative cultures to help increase student achievement (Kass, 2013; Leithwood et al.,

2020; Little, 1993; Sanzo et al., 2011). Shared leadership and enabling staff members to use power creates a successful structure within a school. Sanzo et al. (2011) expressed that “developing and sustaining collaborative cultures typically requires leadership initiative. Restructuring and distributing leadership for tasks and increasing teacher involvement in decision making takes time and wise judgement from school principals” (p. 36).

The last category, *improving the teaching and learning program*, focused on school improvement and is more indirect (Printy, 2010). Leaders have a duty to provide staff with the appropriate instructional program and curriculum, provide instructional support, and monitor student learning and the school improvement progress (Leithwood et al., 2020). One study showed that at the beginning of the Covid-19 pandemic when school closures happened that 66% of Virginia based leaders did not show a concern of school closures. Education leaders explained that at the closing of schools during the Covid-19 pandemic, three priorities were “learning which included technology, communication, and supporting faculty, staff, and students” (Cash et al., 2020). School principals’ positions are challenging, but each provides leadership that affects every teacher and every student.

Policy and Online Learning

Education reform is defined as “any planned changes in the way a school or school system functions, from teaching methodologies to administrative processes” (Tienken, 2020). The U.S. Department of Education’s Office of Educational Technology published the National Education Technology Plan (2004) that is “leading the way in efforts to promote change in traditional views in the K-12 environment” (Rice, 2006, p. 428). Seven objectives were proposed by Rice (2006) to help implement the change in technology views: (1) strengthen leadership, (2) consider innovative budgeting, (3) improve teacher training, (4) support e-learning and virtual

schools, (5) encourage broadband access, (6) move toward digital content, and (7) improve achievement through student data management.

With an emphasis on online education, the National Education Technology Plan, recommended that states, districts, and schools: (1) provide every student access to online learning, (2) enable every teacher to participate in online training, (3) encourage the use of online learning options to meet the NCLB requirements, (4) explore creative ways to fund online learning opportunities, and (5) develop quality measures and accreditation standards for online learning that mirror those required for course credit (Rice, 2006). Twenty-two states and local-level school divisions have focused on existing virtual school or distance education programs prior to the pandemic (Watson et al., 2004). California and Florida were the two states that had the largest statewide programs as of a study directed and funded by the Colorado Department of Education (CDOE). According to the CDOE study, the role of states and state education agencies were different among the states; however, each state must address the equity and access of online programs for all students. This study also noted that educators view online programs may not meet the NCLB requirements, but it was too early in online education for K-12 public schools to determine if the requirements are, being met (Watson et al., 2004). Watson et al. (2004) concluded that in the development of online learning programs for the K-12 environment, only a few states have policies established. In most cases, “online learning is little understood by policymakers” (Rice, 2006, p. 429). Policymakers have a duty to collaborate with educators to understand online learning so students may obtain a quality experience in the online modality.

Summary

The topic of this literature review was teacher perceptions and experiences regarding how education leaders are supporting teachers to teach, effectively in the online environment.

Learning is not just about studying behaviors or memorizing information; it is encouraging learners to think deeply about their studies and about educators making the learning as visible as possible (Salinger, 2016). Much of the research reviewed on traditional face-to-face learning discussed the meaningful relationships among the persons in the classroom and the effective learning strategies needed in a math classroom to allow students to embrace the learning process. As a result, students become self-motivated and highly confident learners who can solve difficult problems in the future. This literature review revealed some of the background of traditional and online teaching and focused mostly on teacher perceptions and attitudes towards online teaching. Based on the searches conducted for this paper, most of the research for distance education and online teaching focused on higher education.

Chapter 3: Methodology

Introduction

The research focused on teacher perceptions and experiences of leadership support to teach effectively online in an emergency. The purpose of this study was to investigate middle school teachers' perceptions and experiences of how education leaders provided support for them in the transition to online teaching during a global pandemic. The research question was how did education leaders support middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic?

The study is qualitative due to the focus on understanding the perceptions and experiences of middle school teachers in the transition to online teaching during a global pandemic. The qualitative analysis conducted, by the researcher, through demographic surveys and virtual interviews, of middle school teachers selected purposefully based on specific criteria. Teachers identified were a 6th through 8th grade teacher, taught English, mathematics, science, or social studies during the pandemic, taught at least one class online during the Covid-19, and was not a student teacher during the 2020-2021 academic school year. This dissertation addresses the effectiveness of education leadership support for teachers in the transition to online teaching during a global pandemic.

The methodology designed, was to investigate English, mathematics, science, and social studies teachers' perceptions and experiences of leadership support to teach effectively online during a global pandemic. The research question developed was to examine teachers' perceptions and experiences of leadership support of teachers to teach effectively in an online environment. This chapter describes the design of the research, including a description of the setting and the sample selection, the data collection process, the research timeline, the

instrumental design and validity of the data, the data management, and the data analysis procedure.

Research Design

This study was a qualitative research approach analyzing surveys and interviews. Qualitative research uses inductive and deductive approaches to analyze data and establishes common patterns and themes that will not be limited to one single conclusion (Creswell & Poth, 2018). The qualitative research method, for this study was chosen because it allows a better understanding of the teachers' experiences and perceptions of how education leaders provided support for the transition to online teaching during the pandemic and how education leaders supported English, mathematics, science, and social studies teachers to effectively teach online. The researcher chose the school division, the school, teacher participants, conducted the surveys and interviews, and completed the data analysis. This allowed the researcher to develop a better understanding of the middle school teachers' perceptions and experiences of education leader support in the transition to online teaching.

Study Setting

The middle school selected was in one Virginia school division in which the teachers transitioned to online teaching during a global pandemic. The researcher wanted to include a school division that sought to continue educating students in the online learning modality during the Covid-19 pandemic. The sample includes middle school teachers who taught English, mathematics, science, or social studies in the academic school year 2020-2021. This middle school was selected because of the implementation of online instruction for the school division in grades K-12. The middle school has grades 6 through 8th with 22 English teachers, 23 math teachers, 22 science teachers, and 23 social studies teachers.

Selection of Participants

Participants were intentionally selected for the study based on specific criteria known as purposeful sampling (See Table 3). The participants were purposely selected from the survey data based on content taught, grade level assigned, number of years taught, and if they taught at least one online class during the 2020-2021 academic school year. The teacher participant included English, mathematics, science, or social studies teachers, taught grade levels six through eight, taught at least one class in the online modality during the Covid-19 pandemic, and not a student teacher during the 2020-2021 academic school year. (Creswell & Poth, 2018).

Table 3

Selection Criteria for Participation in the Study

Demographics	Selection for Criteria
Content area of teacher	English, mathematics, science or social studies
Grade level	Sixth through eighth grade
Years of teaching experience	Classroom teachers may be in the first year of teaching (no student teachers)
Teacher internet access	Access at home, school, or both
Technology efficacy	Novice to expert
Method of teaching when school began	In person only; virtual only; blended in-person students and virtual students

All 90 middle school teachers were sent an email requesting their participation in the study. A link to the Qualtrics survey was included in the email. Teacher selection for interview participation was made after the analysis of the survey and determined that the respondents met the criteria in Table 3. The researcher received fifteen surveys and each respondent received an email requesting their participation in the virtual 1:1 interview. Of the 15 survey respondents, 6 teachers volunteered to participate in the virtual one-to-one interviews. Two math teachers, two English teachers, one social studies teacher, and one science teacher participated in the interviews. Of these teachers, one taught sixth grade, two taught seventh grade, and three

taught eighth grade. The researcher completed 6 1:1 virtual interviews based on the teacher schedules.

Data Collection

The study was conducted at a middle school in southwest Virginia. With permission from the superintendent (Appendix B), an email (Appendix C) with an informed consent to participate sheet (Appendix D) and an initial survey (Appendix E) were sent to the 90 middle school teachers, who taught English, mathematics, science or social studies, in a Virginia school division. These survey data were used to determine the characteristics of the teachers such as grade level and content area taught level of technology, and learning modality in which the teacher taught during the pandemic. If a teacher did not respond to the initial request, a reminder email was sent seven days after the first request (Appendix F). The teachers were asked to voluntarily complete the survey of which fifteen responded. The fifteen survey respondents received an email request (Appendix G) from the researcher for voluntary participation in a one-to-one interview to share their perspectives and experiences of leadership support during the transition to online teaching. The interviews allowed teachers to speak freely about their perceptions and experiences of leadership support for the transition to online teaching during a pandemic and how education leaders provided support to middle school teachers to effectively teach online. Creswell and Poth (2018) summarized the process for conducting interviews, and the researcher used the following process for interviews for this study:

- Used, with permission, the open-ended questions created by a researcher, (Purnell, 2012) that have been rephrased to fit the topic.
- Identified the interviewees based on survey respondents (purposeful sampling)
- Recorded interviews for data collection using audio recording via Zoom.
- Obtained verbal consent to participate from the volunteer interviewees.

- Designed and used an interview protocol to guide interactions.
- Completed one-to-one interviews virtually via Zoom.
- Transcribed interview responses using the automatic transcription feature of Zoom.

Prior to the survey and one-to-one interviews, a pilot test with four teachers was completed to clarify and frame the questions of the research interview tool (Creswell & Poth, 2018). One case study suggests using a pilot test to improve data collection plans and create pertinent lines of interview questions (Yin, 2014). Data were collected to investigate the teachers' perceptions and experiences regarding how education leaders provided support for the transition to online teaching during a global pandemic. After completion of the interview, the interview responses were transcribed using the Zoom automatic transcription feature. All identifying factors were removed and each participant was given a four-digit code alias. Transcripts were provided to each of the participants by the researcher to verify their record of responses. After verification of the transcribed interview responses, the researcher followed the data analysis procedures. Deductive coding was used while reading transcribed interviews from each participant. A data summary table (Appendix H) was created using Microsoft Excel downloaded from Google Sheets to help organize information from transcribed interviews. Each question is listed with all responses of each teacher color coded under each question. Coding continued in the data summary form to aid with organization and data analysis. This process allowed the researcher to make connections among common themes and synthesize the data to complete a within-case analysis for the research question to be answered.

Study Approval Process

Prior to beginning the study, The Human Research Protection Program (HRPP) through the Virginia Tech Institutional Review Board (IRB) approved the research prior to conducting

the study in 2021 (Appendix I). The Collaborative Institutional Training Initiative (CITI) (Appendix J) and the Basic Responsibility Conduct of Research (Appendix K) were completed in 2019 and 2021, respectively. After these approvals and permission granted by the principal investigator, the data collection process began.

The division superintendent was contacted to obtain written permission to conduct the study at the selected school after successful completion of the prospectus defense. The email described the purpose of the study and explained the data collection process. Upon approval of the division superintendent, an introductory email including the link to the survey and informed consent sheet was sent by the researcher to the English, mathematics, science, and social studies teachers within the school. The survey instrument was rewritten with permission from Purnell's (2012) research. The written permission was obtained via direct messaging in Linked In. A reminder email was emailed a week later to remind teachers of the study. Teacher responses were collected by the researcher. An email was sent, by the researcher, to the survey respondents requesting participation in a one-on-one, virtual interview.

A virtual interview was scheduled with a specific time and date with the researcher and the survey respondents requesting participation in the one-to-one interviews. The interview protocol (Appendix L) and interview questions (Appendix M) were used. The interview instrument was also rewritten with permission from Purnell's (2012) research. Prior to asking the first interview question, the interviewee was asked for verbal consent to participate in the virtual interview. The verbal consent was documented using the verbal consent form (Appendix N).

After each interview, the researcher downloaded the Zoom audio recorded transcript and sent the transcription and verification form (Appendix O) via email to each interviewee.

After receiving the interview transcription consent from the interviewee via email, the researcher analyzed the data following the data analysis procedures. If the transcription consent form was not received by the teacher, permission was granted, as approved by the IRB, for use of the data by the researcher in the study.

Instrument Design and Validity

The first step in creating a data collection instrument is developing an appropriate, valid, intricate, and effective instrument. The survey instrument was recreated, in alignment with the topic, by the researcher with permission from Purnell (2012), who created the instrument used in her research study titled *Exploring Teachers' Perceptions of Professional Development in Virtual Learning Teams*. The survey focused on different grade levels, teacher specializations, technology experience level, and whether the participant attended professional development prior to the beginning of the academic year of the study. The survey responses provided data that showed all study participants are English, mathematics, science, or social studies teachers, in grades 6 through 8, the level of technology expertise, and who taught at least one course online during the Covid-19 pandemic.

Studies have shown that interviews are reliable and valid, but also include unique responses from the participants (Creswell & Poth, 2018). Survey respondents were sent an email asking for participation in the one-to-one interviews. The interview data were used to determine the patterned themes of teacher perceptions and experiences of how education leaders provided support of the transition to online teaching during a global pandemic.

To establish validity as per Creswell and Poth (2018), through interviews the researcher used an interview protocol as well as created questions that allowed the interviewee to speak openly and freely about his or her perceptions and experiences. Triangulating the three data

sources (multiple interviews, identifying common themes, and reflection journal based on the interviews), validity, and credibility of the data were increased. Triangulation also helped to make certain biases, which may interfere with the outcomes when using only a single method, to be reduced. The virtual one-to-one interviews, conducted by the researcher, were the primary source of data collection for the analysis.

Data Management

Steps were taken to make certain confidential and ethical treatment of the data collected. The researcher removed all teacher identifiers and assigned an alias for each participant using a color and four-digit code combination. The audio recordings of verbal consent and the interviews are saved on the researcher's laptop, which is password protected and accessible to principal investigator and researcher only. All the data collected are stored and secured on the Virginia Tech Google Drive and Microsoft 365. If a participant volunteered and consented to be in the study, the participant could withdrawal from the study without consequences. The participant could have also declined to answer any of the questions asked and remained in the study. All audio recordings of the interview were deleted when the researcher received the interview transcription consent form or one week after the consent form was due. Any other documentation will be deleted and/or shredded upon successful completion of the dissertation defense.

Data Analysis

The following process was used to organize and manage the data, find common themes among the interviews, and develop descriptions of the participants' perceptions and experiences regarding how education leaders provided support in the transition to online teaching during a

global pandemic. The following illustrates the steps of the data analysis procedure the researcher used:

- Created and organized data files (Using Qualtrix and Google Sheets).
- Read through text, made notes, & formed codes (Codes to protect identity and privacy of the participants).
- Synthesized the data by describing the personal experiences and perceptions of the participants.
- Identified the common themes within the data.
- Determined what was important and what was to be learned.
- Selected what information to report.

The researcher received the survey responses and conducted one-to-one interviews with each survey respondent. Data from the interviews were entered into a Google Sheets spreadsheet and only identified by using the given alias of a color and four-digit code combination. The interview data analysis provided the researcher with the participants' views based on their perceptions and experiences of leader support for teaching online during a pandemic and participation in professional development provided by the division to assist teachers in their transition to online learning modalities during a pandemic. Audio recordings of each interview and the interview transcriptions were assigned the same four-digit code from the data spreadsheet. The transcriptions and recordings were saved on the researcher's Virginia Tech Google Drive. The virtual interviews responses with participants were transcribed using the automated transcription of Zoom. Deductive coding was used while reading anonymous transcribed interviews from each interview participant. The codes were color-coded and the frequency of each code from the data was recorded for analysis. Using Microsoft Excel downloaded from Google Sheets, a data summary table was created to organize information

from transcribed interviews. Interview responses for each teacher are listed under each question using the color and four-digit code assigned. The coding process allowed the researcher to identify common themes and synthesize the data to answer the research questions. The analysis led to summaries of findings with supporting evidence from the interview responses to answer the research question. Inferences and ideas were made from the findings, and suggestions for education leaders, implications, action, and policy are included in this study.

Research Timeline

Table 4 describes the researcher's timeline for the study.

Table 4

Timeline for Completing the Proposal and Dissertation

Anticipated Date	Actual Date	Phase	Plan
05/2021	05/2021	Human Research Protection Program (HRPP) Submission	Submitted IRB protocol to the HRPP
06/2021	05/2021	Obtain written permission from the school division superintendent to conduct the research study	Contacted the school superintendent via email to request written permission
06/2021	06/2021	Part 1 Data Collection	Sent email to the English, mathematics, science, and social studies teachers that included the survey link
06/2021	06/2021	Part 2 Data Collection	Sent e-mail to survey respondents to request participation in one-to-one interviews
07/2021	07/2021	Part 3 Data Collection	Scheduled interviews with survey respondents; Conducted interviews virtually in a quiet location and audio recorded
07/2021		Data Analysis	Transcribed interviews with codes, classified codes into common themes and interpreted the data
12/2021	01/2022	Dissertation Defense	Prepared final presentation
05/2022	05/2022	Graduation	Walk the stage & celebrate

Summary

Chapter 3 provided an outline of the research design, study setting, selected participants, data collected, instrument design and validity, and data management and analysis. The methods included a survey and interviews as techniques of collecting data. A qualitative methodology was chosen for this study using interviews to gain understanding of teachers' perceptions and

experiences of education leader support in the transition to online teacher during the Covid-19 pandemic. Virtual interviews were recorded and transcribed through the automatic Zoom feature. Deductive coding was used to analyze the data collected from the interviews to determine common themes to answer the research question.

Chapter 4: Data Analysis and Findings

Introduction

The purpose of this study was to investigate middle school teachers' perceptions of how leadership provided support for them in the transition to online teaching during a global pandemic. The research question was how are education leaders supporting middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic? Analysis of the teachers' experiences and perceptions may help education leaders show support for teachers in the development of virtual course curriculum and instructional strategies for the core subject areas. Fifteen middle school teachers completed the survey and 6 of the 15 scheduled and participated in the 1:1 virtual interview.

The division superintendent gave approval for the researcher to invite middle school English, math, science, and social studies teachers within the division to participate. The researcher sent a demographics survey to the participants. When the completed surveys were received, the respondents received an email from the researcher asking for their voluntary participation in virtual one-to-one interviews. With verbal consent from each participant, the researcher conducted the virtual interviews via Zoom in July of 2021. Interviews were audio recorded only with verbal consent from each participant and transcribed using the Zoom transcription feature. All transcriptions were saved into the researcher's Google Drive account provided by Virginia Tech. The participants verified the interview transcriptions and the researcher began the analysis process. Interview questions and responses were downloaded into a Google Sheets document to allow for organization of the data. All transcriptions were saved into the researcher's Google Drive account provided by Virginia Tech. Interview transcriptions were saved with a color and four-digit code combination to remove any identifying information of the

participants. Each interview question was organized with the responses of the participant and the analysis of the data were completed through deductive coding. Common themes among the participants' responses were developed. Of 90 teachers, 15 completed the surveys which resulted in a 16.67% response rate. Of the 15 survey respondents, 6 teachers participated in a one-to-one virtual interview.

Survey Analysis

Tables 5 and 6 display the results from the survey.

Table 5

Survey Responses

Subject	Grade	Years	Attend PD	Efficient PD	Support Level Principal Transition	Support Level Grade-level Admin in Transition	Expertise Level Canvas beginning 2020-21 year	Principal knowledge of Canvas to provide to support	Grade-level Administrator knowledge of Canvas to provide support
English	7 th	16	Yes	No	Not a lot	Some	Intermediate	No	Some
Science	8 th	7	Yes	Yes	A great amount	A great amount	Intermediate	Some	Some
Math	7 th	9	Yes	Yes	Not a lot	Not a lot	Intermediate	No	No
Social Studies	7 th	30	Yes	Maybe	Some	Some	Intermediate	Some	Some
Social Studies	6 th	25	Yes	Maybe	A great amount	A great amount	Intermediate	Yes	Yes
English	8 th	25	Yes	Maybe	Some	Some	Intermediate	Some	Some
Math	8 th	24	Yes	Maybe	Not a lot	Some	Intermediate	No	Some
English	7 th	22	Yes	Yes	A great amount	A great amount	Intermediate	Some	Some
Math	7 th	13	Yes	No	Some	Some	Intermediate	Some	Some
Math	7 th	9	Yes	No	Not a lot	Not a lot	Intermediate	No	No
Math	6 th	3	Yes	Yes	A great amount	A great amount	Novice	Yes	Yes
English	7 & 8 th	14	Yes	Maybe	Some	Some	Intermediate	No	No
English	6 th	17	Yes	Yes	A great amount	A great amount	Intermediate	Yes	Yes
Math	8 th	18	Yes	Yes	Some	Some	Intermediate	Some	Some
Math	8 th	17	Yes	Maybe	Some	Some	Intermediate	Some	Some

Table 6*Survey Results Continued*

Technology skills improved at the end of the school year	Difference in support from Principal & Grade-level administrator between in-person & online teaching	Principal gave enough support to the teacher to effectively teach online	Grade-level administrator gave enough support to the teacher to effectively teach online	Did you receive enough PD to teach online	Do you want additional PD to teach online
A lot	Yes	Yes	Yes	No	Yes
A little	No	Yes	Yes	Yes	No
A moderate amount	Yes	Yes	Yes	No	No
A lot	Yes	Yes	No	Yes	No
A great deal	Yes	Yes	Yes	Yes	Yes
A little	Yes	No	No	No	No
A lot	Yes	No	Yes	Yes	No
A lot	Yes	Yes	Yes	Yes	Yes
A lot	No	Yes	Yes	No	Yes
A great deal	No	No	No	No	No
A lot	Yes	Yes	Yes	Yes	Yes
A great deal	Yes	Yes	Yes	Yes	Yes
A lot	Yes	Yes	Yes	Yes	Yes
A lot	Yes	Yes	Yes	Yes	Yes
A lot	Yes	Yes	Yes	No	Yes

The survey responses included subject taught, years of experience, expertise level of technology, perceptions of the amount of support provided from education leaders, efficiency of the professional development, and the need or want for additional professional development. Five English, seven math, one science, and two social studies teachers completed the survey. The average amount of years in teaching was 16.6 years with three years as the lowest and 30 years

as the highest years of experience. Of the 15 survey respondents, 6 teachers participated in a one-to-one virtual interview. Table 7 shows the grade level, content subject to which the interviewed teachers were assigned for the 2020-2021 school year, and the four-digit code assigned to each teacher participant by the researcher.

Table 7

Teacher Grade Level, Subject Area Taught of Interviewees, and Assigned Code

Grade	Subject	Four-digit code	Color code
6th grade	Social studies	5784	Green
7th grade	English	3505	Red
7th grade	Math	1056	Purple
8th grade	English	5636	Yellow
8th grade	Math	4952	Blue
8th grade	Science	7689	Brown

Interview Question Analysis

Interview Question 1. *How do you define support?*

Each interviewee shared his or her personal *definition of support*. Table 8 shows the common themes for this question.

Table 8*Common Themes for Support Definition*

Define support	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Listening to teachers' issues, concerns & suggestions	X	X	X		X	X
Being Positive	X	X	X	X	X	X
Assisting teachers/making parent phone calls	X	X	X	X	X	X
Providing realistic timelines	X	X		X	X	X
Checking on teachers	X	X			X	X

Listening to teachers' issues, concerns, and suggestions, being positive, helping when teachers have a need such as making parent phone calls, providing realistic timelines, and checking on teachers each week emerged from responses in defining support. One teacher explained, teachers needed someone to listen to what they have to say and not try to fix everything (5636). Another teacher expressed that support is listening to concerns or personal struggles because of all of the changes (3505). Two teachers discussed that they just wanted someone to listen to their concerns, provide assistance if needed or listen to the teacher suggestions and consider implementing the teacher ideas (7689, 1056).

Five of the participants shared that administration should be positive when communicating any information. One teacher added when communicating with teachers about

changes or expectations, leaders should be positive and not condescending. One teacher voiced teachers are human. She stated that teachers are experiencing the pandemic as well and leaders should not forget about them. Another teacher shared teachers have personal lives and families outside of school and leaders must understand the need for balance between school and home (3505). Another teacher expressed that most of the education leaders were positive during the transition. She said: “teachers need positive reinforcements when teachers are overwhelmed” (5784). The other three teachers expressed positive affirmations in emails or a thank you helps lessen the stress for teachers.

All the teachers expressed the administrators were very helpful especially when parent contact was needed. Teacher 3505 said, “When teachers see the administrators stepping up or stepping in when teachers need assistance, which is very helpful.” Another said when administrators are just there for us that is helpful (7689). A third teacher explained that when administrators find means of purchasing and implementing different resources and programs is very helpful (3505). The fourth teacher voiced that when leaders give you the necessary tools to be successful is helpful.

Five of the 6 teachers expressed that providing realistic timelines for learning and implementing the processes is included in the definition of support. Teacher 3505 explained that teachers need time to learn and implement the new initiatives that before, during, and after the pandemic. She further shared that after the professional development for Canvas, teachers did not have enough time to learn how to develop assignments or assessments to teach the students how to navigate in the program. Another explained when someone gives you the time you need to be successful is part of supporting teachers (4952).

The last theme for the definition of support was checking on teachers. One teacher (3505) said that administrators checking on teachers regularly regarding stress or other issues provides support. Another specified that when an administrator “just stops by the room and asks how are you shows that the administrators are supporting teachers” (1056). Another expressed when administrators are just there in the hall and asks if there is anything the teacher needs is supportive (7689).

Interview Question 2. *Share your experiences with the online professional development, the Canvas Hike.*

Interviewee responses were individual experiences and perceptions of the Canvas Hike professional development provided by the school division. Common themes of the Canvas Hike were that it was *informative and helpful, organized, administration needed the training, and the need for teacher interaction during the training*. Table 9 shows the common themes that emerged.

Table 9*Themes of Teacher Experiences with the online professional development, the Canvas Hike*

Experiences perceptions of professional development	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Informative & helpful		X	X	X	X	
Organized		X	X	X	X	
Administration needed to be trained	X	X			X	
Teacher interaction during the training was needed	X	X	X	X	X	X

One teacher voiced the Canvas sandbox was extremely helpful and allowed for teachers to build a shell for classes the ability to share with my colleagues (3505). Another stated that having the training for Canvas over the summer allowed her to be ahead of the game when school started (4952). Two teachers voiced that the Canvas hike was informative and helped them to organize lessons for the upcoming school year (5784, 5636). Three teachers expressed that the administrators should have attended the professional development. One teacher voiced that if the one trainer was not available then the only people to ask are administrators and they were not always knowledgeable. Another teacher added that some of the administrators did not know how to log into Canvas during the teacher training (5784). Another mentioned although administrators were there to help, they still could not answer questions (1056).

All the teachers shared that the training should have been face-to-face for all teachers. One teacher said, “When teachers are in the training together, we could discuss and answer

questions for each other” (3505). Another explained teacher interaction and collaboration in-person is necessary (1056). A third teacher explained because she was not tech savvy that having the professional development on Canvas in person for all, would have allowed her to have a better support system and receive help from colleagues (7689). One teacher did not feel as though face-to-face training was considered when the online training for teachers was developed (5784). She further said, “Because of Covid-19, everyone was required to stay home” (5784). Although the professional development was in the summer, teachers were overall very positive about attending, learning, and using the learning management system, Canvas.

Interview Question 3. *Share with me your experiences with online teaching during the pandemic.*

Participant responses for question 3 were remarkably similar. Table 10 displays the themes of teacher experiences and perceptions when discussing teaching online during the a crisis. Themes that emerged were that *students did not attend the online class sessions, some teachers disliked online teaching, teaching online from home was difficult, and only two participants enjoyed online teaching.*

Table 10

Themes of Teacher Experiences of Teaching Online During a Pandemic

Experiences/perceptions of online teaching	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Low student attendance	X	X	X	X	X	X
No penalty for student absences	X	X	X	X	X	X
Hated online teaching			X	X	X	X
Difficult to teach online at home		X	X		X	X
Enjoyed online teaching	X	X				

All the teachers shared that the students did not attend the online class sessions consistently. All interviewees indicated that the students who did not attend the online teaching sessions were behind in learning and their grades were significantly lower than students who did attend the online sessions. Two expressed students did not interact nor did they watch the teaching videos that had created and posted (1056, 4952). Three teachers shared their disappointment that students did not attend virtual class sessions and students received no consequences for absences (3505). Another teacher explained her class attendance for online classes was extremely low, but she stated that she had the perception that some were overwhelmed, did not have the parental support, and did not have internet at home to participate (5784). Teachers cannot assess appropriate mastery of the content if students do not attend classes.

Four of the teacher participants disliked teaching online. One voiced that online teaching was the hardest thing she has done in her 18 years of teaching. She further explained that the school year 2020-2021 was the worst year in her teaching career and felt deflated and that the effort she put into her teaching was not good enough (4952). Another explained that online teaching made things more difficult (3505). A third teacher expressed that the only reason she disliked the online teaching was that there was not enough time to train or teach students how to be online learners. She further expressed that students must have time and training to learn a new process and because of the pandemic the online modality was thrown at teachers and students (7689). The last teacher expressed relationships are particularly important especially for middle school students and when students were not allowed to come to school because of Covid-19, the teacher-student, and student-student relationships suffered.

Four teachers expressed that teaching online from home was very difficult because the necessary resources such as Internet access. One teacher shared “I do not have a good Wi-Fi connection because of where I live so it was very hard for me” (1056). Another shared “I had more distractions at home like cleaning, teaching my own children, and watching television” (3505). Teacher 5784 explained that her materials are in her classroom and not at home. For example, she voiced that she does not have a whiteboard or smartboard at home like she does in her classroom (5784). The fourth teacher shared she did not have Internet access at home so she had to come to school to teach her online sessions, but no other teachers were in the building so she felt isolated.

Two teachers expressed that they loved teaching online. A teacher shared that she felt like she had better connections with my students (5636). She further explained that she could interact one-on-one with her students during the day in the online setting. Another teacher explained that she liked the online teaching because her students would elaborate more and the chattier kids in person would not be so chatty in the online session (7689). In these interviews, the teachers also had similar responses of the students that are noticeably quiet in class were more at ease to communicate with the teacher especially the with private chat feature.

Interview Question 4. *Compare and contrast your experiences with in-person teaching and online teaching.*

Participants had similar responses to their perceptions when comparing experiences of face-to-face teaching versus online teaching. Table 11 displays the themes that emerged. The teachers explained students had *fewer distractions in online settings, face-to-face teaching was more effective, and student attendance in online learning sessions was not required.*

Table 11

Themes of Comparing and Contrasting Teacher Experiences of Face-to-Face Teaching vs. Online Teaching

Compare & Contrast experiences of online vs. face-to-face teaching	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Students had fewer distractions with online teaching	X	X	X	X	X	X
In-person teaching was more effective	X	X	X	X	X	X
Student attendance for online session was not required	X	X	X	X	X	X

The teachers expressed that in the online sessions, students had fewer distractions. One teacher communicated that the quiet students participated more in the virtual setting (7689). She further conveyed that she felt the reason the quiet students communicated more was that the teacher had more control over muting other students from commenting. One teacher communicated her opinion that when the students are home without their friends, they were better focused (5784).

All the teachers mentioned that in-person teaching is much more effective than online teaching. One shared the students have more resources in the classroom than they do at home (3505). Another communicated that teaching in person allows her to build better relationships with the students and online teaching made the teacher feel as though the students were numbers and not people (4952). Another teacher voiced that trying to determine the best time to offer

students help with assignments was hard and the availability of teachers compared to the student availability was difficult when online (5784). The last three teachers voiced collaborative planning contributed to more effective lesson plans and ability to assess content mastery.

Student attendance was the most discussed response by teachers. One teacher expressed that students in the online class only attended an average of three days per week as opposed to when students were face-to-face; the same students would attend five days a week (5636). The teachers' perceptions were that parents and students know that attendance is required for face-to-face learning and truancy is the consequence if a student accumulates more than seven absences. During the pandemic, the teachers explained neither students nor parents faced the same truancy consequences when students accrued the same number of absences in the online sessions. Another teacher stated, students without internet, motivation, and/or parental support, did not log into the online sessions (5784). All the teachers mentioned in their responses that the students, with low attendance, did have lower grades than the students who attended the online teaching sessions.

Interview Question 5. Give an example of how your principal supported you in the transition to online instruction from face-to-face instruction during the pandemic. Give an example of how your grade-level administrator supported you during the transition to online instruction from face-to-face instruction during the pandemic.

Teachers were incredibly positive in the responses for support from leadership. Table 12 displays the themes of how the teachers perceived support during the transition to online teaching.

Table 12*Teachers' Perceptions of Leadership Support*

Examples of leadership support	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Campus Principal - Supportive	X	X	X	X	X	X
Grade-Level administrator- Supportive	X	X	X	X	X	
Approachable		X	X	X		X
Problem-solvers	X	X		X	X	X
Assisted with parent calls	X	X		X	X	X

The themes that emerged were *the principal was supportive, the grade-level administrator was supportive, the principal and grade-level administrators were approachable, the principal and grade-level administrator were problem solvers, and the administration assisted with parent communication.*

Two teachers indicated that administration did the best they could during the transition to online teaching and that administration was just as overwhelmed as teachers were. All teachers expressed that the open communication from administrators to teachers was extremely helpful. Administrator communicated expectations clearly and leaders would assist when needed. One teacher shared, the campus principal made herself approachable by being readily available to answer any questions (3505). Another explained, the campus principal was very supportive and approachable throughout the transition (5784). All teachers expressed, again, that administrators'

assistance in communicating with parents was needed and extremely helpful. One teacher shared that the campus principal's weekly messages to parents were honest, transparent, and necessary to get changes that were happening daily communicated to parents (4952).

Interview Question 6. *Share with me an example from the principal of a time when you felt unsupported during the transition. Share with me an example from the grade-level administrator of a time when you felt unsupported during the transition.*

Consensus from all teachers was that *there was no specific example in which any teacher felt unsupported*. One teacher explained, the teachers who were complaining about lack of support had not reached out and asked for support (5784). On the other hand, another teacher expressed, it was the blind leading the blind, but it was not the leaders' fault because the transition came so quickly (4952).

Interview Question 7. *Is there something specific that you have worked on or completed as a lesson or project in an online class that has made immediate changes in the effectiveness of your teaching because of leadership support?*

The themes that surfaced from this question were *learning Canvas and learning how to use technology better in the classroom*. None of the teachers gave specific examples of lessons used in the online sessions that were moved to face-to-face teaching due to leadership support. One teacher did express that the grade-level administrator placed her in a pilot program of using a software program in face-to-face and online classes was beneficial (5636). This teacher also expressed that the pilot program allowed for more student participation in both learning modalities because students were able to provide answers in confidence and only the teacher would know who had or had not mastered the concept (5636).

Interview Question 8. *What evidence do you have students are learning in online classes?*

Themes for evidence of learning were *attendance assessments, participation, and Standards of Learning (SOL) assessments*. Table 13 shows the distribution of the themes.

Table 13

Teacher Evidence of Student Learning in Online Classes

Evidence of Learning	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Attendance	X	X	X	X	X	X
Assessments	X	X	X	X		
Participation	X			X	X	X
SOL assessments			X	X		X

The teachers conveyed those students who attended the online teaching sessions had higher grades on assessments and performance tasks. Teachers commented that the correlation between attendance in the online sessions and grades was remarkably high. One teacher expressed, “the goal was to increase student participation and attendance by keeping track of attendance daily and offering positive incentives to the students” (5784). In summary, the teacher explained students were motivated by a reward and were learning without even realizing they were. Another teacher shared “in the online modality assessments could be reset and students had multiple opportunities to master the concepts as well as one-to-one remediation with the teacher” (5636). This teacher further explained the more the student practiced the higher the student achieved. Another teacher shared she had no evidence of learning because the mastery of concepts is nonexistent (4952).

Interview Question 9. *What evidence do you have that students were not learning in online classes?*

The themes that emerged from this question were like question eight. The themes were *attendance affected student grades* and *no internet access affected student grades*.

Table 14 shows the distribution of these themes.

Table 14

Evidence students were not learning in online classes

Evidence of students not learning	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Low Attendance affected grades	X	X	X	X	X	X
No Internet access	X		X		X	

Teachers expressed that there was a high correlation between attendance and grades. If students did not attend the online sessions, then their grades were typically lower. One teacher expressed that her SOL test results in 8th grade mathematics were the lowest her 18 years of teaching (4952). The teacher believed that the low scores were a result of low student participation and no parental support for online classes. Another teacher shared the students that did not attend the online teaching sessions their grades showed lack of learning (7689). Two teachers expressed that the students that did not attend the online sessions typically did not complete the assignments or assessments, so their grades would suffer (5636; 5784). Teacher 5784 further explained that some of the students did not have internet, parental support, or they lived with elderly grandparents that did not understand how to log into the online sessions; therefore, the students completed no assignments and the grades suffered.

Interview Question 10. *Do you want online classes to continue? Why or why not?*

The only theme that emerged for online classes continuing was *online classes only for a few select students*. Table 15 shows the distribution of the themes.

Table 15

Online classes should continue

Online classes should continue	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
For a select student only	X	X		X	X	X

Only one teacher expressed that the online classes should not continue for any student because the teacher's perception was students need face-to-face instruction to develop their mathematical abilities (4952). Another teacher said that for students who are motivated to learn, have good internet access, and have parental support at home, online classes should be an option but only if the students had some type of social interaction (5784). A third teacher shared this was a great question and believe some students did and will benefit from online classes, but stricter guidelines for attendance in the online sessions would be necessary (3505).

Interview Question 11. *Do you want additional professional development in online teaching? If so, what would you like training on? If not, why?*

The one theme for this question was *teachers wanted a moderate level of professional development for Canvas*. Table 16 shows the theme that emerged.

Table 16*Moderate level of professional development wanted*

More Professional Development	Teacher 1056 Purple	Teacher 3505 Red	Teacher 4952 Blue	Teacher 5636 Yellow	Teacher 5784 Green	Teacher 7689 Brown
Advanced PD	X	X	X		X	X

Five of the 6 teachers explained that *more training and support of how to be creative to increase student attendance and participation is needed* (Dolighan & Owen, 2021). Organization and consistency of the Canvas platform was mentioned as a need for teachers, students, and parents. One teacher shared the inconsistency of how teachers had the Canvas online classes laid out was very confusing to students and parents, thus resulted in low attendance, low participation, and lower grades (7689).

Interview Question 12. *What else would you like to share with me about your perceptions or experiences of online teaching during the pandemic? What else would you like to share with me about your perceptions and experiences in regards to support you received or did not receive from the principal or grade-level administrator?*

The patterned theme for this question was *teachers had no other examples to share*. Two teachers expressed although administration did the best they could, more support in parental contact was needed (1056; 5636). One of the two teachers' perception was because of the transition to online teaching some colleagues left the profession by retiring early or changing careers. The other teacher shared if leaders in the future should choose teachers with the right mindset for teaching online then the online learning modality might be more successful (5636). The teachers concluded that the mindset of teachers and more strict requirements of student attendance were crucial factors in the success of online learning during the pandemic.

Survey and Interview Response Comparison

Surveys were sent to 90 middle school teachers who taught English, mathematics, science, or social studies during the Covid-19 pandemic to investigate the teacher perceptions of how education leaders provided support for them in the transition to online teaching. Fourteen teachers returned the survey and 6 teachers scheduled and completed a virtual 1:1 interview with the researcher. Table 17 shows the similar comparison between the survey interview responses.

Table 17

Survey and Interview Response Comparison

	Survey (15 respondents)	Interview (6 interviewees)
Principal Supportive in the transition	11 of 15 73.3%	6 of 6 100%
Grade-level administrator Supportive in the transition	12 of 15 80%	6 of 6 100%
Professional development (PD) completed	15 of 15 100%	6 of 6 100%
PD was efficient	12 of 15 80%	6 of 6 100%
Principal Technology knowledge enough to provide support	10 of 15 66.67%	3 of 6 50%
Grade-level Administrator Technology knowledge enough to provide support	12 of 15 80%	3 of 6 50%
Technology skills improved	13 of 15 86.67%	5 of 6 83.3%
Principal Support effective to teach online	12 of 15 80%	6 of 6 100%
Grade-level administrator Support effective to teach online	12 of 15 80%	5 of 6 83.3%
Teachers received enough PD	9 of 15 60%	5 of 6 83.3%
Teachers want additional PD	9 of 15 60%	5 of 6 83.3%

Research Findings

The purpose of this study was to investigate middle school teachers' perceptions of how leadership provided support for them in the transition to online teaching during a global pandemic. The research question was how are education leaders supporting middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic? The data analysis generated seven common themes of leadership support for the transition to online learning during a global pandemic. Summary of these themes are *listening to teachers' issues, concerns, and suggestions, being supportive, helpful, and positive, assisting with parental communication by administration, attending online classes by students was poor; evidence of students not learning was due to poor attendance, more online teacher training was wanted, and teachers never felt unsupported by leadership.*

Figure 1 summarizes the seven themes that emerged from the 6 participants' data and what they identified as their perceptions and experiences of leadership support during the transition to online teaching from in-person teaching during a global pandemic.

Figure 1*Teacher Perceptions and Experiences of Leadership Support During the Transition to Online Teaching*

Note: Common themes that emerged from the data

Themes generated from the research of middle school teacher perceptions and experiences how education leaders provided support for them in the transition to online teaching during the global pandemic. The seven main themes that emerged were administrators listened, administrators were supportive, helpful, and positive; administrators assisted with parent communication; students' attendance was poor and administrators did not make it mandatory; teachers never felt unsupported by administrators; and teachers want additional professional development on online teaching by administrators.

Summary

Responses to the interview questions revealed middle school teacher perceptions and experiences regarding education leadership support for them in the transition to online teaching during a global pandemic. All participants explained that administrators must listen to the

teachers, and mandatory student attendance in the online sessions were key elements to the success of teaching in the online learning modality. Although all participants felt that leadership was supportive and positive, the transition to online teaching did have some barriers for success. The greatest obstacle to success was the lack of student attendance in the online sessions. The data analysis was based on 6 participants that fully participated in the study by responding to the demographic survey and answering 12 virtual interview questions. The interview questions produced common themes within the data. Chapter 5 conveys information for leaders and educators in regards to online teaching in the future based on the researcher's findings.

Chapter 5: Findings, Implications, and Conclusion

Introduction

The purpose of this study was to investigate middle school teachers' perceptions of how leadership provided support for them in the transition to online teaching during a global pandemic. The research question was how did education leaders support middle school teachers to effectively teach English, mathematics, science, and social studies online during the pandemic? Analysis of the teachers' experiences and perceptions may help education leaders show support for teachers in the development of virtual course curriculum and instructional strategies for the core subject areas.

Findings

The teacher participants were middle school teachers who taught middle school English, mathematics, science, or social studies in Virginia. Fifteen teacher participants completed the survey. Six of the 15 survey respondents completed virtual one-to-one interviews. An analysis of the responses, to the teacher survey and interview questions, produced seven findings.

1. Administrators listened to teachers during the transition to online teaching during the pandemic.
2. Administrators were supportive, helpful, and positive.
3. Administrators assisted with parent communication.
4. Student attendance was poor in online classes.
5. Teachers did not feel unsupported by administrators.
6. Lack of student attendance in online teaching sessions was evidence that students did not learn in online classes.
7. Additional professional development for online teaching is wanted.

Discussion of the Findings

Participants expressed administrators listened to teachers in the transition to online teaching during the pandemic (Finding 1)

All 6 teachers expressed through their perceptions and experiences of education leader support is listening to teacher issues, concerns, and suggestions. Teachers in this study agreed unanimously that when education leaders listened to the teacher concerns and issues regarding the transition to online teaching, the listening allowed stress to be limited. Several teachers stated he or she just wanted an administrator to be there and listen to the issues, concerns, and suggestions. (Table 6).

Research from Leithwood et al. (2020) stated that one of the four categories of core leadership that effects teacher performance is building relationships and developing people. Transformational leaders are expected to boost morale, encourage teacher confidence, and motivate the staff to work together to achieve a common goal (Kass, 2013). Sanzo et al. (2011) divulged, in his study, that supporting and listening to the faculty is essential.

Participants expressed administrators were supportive, helpful, and positive (Finding 2)

Eleven of 15 teachers answered in the survey that the campus principal provided some or a lot of support in the transition to the online modality. Twelve of the 15 teachers answered that the grade-level administrators were supportive in the transition. The 6 teachers expressed in the interviews that the principal and grade-level administrators were supportive, helpful, and positive during the transition. The 6 teachers voiced administrators were very helpful in making parent phone calls when needed. One teacher shared that her grade-level administrator would call parents if students did not attend the online teaching sessions and/or if students were not completing assignments. One teacher did express the transition was confusing because she

believed that no one knew exactly what to do. She explained that administrators did the best they could during the transition and felt as though the administrators were learning with the teachers and the students. Responses from the survey and interviews were similar of leader support in the transition to online teaching.

Masry-Herzallah and Stavisky (2021) concluded there is a positive correlation between principals' transformational leadership style and explained that the quality of communication supported this positive correlation. The research showed that if school leaders were transformational leaders, the school communication was better between leaders, teachers, and stakeholders. In addition, the study concluded that with a transformational leader and better communication, online teaching was more successful (Masry-Herzallah, 2021). Sanzo et al. (2011) identified leaders that the most influential individuals in the school building and care the burden to motivate teachers. He further explained, this is accomplished by setting directions for teachers. The literature reviewed showed that online teaching has improved over the last few decades in the U.S (Wedemeyer & Najem, 1969). However, the abrupt transition to online teaching showed organizational effectiveness needs to be improved due to the processes being complex and processes for essential knowledge and skills from education leaders are necessary for teachers and for students (Masry-Herzallah & Stavisky, 2021). The transition during the Covid-19 pandemic has been referred to in studies as a crisis or emergency. One article did express that case studies have not examined education leadership and teacher roles and functions during an emergency or crisis (Masry-Herzallah & Stavisky, 2021).

Participants expressed administrators assisted with parent communication (Finding 3)

The 6 teachers explained that assistance in constant parent communication was necessary during the transition. One teacher expressed that with the amount of time and work it took to

convert face-to-face lessons to online lessons, record-teaching videos, upload assignments, and then teach online we needed administrators to help with parent communication. Another teacher divulged that when administrators assisted with parent communication, it helped reinforce the information that teachers communicated (Table 6 & 10).

Studies supported the importance of collaborative cultures to help increase student engagement and achievement (Kass, 2013; Leithwood et al., 2020; Little, 1993; Sanzo et al., 2011). As Kass (2013) noted, an effective leader must motivate the staff to work towards the common goal. Assisting teachers is an important task, such as parent communication, allows for this step towards the common goal of increasing student engagement and achievement in the online learning modality.

Participants expressed student attendance was poor in online classes (Finding 4)

All teachers expressed that the students who attended the online teaching sessions had higher grades on assessments and performance tasks and those students that did not attend had lower grades. One teacher explained after two weeks of teaching online, her goal became to increase student attendance and participation by offering incentives and rewards to students. One teacher was extremely disappointed that students would not attend the online teaching sessions. Three teachers shared when students did not attend the online teaching sessions there were no consequences for their absences from class (Table 8 & 12)

The Covid-19 pandemic caused a major disruption in the U.S. and the entire world including closing K-12 public and private schools (Salerni, 2021). Major restrictions including mask-wearing mandates, social distancing, and the limited number of people together in a group affected traditional classroom settings (Altan & Dowman, 2021). In a reflection on teaching, Salerni (2021) explained two challenges that teachers faced in online teaching were lack of face-

to-face time with students, and low student attendance and engagement. Students need to be astute in the collaborating with other students and teachers to allow for understanding and learning (Mullen, 2021).

Participants expressed teachers did not feel unsupported by administrators (Finding 5)

The survey results of if the teachers felt unsupported in the transition was like the interview responses. Only 5 of 15 teachers that completed the survey felt the campus principal did not provide enough support. Three teachers that completed the survey responded the grade-level administrators did not provide sufficient support in the transition. In the interviews, when discussing a time when teachers felt unsupported by administrators during the transition to online teaching, the teachers could not provide specific examples. One teacher explained if teachers felt unsupported then they were just complaining and had not ask for help or support from education leaders. Two teachers expressed that because the school closures came so fast, the administrators were not at fault and were learning the processes alongside the teachers. Overall, the survey respondents and interviewees shared there was more support in the transition than no support.

When developing the organization, one category of core leadership, building collaborative cultures with the faculty and staff is essential (Kass, 2013; Leithwood et al., 2020). One study revealed that providing support to the faculty is essential (Sanzo et al., 2011).

Participants expressed lack of student attendance in online teaching sessions was evidence that students did not learn in online classes (Finding 6)

When discussing evidence that students did not learn in online classes, all teachers responded that if students did not attend the online sessions, their grades were typically lower than students who did attend the online sessions. One teacher expressed that due to low attendance in the online sessions, the SOL results in 8th grade mathematics were the lowest the

teacher has received in 18 years. Three teachers mentioned that students either did not turn in assignments or turned in blank assignments (Table 12).

Studies showed that lack of student attendance and engagement made student assessment difficult (Cutri et al. 2020; Masry-Herzallah & Stavisky, 2021; Salerni, 2021). One teacher in a study shared the lack of attendance of students resulted in the inability to assess their learning or mastery of the content (Doligham & Owen, 2021).

Participants expressed more professional development for online training was wanted

(Finding 7)

In the survey, nine of 15 teachers answered that they received enough professional development to teach online in the beginning of the 2020-2021 school year. Nine of 15 teachers responded that additional professional development for online teaching is wanted. According the survey responses, all 15 teachers indicated that their level of technology expertise was intermediate at the beginning of the 2020-2021 school year. The survey results also revealed that 13 of the 15 teachers answered that their technology skills increased a lot or a great amount. All 6 teachers interviewed expressed the desire and need for additional and moderate level professional development in the Learning Management System (LMS), Canvas. Five of the teachers interviewed shared that the summer PD was a great beginning, but teachers want additional training on an intermediate level should include how to develop more effective lessons for the online environment. One teacher shared there should be more options and ways to teach, and technology is one way. Another teacher expressed the need for more opportunity or the option to teach online in situations other than emergencies. She further explained online teaching is never leaving so teachers should be able to use it (Table 14).

The literature reviewed for professional development showed an important relationship in the value of seeking professional development for online teaching and the success of online teaching (Dolighan & Owen, 2021). Education leaders can influence a teacher's sense of self-efficacy in the knowledge of teaching online (Cutri et al., 2020). When teachers lacked the knowledge of technology and/or how to teach online synchronously, then the result is less instruction online and more independent work for the student (Cutri et al., 2020; Hans & Patterson, 2020). The research study concluded that teacher knowledge and skills are a critical factor in creating online lessons that are effective for online teaching and online learning (Han & Patterson, 2020).

Implications

Although online teaching has been in the United States for many years (Wedemeyer & Najem, 1969; Emmerson, 2004; Dickey, 2005; Hew & Cheung, 2010), education leaders offering individual online classes or an online academy for students are advised to consider the findings of this qualitative study.

- 1. Education leaders are advised to support teachers and listen to concerns regarding teaching online.** As mentioned in Chapters 2 and 4, the Covid-19 pandemic caused a major disruption in K-12 classrooms by requiring teachers to transition from a face-to-face teaching environment to an online environment overnight. Education leaders should be well educated in how to assist teachers in transitioning to an online teaching modality. This implication is associated with Findings 1 and 2.
- 2. Education leaders might consider requiring all students to attend the online teaching sessions.** Through reviewing with teachers and parents the correlation of student attendance and grades on assessments or performance tasks, education leaders

can add to all stakeholder expectations of student attendance. This implication is associated with Findings 4 and 6.

- 3. Education leaders are advised to provide continuous professional development for teachers that teach online classes.** This will allow teachers to learn how to better develop knowledge and skills that are critical in designing technology-based lessons. The continuous professional development will also allow for continued teacher collaboration and increase teacher beliefs in the online lessons being effective and successful. This implication is associated with Finding 7.

Policy Implications

School divisions in Virginia are advised to consider the findings of this study to make changes regarding student attendance in the online learning modality. School policy may need to be adjusted or changed to require students' daily attendance to online teaching sessions just as they are required to attend face-to-face lessons or face truancy consequences. School policy may require parents that choose online academies to have reliable daily internet access for their children and aid as necessary for all students.

The VDOE may consider the findings of this study, specifically findings 2, 4, 6, and 7, which would allow for a smooth transition to online teaching during an emergency or crisis such as the Covid-19 pandemic. Reviewing the teachers' perceptions and experiences in the transition to online teaching in the 2020-2021 academic year will allow the VDOE to share strategies for education leaders to implement when teachers transition to an online teaching environment. It would also provide information for all stakeholders in developing policies for students choosing to attend online academies or in the event, school divisions must transition in the future to online teaching due to other emergencies such as inclement weather.

Conclusion

This study contributes to the research on teachers' perceptions and experiences of education leader support for the transition, during the Covid-19 pandemic, to online teaching. The focus on this middle school makes it helpful for education leaders in rural areas. Teachers showed passion and the researcher believes the teachers reflected on their own processes of the transition to online teaching because of the one-to-one interviews. It is the researcher's hope that this study adds to the literature base regarding education leadership support that teachers' need to teach effectively online.

Recommendations for Future Research

1. Further examination of the data on teacher knowledge and skills for curriculum design for the online teaching modality may be considered. It may be important to conduct a qualitative study of parents of middle school students. Research on parent perceptions and experiences would help education leaders to understand, better, the needs of the families attending the school division.
2. A researcher could alter this study by using high school teachers in grades nine through twelve to determine if consistency exists with the findings across the schools.
3. A study may be conducted using only special education teachers in middle or high school to determine if the findings show consistency in providing services to students with disabilities.
4. Each finding could be studied deeper to gain more understanding of the impact of education leader support for online teaching. This may be completed by asking the education leaders to implement the findings and collect data based on changes that were implemented.

Researcher Reflections

As an education leader with a passion to improve curriculum and instruction and allow for student choice, my study exhibits the importance of support, knowledge and skills, and educator dedication. Leadership in education has evolved in my 16 years in education from managing the building and people to instructional leadership. It is my responsibility to lead teachers, embrace the change, and gain as much knowledge about curriculum and instruction as I can in the face-to-face environment as well as the online modality. Technology integration is not new in the classroom. However, the full transition for all students, K-12, to online teaching a pandemic forced all teachers to transition quickly. Researching online teaching, surveying, interviewing, and analyzing teacher responses about their perceptions and experiences through this study have allowed me to share research with education leaders. It also allows me to encourage leaders and teachers to continue learning, developing, and implementing curriculum in the online learning modality for all students.

I am grateful to have added to the literature surrounding leadership support for the transition to online teaching during the Covid-19 pandemic at one school in Virginia. Based on the results of this study, it is my perception that education leaders supported teachers in a positive way in the transition to online teaching during the global pandemic. Leader support, student attendance, and teacher professional development for online teaching strategies are key factors for success in online teaching in the future. I hope that all education leaders will review the findings and reflect on their own processes during the transition to online teaching during a global crisis. Finally, I encourage all education leaders to implement some form of online teaching in their schools and support their teachers who teach online. For all educators, I hope they will use the findings to make purposeful decisions about teaching in the online modality.

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APPENDICES

APPENDIX A: Literature Reviewed On Online Learning

Appendix A

Literature Reviewed on Online Learning

Author/Year	Research Questions/Purpose	Main Themes	Method/Data Sources	Findings/Important Information
Emmerson, A.M. (2004)	Distance education history - How did federal policy influence distance education? Access to distance education by women, minorities and the working poor	Higher Education Policy Influence Distance education definition Online Learning Social justice	Chronological approach; federal quantitative data on distance education programs	“First successful attempt to apply a systems approach to alternative instructional delivery mode that was experiencing rapid changes because of technological advances.
Fulmer, S.M. & Turner, J.C. (2013)	Examine middle school teachers’ views about implementing challenging instruction while participating in a whole-school PD	Teachers K-12	Grounded Theory analysis	Lack in the literature online learning; teacher training What is challenging instruction? Through research it has been found that challenging work for students has been beneficial and successful for their learning process.
Gregoire, M. (2003)	Challenges of Change for Teachers	Teachers K-12	Scholarly article Cognitive models of belief change with motivational and affective factors found in social psychology	Lack of literature for K-12 online learning Teachers struggle to implement new instructional strategies because of their own current beliefs and understandings of certain concepts.

			theory and research	
Hattie, J. (2015)	Visible Learning - what works best and comparisons between different ways of influencing student learning	Visible Student Learning Higher education	Synthesis of 1200 meta-analysis relating to influences on achievement	Visible Learning Model -asked teachers to evaluate the “quality of evidence of six key findings 1. Plan and self-review the instruction; incorporate feedback about intervention and teaching impact. 2. Ensure presence of teaching strategies for raising teaching impact 3. Use student voice 4. Gather and analyze data about impact. Use the DIE approach Diagnose students before the lesson. Multiple Interventions they can apply, Evaluate the students’ response to the interventions.”
Hattie, J. (2015)	Visible Learning - learning should be as visible as possible for students	Visible Student learning	Meta-analysis student achievement of more than 65000 studies 150000 effect sizes and ¼ billion students derived from k-12 settings	
Hattie, J. & Zierer, K. (2019)	To make learning as visible as possible to students - what is a good teacher	Teacher Implementation Methods	Meta-analysis - 8000 primary studies; estimated 300 million learners; measures effect size; studies with Hattie’s original studies	Visible Learning - Wanted what is best for students; 1. What gives students the greatest progress in learning 2. Core statement depends on teacher expertise -

				<p>teacher belief - evaluate impact on the learning</p> <p>Key Message - Visible learning is NOT hears</p> <p>Without visibility of learning, education and teaching is more difficult; real learning without understanding is not possible</p>
Jones, J.C. (1967)	Learning behaviors	Learning Definition	Chapter book	Learning Definition - purpose of education
Leithwood, K, Hopkins, D. & Harris, A. (2020)	To test validity of previous research claims about successful school leadership	School Leadership	Scholarly article	<p>Four categories of core leadership that affects teacher performance</p> <ol style="list-style-type: none"> 1. Setting directions 2. Build Relationships and develop people 3. Develop the organization to support desired practices 4. Improve the Instructional Program
Lewis, E. (2009)	To examine job perceptions, attitudes, and levels of job satisfactions for faculty teaching in a distance online education environment	Teacher self-efficacy K-12	Survey of higher education; ANOVA	<p>Gaps in the literature for K-12; lack of literature for teacher training</p> <p>Faculty perceptions- online content - high; faculty development - satisfactory - distance online education program perceived by colleagues - negative;; Students are not prepared academically for online courses; faculty does not believe they have the freedom to adapt the curriculum based on student needs; Faculty believes they are fairly compensated</p>

Little, J. (1993)	Collaborative Cultures	School Leadership		Core leadership categories – collaboration
Mednick, S.A., Polio, H.R., & Loftus, E. F. (1973)	What is learning?	Learning	Chapter book	Characteristics of learning; example of child riding a bicycle and return of that skill over time.
Newmann, F. (1992)	Effective schools to increase student achievement	Student Engagement Student Achievement Student learning - assessments Teacher	Book series of 5 different projects of effective schools from 1985-1991; Qualitative case studies – 5 in 1 book	Research shows that students have and are influenced by culture and surroundings; Teachers believe; students are influenced by their environments including living conditions; Students' perceptions in research are that they are successful at the higher achieving schools due to perception. If expectations exist students will rise to those expectations. - Instruction must include higher order thinking activities to engage students and allow them to analyze the information for understanding of the material for self-learning. Students need motivation; maturity; study habits; organizational skills, academic preparedness; *Student Engagement
Parkes, S. E. & Thomas, A. R. (2007)	To report on the values practiced by five effective secondary principles and identify common practices	School Leadership	Comparative study Principal observations; comparison of values using Senge and	Three categories were identified: (1) Interpersonal Relationships, (2) Operational Style, (3) Personal Qualities/Attributes; One unexpected outcome was effective principals were willing to be interrupted if needed; Staff felt

			Rokeach Scales; private interviews	valued when concerns became a priority for the principal;
Printy, S. (2010)		School Leadership	Scholarly Article – Leadership makes a difference in quality of instruction	<ol style="list-style-type: none"> 1. Principal leadership is important to student learning 2. Principals influence student learning by working with or through 3. Teachers and other classroom related factors.
Rice, K.L. (2006)	Comprehensive examination of current K-12 distant education	Distance Education/Policy Reform	Types of K-12 online programs - US. Department of Education Technology Plan Scholarly article	Statewide, District-level supplemental programs, Single District Cyber schools, Multi-District cyber schools, Cyber Charters; change in the view of the traditional K-12 classroom environment; Research explains “that since teachers are the most important people in school it is critical to nurture teachers’ commitment and competence to teach all students.”
Rice, K.L. (2006)		Online Learning vs Face-to-Face Learning K-12	Comparative Studies - student achievement of Algebra 1 students 6 teachers 81 students	Lack of literature k12 Virtual higher performance; face to face more college prep classes; virtual more likely repeating course
Roblyer, M.D. (2006)	Improve dropout rate	Online Learning - Student Learning/Teacher perspective School Leadership	Scholarly article	Learning happens anywhere anytime anyplace; without meeting a teacher in person; Benefits from the absence of issues that happen in a traditional

				<p>classroom such as behaviors, special needs, lack of motivation; choices and flexibility are motivators for online students; More complicated due to challenges of teachers creating an effective learning environment</p> <p>Successful leaders in virtual schools have the following strategies in common, according to the research, (1) Prepare students for success (2) Prepare teachers for success, (3) Use interactive, flexible course designs, (4) Monitor and support teachers (5) Monitor and support students.</p>
Salinger, M. (2016)	To find out what is happening in the classrooms; What is the teacher's goal?	Teacher Strategies	Article -	<p>A teacher's goal cannot be just for a student to pass a test. A teacher's goal should be to evaluate the impact he or she is having on the learning process of each student. Hattie (2015) "What is most important is that teaching is visible to the student and that the learning is visible to the teacher."</p>
Santagata, R. (2009)	The effectiveness of video PD for teachers	Teacher PD -Video based	Scholarly article – Experimental study Teacher written responses	Teachers were engaged in discussions; completed planned activities and attendance rate was high; difficulties – difficulty with questions that relied on teachers' basic conceptual understanding of the target math concept; difficulties with questions that built on teacher

				knowledge of their students' understanding; and difficulties with questions that requested analyses of student work and reasoning that goes beyond classifications into right and wrong answers
Sanzo, K.L, Sherman, W.H., & Clayton, J. (2011)	To examine the leadership best practices of school principals as they lead in an accountability and standards; to facilitate high levels of student achievement	School Leadership	Inductive exploratory study;	“Shared leadership; facilitating PD; Leading with instructional orientation; acting open and honestly” Common themes – sharing leadership; facilitating PD, leading with instructional orientation and acting openly & honestly.
Schlosser, L. & Simonson, M. (2010)		Online Learning Distance Education K-12 Literature	Article – Defining Distance education	Gap in the literature for k12 Gap in literature regarding Teacher training;
Watson, J, et. al (2004)	To explain what states are doing to address the need for policy guidance	Online Learning (Distance Education)/Policy Reform	22/50 states; Telephone interviews; literature reviews, and internet searches.	Cyber school v supplemental and statewide vs single district; policy includes all basic five types of online programs; At the time of this research, the authors found it was too early to conclude how if it all NLCB would affect online programs. Policies in states follow nondiscrimination laws; however, the research explains that it is difficult for states to address the equity and access pieces of online education programs. Many states have not addressed the low economic status or special education needs of students in

				terms of equity for online education.
Wright D., Clark, J., Tiplady L (2015)	Purpose is to make learning as visible as possible for students; incorporate technology in math classes and increase student achievement	Student learning as assessment; Visible Learning Teacher	Formative assessments to understand that learning involves assessment; explores how assessments and learning are connected; Shows how formative assessment is a process which makes learning visible and closes the loop between learners, peers and teachers with constructive feedback	Activity enhancement that shifts teacher's thinking from how they are teaching to what the students are learning; mind shift; increase in teacher use of technology; increase in student engagement and quality of student work;
Fisher D. & Frey, N. (2016)	To make learning as visible as possible to students - what is a good teacher	Visible Learning	Meta-analysis - 8000 primary studies; estimated 300 million learners; measures effect size; studies with Hattie's original studies	Wanted what is best for students; 3. What gives students the greatest progress in learning 4. Core statement depends on teacher expertise - teacher belief - evaluate impact on the learning Key Message - Visible learning is NOT hears Without visibility of learning, education and teaching is more

				difficult; real learning without understanding is not possible
Walker, R.R. (2019)	Purpose to identify and modify a scale for use in the virtual setting; analyze data collected from virtual teachers to describe and explore their sense of self-efficacy	Teacher self-efficacy Gaps in literature Growth in online courses	Exploratory correlational study; Survey methods; multiple regression; factor modeling and descriptive and inferential statistics	Gaps in literature Regardless of the educational setting, the relationship between a teacher and student drives the learning process. Online learning does offer “accessibility and convenience options.” Online teacher requires a mind shift for teachers and he/she must modify instructional delivery.
Baumiester, R.F. (1992)	Psychology of Optimal Experience	Teacher	Interviews of people of different cultures to describe what makes an experience enjoyable and optimal for people	Challenging activities for teachers to create is a difficult task.
Abrego, J.C. & Pankake, A. (2010)		School Leadership Teacher	Scholarly article	Research shows that in online education/learning that education models must be different. Leaders must change their beliefs and educational designs for online learning to be successful for students. “Virtual schools must be student or community driven, where the teacher becomes an active, expert participant, rather than simply a conveyor of knowledge or a facilitator.”
Dickers, A.G (2015)	Perspectives of virtual school teachers on the impact of	Online learning Face-to-face	Teacher interviews; focus	Research shows that teachers are more organized in their daily

	online teaching on their fact-to-face practice	Teacher	groups; mixed method approach	routines, instructional practices, and inclusion of technology and manipulatives. Teachers integrated technology more in the face to face settings after utilizing technologies in the virtual environments. Asynchronous vs Synchronous strategies implemented more based on student needs. “Shifts in purpose and profession” Significant impacts their online teaching had on their face to face teaching such as communication with colleagues, parents, and students; changing roles of the teacher and the student; an increased confidence in their abilities to teach virtually and face to face
Barbour, M.K, Reeves, T.C. (2009)		Online Learning - Virtual Schools	Qualitative study – interviews; comparison with face-to-face	The three benefits of virtual learning - provides individual personalized learning based on student needs and learning styles. Flexibility in schedules due to advanced studies, internships, health issues, and other student interests. High Quality learning; Improvement of student outcome and skills
McFarlane, D.A. (2011)	Examines online vs face to face organizational structure and pedagogy in terms of education and the teaching and learning process	Online vs Face to Face Learning	Comparative Case study – online vs face to face	Very little research on online learning for K-12; Main difference between online learning and face to face learning is the “physical interactions

				among teachers, staff and students.” Traditional schools have higher operation costs than virtual schools due to transportation costs, opportunity costs, and staffing costs.
Malik, R. H. & Rizvi, A.A. (2018)	To examine the perceptions of students about classroom learning environment on achievement in secondary mathematics	Face to Face Learning	Exploratory Study Secondary schools; 516 students 10th graders; ANOVA; Pearson r; to find out the effect of perception of students about classroom learning on student achievement	Traditional learning or Face-to-Face learning takes place in a brick and mortar, classroom with meaningful interaction among the members of that classroom. Malik and Rizvi (2018) explained the face-to-face learning process includes teachers, students, content, and the learning process. Depending on the teacher, classroom procedures and processes could differ; however all classes include physical and human components.
Rakes, G. C. & Dunn, K. E. (2015)	To measure teacher concerns and interest in online teaching	Teacher Gaps in literature Growth in online courses Online Learning	Qualitative investigation; qualitative methods to interpret survey and open-ended item responses.	Lack of study for K-12 Online learning; k-12; Gap in literature; degree of interest in or value of online k-12 education is very minimal; results no value in online education; new efforts are needed to address the teachers’ needs & concerns; Online personalized learning; self-paced or follow school calendar or fall in between the 2. Concerns include beliefs, concerns, perceptions regarding

				<p>the innovation and transition; need to understand the concerns regarding the shift in instructional modality can assist in the design of the intervention necessary to increase effective participation of teachers.</p>
Picciano, A.G., Seaman, J (2007)	Survey of Administrators	<p>Teachers Student Learning; K-12 Online Learning Benefits</p>	Survey	<p>Gap in Literature K-12 Educators have perceptions that online learning is not as effective as face-to-face learning; Students need motivation; maturity; study habits; organizational skills, academic preparedness; Meeting specific Student needs; Offering courses not available at school; AP courses or college courses; Credit Recovery; Reducing scheduling conflicts;</p>
Kennedy, K. & Archambault, L. (2012)	To help prepare teachers for k-12 online learning	<p>Online learning Teacher</p>	Mixed Methods study; quantitative data –descriptive stats for general findings; qualitative data – survey and peer debriefings;	<p>Growth is exponential in the US; all 50 states as of 2011 offering at least 1 course online and is a graduation requirement; In the US, state departments have mandates and certification processes for teachers in K-12. The NCATE requires skills and knowledge to include social justice, responsibility, academic honesty professionalism, fairness, equality, caring, and empathy (2002). Other skills include classroom management,</p>

				<p>motivation, teaching strategies, and differentiation.</p> <p>Same skills needed for online teaching; but how? But NCATE does not acknowledge the need for teachers to learn methods of line learning/teaching.</p>
Picciano, A.G., Seaman, J., Shea, P., & Swan, K. (2012)	To examine the role that online learning is playing in addressing some of the concerns and issues facing American high schools; to improve graduation rate and credit recovery	<p>Student learning</p> <p>Online Learning</p>	Qualitative Case Study	<p>Student enrolled over 1 million only 2% of total k12 population in US in 2007-2008. 47% increase in enrollment in 2 years = Same -</p> <p>Archambault, L. & Crippen, Offering to meet needs of students; AP courses; credit recovery; other courses not offered at school; reduce schedule conflicts; Predict ½ of all high school courses will be online in 2019;</p>
Archambault, L. & Crippen, K. (2009)	To examine the demographic nature and experiences of K12 online teachers	<p>Online learning</p> <p>K-12</p> <p>Teachers</p>		<p>K-12 online education has emerged to 21st century learning and a legitimate form of education that is growing exponentially.</p> <p>Gap in the literature; little has been researched regarding the population of teachers, their characteristics, preparation, or if they differ or not from the face-to-face teachers.</p> <p>The current pedagogy for online teaching is based on current traditions of the face-to-face classroom.</p>

Dumay, X., Boone, T., Van Damme, J. (2013)	To estimate the effects of principal leadership on students' achievement growth in mathematics	School Leadership		Many studies over decades have shown no consistent evidence of direct effects of leadership on school outcomes however; models of leadership that affects student achievement refers to the instructional model and centers on improving teaching practices;
Watson, et al (2004)	State level policy & practice		Case Study	Polices and funding vary among states.
Bandura, A. (1977, 1986)	Self-Efficacy Theory	Self-Efficacy Theory	Chapter book	Definition of Theory
Ryan, A., Kuusinen, C., & Bedoya-Skoog, A. (2015)	Examine the nature of teachers' self-efficacy, differences between elementary and middle school teachers' self-efficacy and implications for observed classroom quality	Self-Efficacy	Exploratory factor analysis	Indicated teachers' self-efficacy for managing peer relationships is a distinct dimension for teachers' self-efficacy for classroom management instruction and student engagement; middle school teachers' self-efficacy is lower than elementary
Guskey, T. R. (1988)	To investigate the relation between teacher perceptions and teacher attitudes of the implementation of new instructional practices	Self-Efficacy	Exploratory study – 3 survey sections	Positive attitudes and high level of confidence in teaching abilities; implementing mastery learning would be difficult and require extra work; grade level nor years of experience was significantly related; strong and statistically significant relationships between teachers' perceptions and implementation of instructional strategies
Fackler, S., & Malmberg, L.-E. (2016)	Investigate the effects of personal characteristics student group and school	Self-Efficacy (TSE)	Qualitative – survey; *International;	More experienced teachers had higher TSE also had more structured classrooms; student

	features and leadership effects on teachers' self-efficacy			oriented activities and enhancing activities; Student achievement, Different Mother Tongue, Parents' educational level affected TSE; (different variables added to each of these for different results but all impacted TSE)
Wolters, C. A., & Daugherty, S. G. (2007).	To investigate the relation between the constructs and differences on the bases of teaching experience and academic level;	Self-Efficacy	Qualitative – survey with Likert scale; Exploratory factor analysis	Teachers' sense of efficacy could be used to explain the classroom mastery goal structure reported; some self-efficacy was greater with more years of experience;
Brinkmann, J.L., (2019)	To investigate how teacher prep programs can better prepare to teach math in elementary classrooms; examine strategies to increase self-efficacy in teaching math	Self-Efficacy	Quasi-experimental mixed methods	Aligned with Bandura's self-efficacy theory; PT's need practice in smaller settings; positive feedback; *direct correlation between PT confidence in teaching math, teacher self-efficacy, and student achievement
Salerni, A (2021)	Reflection on teaching during Covid-19	Reflection on teaching during Covid-19 Online Learning/Teaching Teacher Self-Efficacy		2 challenges – lack of face-to-face time with students & student engagement much lower; teacher was able to give immediate feedback; Lack of f2f – was not able to hear students read aloud or review essays for grammatical or spelling errors; some students grew; biggest
Masry-Herzallah, A. and Stavisky, Y. (2021)	Is there a correlation between the principal's transformation leadership style and the school's success in online learning? What role of school communications in the	School Leadership	331 teachers participated in the study on subject of online teaching during the Covid-19 pandemic.	Positive correlation between principals' transformational leadership style and the success of online teaching and the quality of communications in the school mediated this correlation

	correlation between the principal's transformational leadership and the school's success in online teaching?		Hierarchical regressions to evaluate the hypothesis; used SPSS process Quantitative analysis	Significant implication to improve organizational effectiveness in transitions to online learning ; Online learning has become an essential element of schools both during routine and in an emergency; The Covid-19 crisis was a complex process creating the necessity for essential knowledge and skills from education leaders for students to successfully learn; Studies did not examine leadership roles and teacher functions during an emergency;
Dolighan, T. & Owen, M.(2021)	Teacher's efficacy for teaching in a fully online teaching environment during the transition to online teaching due to the Covid-19 pandemic; Identify how variables such as pd experience and teaching supports correlate with the self-efficacy perceptions of teachers	Student engagement; classroom management; online instruction strategies; computer skills	Mixed methods approach Survey; quantitative;	Significant relationship the value of taking PD (Professional Development) for online teaching and success of online teaching
Mullen, C.A. (2018)	To discover if outcomes differ in a remote and in person course; 1. Did learning vary between groups completing the same course? Did students' cognitive learning capacity for making meaning change from one environment to the next?	The need for synchronous e-learning; bridging online instruction with f2f models ; Teachers must shift from exclusively attending to their content expertise toward best practices concepts and strategies in teaching subject matter; Teacher Self-Efficacy		

Mullen, C.A. (2020)	To identify and analyze the progress of proposals and dissertations after mentor-mentee relationships rapidly transitions to intensive online doctoral mentoring because of Covid-19	Crisis management;	Exploratory pedagogic research design; survey that revealed the benefits and drawbacks of technology for learning within online doctoral mentoring contexts;	“Emergency response mentoring intervention was to ensure I was doing everything possible as the mentor for structuring facilitating, and encouraging academic progress; Attempts are made to spark reflection on teaching in public spaces and improve education; inquiry was motivated by the sudden transition online of mentoring that necessitated an innovative response to assure support of mentees’ progress and goals.
Mullen, C.A. (2021)	To imagine online learning space as a space of possibility for learners in pandemic-burdened societies	Collaboration, creativity, critical thinking, and communication are needs for all students		Call for public educators to rise, make and invest in the changeover night;
Altan, O. & Dowman, I. (2021)	Changing world due to Covid-19 - article	Major disruption to the United States and the entire world;		Major disruption; crisis; Jan 30, 2020 WHO declared the outbreak; its health crisis for the world; Major restrictions from business closures, school closures, and employees of different industries working from home; Social distancing; contact tracing; mandatory mask wearing;

<p>Van Loon, A.W.G., Creemers, H.E., Vogelaar, S., Miers, A.C., Saab, N., Westenberg, P.M., Asscher, J.J. (2021)</p>	<p>Investigated concerns of adolescents during the COVID-19 pandemic</p>	<p>High demands of school; lack of social and emotional interactions of students; consequences for future challenges</p>	<p>Ongoing investigation study conducted in secondary schools in the Netherlands; Majority of participants (65%) 6th graders; Quantitative</p>	<p>More than half of the participants experienced medium to elevated level of concerns during the pandemic; concerns included restriction on doing fun things, delays in school, seeing friends less, family becoming ill; college students more concerned as time increased of getting ill; overall concerned about delays in education and social interaction.</p>
<p>Middleton, K.V. (2020)</p>			<p>Article of Covid-19 and impact on learning, teaching, classroom assessment, and student growth</p>	
<p>Bingham, A. J. (2021)</p>	<p>Examines blended high school to offer a blended combination of computer-based learning and face to face instruction; Leadership support to integrate technology in a meaningful way</p>	<p>Leadership practices – provide opportunities for collaboration; supporting teacher professionalism lea</p>	<p>3-year Qualitative case study of a charter high school; 37 interviews with teachers, students, staff, and administrators; class observations; parent nights; PD meetings</p>	<p>Teachers supported technology integration;</p>

Cash, Brinkmann, & Price (2020)	What were administrators' responses to the corona virus-related school closings and alternative instructional delivery? Purpose to identify initial thoughts and behaviors of educational leaders during the emerging pandemic.	<p>leaders little or no concern; themes</p> <p>Playing down concerns; Thoughts it would not impact the U.S.</p> <p>Comparison to the flu Min impact on schools It will pass 34% initial concern Impact on education Concern for the economy Health and safety Sense that consequences could be far reaching Attendance was a thought; loss of instructional time; concern for students' well-being – safe, fed, pushing themselves to a higher standard</p>	Surveys Snowballing sampling PK-12 administrators & central office participants in VT's database including program alumni; all PK-12 principals and assistant principals in VDOE's school email database	Qualitative design approach; 66% no concern 34% initial concern 1 st Priority after school closures <ol style="list-style-type: none"> 1. Learning including technology 2. Communication 3. Supporting students, faculty & staff 4. Providing food 5. Providing safety 6. 10% mentioned technology availability and access 7. Equitable access 8. SWD 9. ELL <p>93% supportive of cancelled state standardized tests</p>
Thomas, T. & Bryson, J. R. (2021)	Challenge of teaching students who are online simultaneously with students who are experiencing proximate learning experiences.			
Han, I. & Patterson, T. (2020)	To explore teacher's curriculum design processes and changes in knowledge, beliefs, and practices during the design and implementation of online teaching in elementary classrooms	<p>Teacher; S. Korea; Teacher professional development; professional growth; Lack of PD for technology integration for teachers in the classroom is still insufficient.</p>	Case student approach to collect and analyze data around teacher's reflective practice, beliefs, and knowledge. Elementary teacher; S. Korea;	<p>Found changes in his beliefs about students, and his perception towards online teaching; Changes in design of curriculum inspired his development of technology integration in the classroom which led to a curriculum design with newly developed knowledge; Teacher knowledge & skills are critical in designing technology-</p>

			Teacher professional development; professional growth;	based lessons; Teachers creating technology lessons depend on the understanding of technology, and their beliefs in the curriculum design being effective;
Feng, X., Ioan, N., & Li, Y. (2021)	Comparison of pre and post Covid-19 of student performance; face-to-face teaching vs. Online teaching	Comparison of pre and post Covid-19 of student performance; face-to-face teaching vs. Online teaching	Descriptive survey; 5765 students in China; paired; paired t-test	Major differences between rural and urban due to lack of resources, teaching facilities and devices;
Cutri, R.M., Mena, J., & Whiting, E. F., (2020)	Faculty readiness of online teaching	Teacher Teacher willingness to try new things major discussion with the focus group; Harder when it is in the moment or right now situation. Sharing power and experiences; teachers felt outside their expertise; Being myself online Changing levels of experience; suddenly being an online teacher made the teacher feel like a brand-new teacher; Assessing online is difficult Identifying equity issues is difficult	Mixed methods; 30 University professors; focus group;	Teachers' willingness to revise lessons for online teaching ; sharing power with students who have a better technology expertise; Assessing students was difficult;
Teng, M. F. & Wu, J. G. (2021)	Teacher challenges and coping strategies for online teaching during the pandemic	Teacher perceptions and experiences	Case Study – Interviews of a 1 st year teacher and 6 th year teacher	1 st year teacher: Lack of technology expertise; difficult change for teacher and student; Lack of student participation; 6 th year teacher: Sought out PD alone ; Believed LMS was a tool not just transfer the lessons and the students work on those; lack of

				student engagement – no use of cameras or microphones;
MacIntyre, P.D, Gregersen, T., Mercer, S. (2020)	To what degree do language teachers experience specific stressors? What coping strategies are used?		Survey 600 teachers; snowball sampling;	Workload and family health Loss of control at work and ability to make decisions Online teaching stress Rapid transition to online teaching with family health worry – created an elevated level of teacher stress;
Mariani, L. (1997)	Definition of support			Comes from French word supporter means “to bear and endure” Latin word supporto sub means under and porto to carry; Modern definition – to hold the weight of something to prevent it from failing;

APPENDIX B: Email Request for Superintendent Permission

SUSAN C. BADGER

June 2021

I am a doctoral candidate in the Virginia Tech Educational Leadership Program under the supervision of my advisor and committee chair Dr. Carol A. Mullen. As you know, I am the Coordinator of the Secondary Learning Center in Franklin County Public Schools. May I receive your permission to conduct a research study for my dissertation investigating middle school teachers' perceptions and experiences of how education leaders supported them in the transition to online teaching during the Covid-19 pandemic? I would like to survey and interview teachers from Benjamin Franklin Middle school for the academic school year 2020-2021? The research is entitled, "An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic." A qualitative phenomenological study is my approach to investigate the relationship between teachers' perceptions and experiences of leadership support and online instruction.

The study will examine teacher perceptions of how principals and assistant principals provided support for online instruction during the Covid-19 pandemic. The specific purpose of this study is to investigate teachers' perceptions and experiences of how education leaders supported teachers to effectively teach online. I will explore teacher perceptions of professional development for online instruction and whether support from leaders contributed to instructional effectiveness to teach online.

The study will analyze teacher grade levels, content area, and years of teaching to identify the sample. I will use teacher surveys and one-to-one interviews to compare common themes to overall student achievement. Participants would be sixth through eighth grader teachers at [REDACTED] who teach English, mathematics, science, or social studies. Participants would be assigned a pseudonym to ensure their anonymity. The data I collect will be entered into a password-protected computer and Google documents provided by Virginia Tech. There will be minimal risk to participating teachers. The primary endpoint is to provide administrators and teachers with different teacher perceptions and experiences of leadership support of the transition, during the Covid-19 pandemic, to online teaching. A secondary endpoint will provide a framework for administrators to use as a resource when planning future virtual courses and professional development for teachers to effectively teach online courses.

With your support, I have included a consent for permission to conduct this study using data from [REDACTED]. A copy of the signed form will be shared with you. I thank you in advance for your consideration of my request and look forward to hearing from you. My contact information appears in this letter.

Respectfully,

Susan C. Badger, MBA
Doctoral candidate
Virginia Polytechnic Institute and State University

APPENDIX C: Introductory Email Requesting Participation in the Survey**SUBJECT: VIRGINIA TECH RESEARCH STUDY OPPORTUNITY**

Greetings,

My name is Susan Badger. I am a doctoral candidate in the Educational Leadership and Policy Studies program at Virginia Tech, working under the direction of Dr. Carol A. Mullen. The study will examine middle school teacher perceptions of how principals and assistant principals provided support for of the transition to online teaching during the Covid-19 pandemic. The specific purpose of this study is to investigate middle school teachers' perceptions and experiences of how education leaders supported them to effectively teach online. I will explore teacher perceptions of professional development for online instruction and whether support from leaders contributed to instructional effectiveness to teach online. To participate in this study, you must be an English, mathematics, science, or social studies for grades six through eight grades at [REDACTED]. You were identified as by the [REDACTED] staff as meeting the required criteria for this research study.

I am writing to invite you to participate in this research study. As a participant in the study, you would first read the Consent to Participate Study Form, and then respond to 20 survey questions via Qualtrix questionnaire. After completion of the questionnaire, respondents will be asked to volunteer to participate in one-to-one interviews via an electronic platform via Zoom or Google meet. The interviews will be audio-recorded and should take 30-45 minutes to complete. The research study will conform to the requirements set forth by the Virginia Tech Human Research Protection Program (HRPP), IRB#20-304. Your participation in this study will not affect, in any manner, your position as teacher or support staff member at the school in which I serve as the Coordinator of the Secondary Learning Center and administrator. Your responses to the survey and one-to-one interviews will be kept anonymous. Due to the involvement of the researcher as an administrator of a program that supports the school, any identifying factors that arise from the survey or interview will be kept confined to the conditions of the research study and will not be considered during any administrator/teacher interactions.

If interested in learning more about or participating in the research study titled, *An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic*, please click on the following link:

Thank you for your consideration in participating in this study. Please email me at [REDACTED] if you have any questions. I appreciate your time.

Sincerely,
Susan C. Badger, MBA
Doctoral candidate
Virginia Polytechnic Institute and State University

APPENDIX D: Informed Consent Sheet for Participants in Research Studies Involving Human Participants

Title of the Research Study: An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic.

Principal Investigator: Carol A. Mullen, Ph.D.

Co-Investigator: Susan C. Badger, MBA

I. Purpose of this Study

The main purpose of this study is to examine teacher perceptions and experiences of how education leaders provided support for online instruction during the Covid-19 pandemic. The specific purpose of this study is to investigate teachers' perceptions and experiences of how education leaders supported teachers to effectively teach online. The aim is to explore teacher perceptions and experiences of professional development and leader support for online instruction and whether teachers feel the development and support contributed to their instructional effectiveness to teach online.

II. Procedure

If you agree to participate in this study, you will be asked to complete a survey. Upon completion of the survey, you will be invited to participate in a one-to-one audio recorded interview via an electronic platform (Zoom) with the researcher, Ms. Susan Badger. You will be asked 15 questions by Ms. Badger, lasting no more than 30 to 45 minutes. This meeting will involve sharing your experiences and perceptions of teaching students English, mathematics, science, or social studies in an online environment, your perceptions of how education leaders supported you in the transition to online instruction, and your perceptions and experiences of professional development received relating to effective instructional strategies to teach online. The interview will take place at a mutually agreed upon time between you and Ms. Badger using the electronic platform Zoom. The audio-recording will be transcribed by a transcription service and you will be asked to complete an Interview Transcription Consent Form after reviewing the transcription.

III. Risks

The risks associated with participating in this study are considered to be minimal.

IV. Benefits

No promise or guarantee of benefits has been made to encourage you to participate. If the data that are collected from you during the above-mentioned interview are used for the doctoral dissertation, the co-investigator will provide you with a copy of the study results

and discuss the results with you after the conclusion of the study.

V. Extent of Anonymity and Confidentiality

Interviews will be conducted by the researcher, Ms. Susan Badger. In the participant letter, the researcher will explain the study and state there will be no negative repercussions to the participant if identifying factors were to arise during the study due to the relationship between the researcher and the participants. The actual interview and responses will be recorded and transcribed by the automated Zoom transcription. Each participant will be randomly assigned a four-digit number by Ms. Badger. Ms. Badger will keep an Excel Spreadsheet with the participants' name and four-digit code. Member checks will be used with the interviewees by sharing the transcribed interviews with the participants to ensure their perspectives have been recorded accurately. Upon transcription and verification, Ms. Badger will analyze the transcripts. Ms. Badger will store consent forms and audio recordings of interviews on her laptop, which is password protected and only accessible to Ms. Badger. All documentation will be deleted and/or shredded upon successful completion of the dissertation defense.

Please note that the Virginia Tech Human Research Protection Program (HRPP) may review this study's data for auditing purposes. The HRPP is responsible for overseeing the protection of the human participants in the research.

VI. Compensation

You will not receive any form of compensation for participating in this study.

VII. Freedom to Withdrawal

It is important for you to know that your participation in this study is entirely voluntary and that you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled. Also, your refusal to participate will result in no penalty or loss of benefits to which you are otherwise entitled. If you choose to withdraw from the study, any information about you and any data that you have provided will be destroyed promptly. You are also free to choose to not answer any question or to not respond to what is being asked of you, and this choice will result in no penalty or loss of benefits to which you are otherwise entitled.

Please note that there may be circumstances under which the investigator or co-investigator determines that you should not continue in the study.

APPENDIX E: Survey Questionnaire

Title of the Research Study: An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic.

Principal Investigator: Carol A. Mullen, Ph.D.

Co-Investigator: Susan C. Badger, MBA

Thank you for agreeing to be a participant in this study. Susan Badger is a doctoral candidate in the Educational Leadership and Policy Studies program at Virginia Tech working under Dr. Carol A. Mullen. The study will examine middle teacher perceptions of how principals and assistant principals provided support for online instruction during the Covid-19 pandemic. The specific purpose of this study is to investigate teachers' perceptions and experiences of how education leaders supported them to effectively teach online. The aim is to explore teacher perceptions and experiences of professional development and leader support for online instruction and whether teachers feel the development and support contributed to their instructional effectiveness to teach online. Criteria for participating in the study include being an English, mathematics, science, or social studies for grades sixth through eighth grade at [REDACTED]. You were identified as by the [REDACTED] staff as meeting the required criteria for this research study.

Middle School Teacher Perceptions and Experiences of how Principals and Assistant Principals Supported them to in the Transition to Online Instruction during the Covid-19 Pandemic Survey

1. What is the content you teach?
 - a. English
 - b. Mathematics
 - c. Science
 - d. Social Studies
2. What grade level do you teach?
 - a. 6th
 - b. 7th
 - c. 8th
 - d. 6th and 7th
 - e. 6th and 8th
 - f. 7th and 8th
3. How many years of teaching experience do you have?
Complete the blank with number of years
4. Did you have access to the internet?
 - a. At home only

- b. At school only
 - c. Both at home & school
5. If you only had access to the internet at school, did the principal or grade-level administrator provide you with a hot spot during the virtual instruction days?
- a. Yes
 - b. No
6. Did you complete the summer professional development, the Canvas Hike, provided by administration?
- a. Yes
 - b. No
7. If you did not complete the Canvas Hike in the summer, why?
- a. It was my summer vacation
 - b. I was nervous about learning Canvas
 - c. I can learn it on my own
 - d. Other
8. If you participated in the Canvas Hike, do you feel as though the training was efficient in transitioning to an online learning modality?
- a. Yes
 - b. Some
 - c. No
 - d. I did not participate in the Canvas Hike in the summer
9. When school opened, in what environment did you teach? (Do not consider when school was 100% online instruction)
- a. In person only
 - b. Online only
 - c. Blended - in person and online (students mixed in your sections)
10. What support do you feel that the principal gave in transitioning to an online instruction during the pandemic?
- a. A great amount
 - b. Some
 - c. Not a lot
 - d. None
11. What support do you feel that the grade-level administrator gave in transitioning to an online instruction during the pandemic?
- a. A great amount
 - b. Some
 - c. Not a lot
 - d. None

12. After using Canvas at the beginning of the school year, please rate your level of expertise.
 - a. Novice
 - b. Intermediate
 - c. Expert
13. Do you feel the principal was knowledgeable of Canvas to support you in online instruction?
 - a. Yes
 - b. Some
 - c. No
14. Do you feel your grade-level administrator was knowledgeable of Canvas to support you in online instruction?
 - a. Yes
 - b. Some
 - c. No
15. How much has your technology skills improved in the last year?
 - a. Improved a lot
 - b. Improved somewhat
 - c. Improved a little
 - d. Did not improve
16. How much do you feel you will use technology in the future, without it being mandatory by administration?
 - a. Daily
 - b. Weekly
 - c. Monthly
 - d. Never
17. Do you believe there is a difference in support from principals and grade-level administrators between in-person teaching and online teaching?
 - a. Yes
 - b. No
18. Do you believe that your principal gave you enough support as a teacher to effectively teach online?
 - a. Yes
 - b. Some
 - c. No
19. Do you believe that your grade-level administrator gave you enough support as a teacher to effectively teach only?
 - a. Yes
 - b. Some
 - c. No

20. Do you want additional professional development on integrating technology and using technology in your classroom?

- a. Yes
- b. No

21. Do you believe that you received enough professional development to effectively teach your content in the online learning environment?

- a. Yes
- b. No

APPENDIX F: Reminder Email to Participate in the Study**SUBJECT: REMINDER VIRGINIA TECH RESEARCH STUDY OPPORTUNITY**

Greetings,

A week ago, I sent you an email regarding my research for my doctoral program at Virginia Tech. Below is the email sent:

My name is Susan Badger. I am a doctoral candidate in the Educational Leadership and Policy Studies program at Virginia Tech, working under the direction of Dr. Carol Mullen. The main purpose of this study is to examine middle school teacher perceptions and experiences of how education leaders provided support for online instruction during the Covid-19 pandemic. The specific purpose of this study is to investigate middle school teachers' perceptions and experiences of how education leaders supported them to effectively teach online. The aim is to explore teacher perceptions and experiences of professional development and leader support for online instruction and whether teachers feel the development and support contributed to their instructional effectiveness to teach online. To participate in this study, you must be an English, mathematics, or science, or social studies teacher for grades sixth through eighth grade at [REDACTED]. You were identified as by the [REDACTED] staff as meeting the required criteria for this research study.

I am writing to invite you to participate in this research study. As a participant in the study, you would first read the Consent to Participate Study Form, and then respond to 8 survey questions via Qualtrix questionnaire. After completion of the questionnaire, respondents will be asked to volunteer to participate in one-to-one interviews via an electronic platform such as Zoom, or Google meet. The interviews will be audio-recorded and should take 30-45 minutes to complete. The research study will conform to the requirements set forth by the Virginia Tech Human Research Protection program (HRPP), IRB#20-304. If interested in learning more about or participating in the research study titled, *An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic.*, please click on the following link:

Thank you for your consideration in participating in this study. Please email me at [REDACTED] if you have any questions. I appreciate your time. Thank you.

Sincerely,

Susan C. Badger, MBA
Doctoral candidate
Virginia Polytechnic Institute and State University

APPENDIX G: Recruitment Email to Prospective Interview Participants

Dear _____:

I am a doctoral candidate in the Educational Leadership and Policy Studies program at Virginia Tech working under the direction of Dr. Carol A. Mullen. The topic of my dissertation is to investigate how education leaders supported middle school teachers in the transition, during the Covid-19 pandemic, to online teaching. The specific purpose of this study is to investigate middle school teachers' perceptions and experiences of how education leaders supported them to effectively teach online.

The main purpose of this study is to examine middle school teacher perceptions and experiences of how education leaders provided support for online instruction during the Covid-19 pandemic. The specific purpose of this study is to investigate teachers' perceptions and experiences of how education leaders supported teachers to effectively teach online. The aim is to explore teacher perceptions and experiences of professional development and leader support for online instruction and whether teachers feel the development and support contributed to their instructional effectiveness to teach online. As a teacher in grades sixth through eighth during the academic year 2020-2021 who taught during the pandemic and transitioned to online teaching in English, mathematics, science, or social studies, your participation in this study is requested.

Your participation in this study will not affect your position as a teacher at the middle school in which I serve as an administrator of a program which supports your students. Your responses to the one-to-one interview conducted by me will be kept confidential. Due to the involvement of the researcher as an administrator in a program that supports you as a teacher, any identifying information that arises from the interview will be confined to the conditions of the research study and will not be considered during any administrator/teacher interactions.

I am interested in your perceptions and experiences as a classroom teacher during the online instruction of the curriculum during the pandemic and what your perceptions and experiences were of leadership support during the transition to online teaching. The research study will conform to the requirements set forth by Virginia Tech IRB. Thank you for your consideration in participating in the study. Please email me at [REDACTED] if you are willing to participate.

Sincerely,

Susan C. Badger, MBA
Doctoral candidate
Virginia Polytechnic Institute and State University

APPENDIX H: Data Analysis Sample

Question 1

How do you define support?

provide assistance; stay positive

checking in regularly regarding stress or misunderstanding; don't be negative

support comes from different areas

support with classroom management; addressing student behavior when more than 1 teacher is having the same issue

when teachers see admin stepping it is helpful

when a teacher finds technology or program that works; that it's research based then having an admin sit down and find means of purchasing and implementing

is helpful; support with calling parents and guardians

new initiatives giving the means to allow for learning and implementing the imitative

giving realistic timelines

understanding that teachers are people; they have lives; they have families; support if we have to leave early and understand things happen

personal support if struggling just someone to talk to

support is listening

when someone or something gives you what you need to be successful

listening; I just want someone to listen and not try to fix it

positive reinforcements; aid/help whenever you are overwhelmed

some admin are negative

some are very positive and very helpful

listening; being there when needed; provide positive feedback

Question 2

Share with me your experiences with the online learning professional development

comfortable with online learning modality

Does not enjoy non interactive videos

rather have a teacher teach face to face

need teacher interaction

need to ask questions

pd we received is monotone and unhelpful

Canvas hike really helpful

Should have been implemented closer to the beginning of school year

needed more time to complete the modules and truly learn it

when teachers were in the building we could sit and discuss answer questions for each other

everything was simple to understand; organized

admin did a good job of explaining within the training

Canvas sandbox was very helpful

Could create 1 course and if they were 3 different levels high inclusion honors could create 1 in sandbox copy it and make changes for the other levels

need moderate hike for now

need more about blended learning

admin should monitor the training; some teachers didn't complete and others were having to pick up the slack'

Training over the summer; knew more about it when school started than others;

I'm not tech savvy so it would have been hard for me to start off the year; stressful without the summer training

tech 10s at 10 were great

very helpful; looked at other activities such as Ed puzzle and quizlet

Canvas hike was informative; wanted to know more detail

Canvas hike was great; I didn't learn everything; volunteered

I need to be organized so attending the training was helping me to organize what was going to happen in the school year

admin was always there to help;

ones that didn't attend training was behind; we had to help them

Not one set system in the spring; bad for students if I was using one platform and another teacher was using a different one

most difficult was hybrid vs virtual; we had kids that were both; it was hard to keep up with which kids were doing what and managing the

students that should be in the online sessions

Question 3

Share with me your experiences with online teaching during the pandemic

enjoyed virtual teaching

did not enjoy hybrid days

students were not able to interact

students did not watch the instructional videos

learning curve for all of us I am not a tech savvy person

I have to be shown more than once and play around myself a few times and we were just thrown into Canvas

I could use the same google link for all of my meetings for the entire year; that was helpful for me and the students

teaching from home was more challenging than teaching virtual at school

Materials like the active board is in my classroom

more variety of things that I felt like I could do that was more effective with teaching being in the building vs at home

More distractions at home

No camera on my laptop for a few days so the students couldn't see me; I did eventually receive a webcam

if in the middle of a virtual class if something wasn't working; the students and I would walk through and learn it together; the students were great at helping

Disappointing that not a lot of students would attend the virtual sessions

no consequences if students didn't attend virtual classes

virtual made things more difficult but it wasn't terrible

hardest thing of my 18 year teaching career; worst year as well;

very overwhelmed; felt like efforts were not good enough

SOL scores were the worst I have ever had; felt deflated

Had to rely on students to help me with what buttons to push

"It was very hard teaching online during a pandemic"

felt like I had better connections with my students;
 had better participation due to Pear Deck all students could answer at the same time; no one would see it but me
 used zoom instead of google meet had abilities to have private messages with students
 highest pass rate
 students that were intrinsically motivated on their own; love school; the ones who want to do homework they excelled
 students whose parents were already involved in their schooling; did great
 these students will always do great; even if they struggle with learning the will be doing great due to the support
 The kids who are not motivated; they do not have parental support for many reasons - work; overwhelmed; mostly gave up
 these kids didn't show up to the virtual sessions they may not have had internet; some half did work some not at all
 These students didn't feel confident enough to email their teachers and ask for help
 I like both in person and virtual; the quiet students participate more in a virtual setting;
 needs to be 1 or the other not both in the same section
 in a virtual setting students elaborated more; they would explain why
 chatty kids in person wouldn't be so chatty when we were all virtual

Question 4

Compare and contrast your experiences with in person teacher and online teaching

In person is much more efficient

students are accountable for attendance

students can ask questions

overall improvement with in person teaching

attendance if in person they know they have to be in the building; virtual oops I missed class no big deal I will just check later

having resources available

Trying to determine what is the best time for students for help with classwork; homework; not being available throughout the day to answer questions of students

determine what assignments and activities the students should complete while virtual vs in person was very difficult;

in person the smaller classes when hybrid was great; honors classes we could truly dive deep into the material and inclusion classes

we had more time to reinforce material

in person allows you to build relationships with students

students need in person bond especially those that are at a low level

virtual teaching made me feel like my students were numbers and not MY students

student must be motivated and the virtual instruction can be as effective as in person

my virtual classes were 5 days a week so I saw my kids every day; students attended my virtual classes at least 3 times

in person students were required virtual students were not required

attendance made learning difficult

students that were intrinsically motivated on their own; love school; the ones who want to do homework they excelled

students whose parents were already involved in their schooling; did great

these students will always do great; even if they struggle with learning they will be doing great due to the support

The kids who are not motivated; they do not have parental support for many reasons - work; overwhelmed; mostly gave up

these kids didn't show up to the virtual sessions they may not have had internet; some half did work some not at all

These students didn't feel confident enough to email their teachers and ask for help

I like both in person and virtual; the quiet students participate more in a virtual setting;

needs to be 1 or the other not both in the same section

in a virtual setting students elaborated more; they would explain why

chatty kids in person wouldn't be so chatty when we were all virtual

Key

1056

3505

4952

5636

5784

7689

APPENDIX I: IRB Approval Letter



Division of Scholarly Integrity and
Research Compliance
Institutional Review Board
North End Center, Suite 4120 (MC 0487)
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732
irb@vt.edu
<http://www.research.vt.edu/sirohcpp>

MEMORANDUM

DATE: July 6, 2021
TO: Carol Ann Mullen, Susan Carol Badger
FROM: Virginia Tech Institutional Review Board (FWA00000572)
PROTOCOL TITLE: An Investigation into How Education Leaders Support Teachers to Effectively Teach Online During a Global Pandemic
IRB NUMBER: 21-441

Effective May 26, 2021, 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: **May 26, 2021**

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.

Invest the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
 An equal opportunity, affirmative action institution

APPENDIX J: CITI Program Certificate

Completion Date 24-Sep-2019
Expiration Date 23-Sep-2022
Record ID 33112176

This is to certify that:

Susan Badger

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/?wed1eed29-7351-46fa-b98a-3fb96c673c56-33112176

APPENDIX K: CITI Program Certificate



Completion Date 29-Jan-2021
 Expiration Date 29-Jan-2024
 Record ID 33112177

This is to certify that:

Susan Badger

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Basic Responsible Conduct of Research Course
 (Curriculum Group)

Basic Responsible Conduct of Research Course
 (Course Learner Group)

1 - RCR
 (Stage)

Under requirements set by:

Virginia Polytechnic Institute & State University (Virginia Tech)

CITI
 Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w42c3ed9a-88b9-43da-b6c5-f326fe8b5687-33112177

APPENDIX L: Interview Protocol

Title of the Research Study: An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic..

Principal Investigator: Carol A. Mullen, Ph.D.

Co-Investigator: Susan C. Badger, MBA

Each interview will be conducted through an electronic platform (Zoom) by the researcher.

Interviewer:

Thank you for agreeing to be a participant in this study. I would like to explain the purpose of this study before we begin. The main purpose of this study is to examine middle school teacher perceptions and experiences of how education leaders provided support for online instruction during the Covid-19 pandemic. The specific purpose of this study is to investigate teachers' perceptions and experiences of how education leaders supported them to effectively teach online. The aim is to explore teacher perceptions and experiences of professional development and leader support for online instruction and whether teachers feel the development and support contributed to their instructional effectiveness to teach online. Your participation will require no more than 30 to 45 minutes. I will gather information from 10 to 40 [REDACTED] teachers in [REDACTED] in the form of interviews, then analyze the responses for common themes, similarities, differences, or patterns. These responses will be compared with other data sources such as the analysis of the survey responses.

Our interview today will be audio-recorded using a digital device. Any of your identifying information, such as your name will be coded with the pseudonym of your choice. Once our interview is completed, it will be transcribed. A copy of the transcription will be sent to you for your review. Upon reviewing the transcript, you may make changes in the transcription you believe are necessary on the Interview Transcript Consent Form. No one will have access to our interview data, your identifying information, or the transcripts from your interview, except the transcription service, the principal investigator, and the co-investigator. All documents, including the de-identified transcription from our interview, will be stored on a secured Virginia Tech Google drive, and destroyed two years after the successful completion of the study and dissertation defense.

You will not be compensated for your participation in the study. The risk to you as a participant in the study is minimal. The benefit of your participation in this study is that your participation, combined with that of other participants, will provide education leaders and teachers in the development of virtual course curriculum and instructional strategies for reading and mathematics in the online learning environment.

At any time, you are free to withdraw from this study with no penalty to you. Do you wish to participate? Do you agree to be audio-taped? Do you have any questions prior to beginning?

APPENDIX M: Interview Protocol

Interview Questions

1. How do you define support?
2. Share with me your experiences with online learning professional development, the Canvas Hike.
3. Share with me your experiences with online teaching during the pandemic.
4. Compare and contrast your experiences with in person teacher and online teaching
5. Give an example of how your principal supported you in the transition to online instruction from face-to-face instruction during the pandemic. Give an example of how your grade-level administrator supported you in the transition to online instruction from face-to-face instruction during the pandemic.
6. Share with me an example from the principal when you felt unsupported during the transition. Share with an example from the grade-level administrator a time when you felt unsupported during the transition.
7. Is there something specific that you have worked on or completed as a lesson or project in an online class that has made immediate changes in the effectiveness of your teaching because of leadership support?
8. What evidence do you have students are learning in online classes?
9. What evidence do you have students are not learning in online classes?
10. Do you want online classes to continue? Why or why not?
11. Do you want more professional development in online teaching? If so, what would you like training on? If not, why?
12. What else would you like to share with me about your perceptions or experiences of online teaching during the pandemic? What else would you like to share with me about your perceptions and experiences in regards to support you received or did not receive from the principal or grade-level administrator?

Thank you for being a part of this interview and contributing your expertise to this particular study. I will be contacting you in the future to review this transcript.

APPENDIX N: Verbal Consent Documentation Form for the Interview

Title of the Research Study: An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic.

Principal Investigator: Carol A. Mullen, Ph.D.

Co-Investigator: Susan C. Badger, MBA

For participants who are being interviewed remotely please complete the following section to document verbal consent:

Do you wish to participate?

Record Subject's Response: Yes No

Do you agree to be audio-taped?

Record Subject's Response: Yes No

Printed Name of Person Consenting

Signature of Person Obtaining Consent

Date

Printed Name of Person Obtaining Consent

APPENDIX O: Interview Transcript Verification Form

Title of the Research Study: An Investigation into the Perceptions of Middle School Teachers Regarding How Education Leaders Supported Them to Effectively Teach Online During a Global Pandemic.

Principal Investigator: Carol A. Mullen, Ph.D.

Co-Investigator: Susan C. Badger, MBA

Date: July, 2021

Enclosed you will find a copy of the transcription of our interview conducted on_____.

Please read the transcript and choose one of the options below.

After you have completed this form by marking option 1, option 2, or option 3, please sign and return via email. If I do not receive your form within a week of the date printed above, the information will be included in the study.

Thank you,

Susan C. Badger, MBA

Doctoral candidate

Virginia Polytechnic Institute and State University

Option 1:

I have read the transcription of our interview and agree that it can be used in its current state.

Option 2:

I have read the transcription of our interview and would like the following additions or corrections to be made before moving forward.

Option 3:

I have read the transcription of our interview and would like to withdraw from the study. With this option I acknowledge that the data from our interview will be destroyed.

Corrections or additions:

Interviewee Signature

Date