



Superintendents' Experiences with Distance Learning Practices in K–12 Public-School Districts in New York During the COVID-19 Pandemic

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Abstract: In early March 2020, the United States was first faced with the COVID-19 virus, which became a pandemic affecting 216 countries across the globe (Worldometers.info, 2020). This pandemic impacted approximately 1.5 billion learners globally by schools' closures and revised practices (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2020), and it required social distancing practices and school closures across the U.S. (Lieberman, 2020). Due to closures, public-school districts were tasked with creating immediate solutions for seamless learning. Many public-school districts implemented distance learning practices to meet the needs of quarantined students. The sudden shift from a traditional, in-person classroom to a distance learning setting challenged both faculty and students. This qualitative case study examines how superintendents in K–12 public schools shifted from on-site learning to distance learning practices during the pandemic. Thirty superintendents from K–12 public-school districts in two suburban counties of New York participated in an online survey. By mid-March 2020, according to the findings, distance learning was implemented in varying degrees. In addition, the study found that most faculty were prepared for online learning through professional development. Parental support, technology, and the inability to work independently were barriers to student learning. The findings suggest ramifications from the delivery of distance learning in the first months of the pandemic. In addition, the study found a need for increased professional development and solutions to distance learning barriers.



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Keywords: distance learning, K–12 education, coronavirus, COVID-19 pandemic, education practices, e-learning

Expériences des Surintendants en Matière de Pratiques de Formation à Distance dans les Districts Scolaires Publics de New York Pendant la Pandémie de COVID-19

Résumé: Au début du mois de mars 2020, les États-Unis ont été confrontés pour la première fois au virus COVID 19, qui a engendré une pandémie touchant 216 pays à travers le monde (Worldometers.info, 2020). Cette pandémie a eu un impact sur environ 1,5 milliard d'apprenants dans le monde en raison des fermetures d'écoles et des changements de pratiques (Organisation des Nations Unies pour l'éducation, la science et la culture [UNESCO], 2020), et a nécessité des pratiques de distanciation sociale et des fermetures d'écoles aux États-Unis (Lieberman, 2020). En raison des fermetures, les districts scolaires publics ont été chargés de créer des solutions immédiates pour permettre la continuité de la scolarité. De nombreux districts scolaires publics ont mis en place des pratiques de formation à distance pour répondre aux besoins des élèves mis en quarantaine. Le passage soudain d'une salle de classe traditionnelle à un cadre d'apprentissage à distance a mis au défi à la fois le corps enseignant et les élèves. Cette étude de cas qualitative examine comment les surintendants des écoles publiques de la maternelle à la 12e année sont passés de la formation en présence à la formation à distance pendant la pandémie. Trente directeurs d'écoles publiques de deux comtés de la banlieue de New York ont participé à une enquête en ligne. Selon les résultats, à la mi-mars 2020, l'apprentissage à distance était mis en œuvre à des degrés divers. En outre, l'étude a révélé que la plupart des enseignants avaient été préparés à l'enseignement en ligne dans le cadre de leur développement professionnel. Le soutien des parents, la technologie et l'incapacité à travailler de manière autonome constituaient des obstacles à l'apprentissage des élèves. Les résultats suggèrent l'existence de ramifications de la formation à distance dans les premiers mois de la pandémie. De surcroît, l'étude a révélé la nécessité de renforcer le développement professionnel et de trouver des solutions aux obstacles à la formation à distance.

Mots clés: formation à distance, éducation, coronavirus, pandémie de COVID-19, pratiques éducatives, apprentissage en ligne

Introduction

Prior to early March 2020, Americans' most recent contact with a novel communicable disease outbreak was swine flu, the H1N1 flu strain, in 2009–2010 (Uscher-Pines et al., 2018). The H1N1 pandemic, which affected children and young adults, caused states to enforce social distancing practices and short-term school closures. In early March 2020, the United States (U.S.) was again faced with a communicable disease outbreak when coronavirus, or COVID-19, became a pandemic affecting 216 countries across the globe (Worldometers.info, 2020). Public health measures for this pandemic called for social distancing practices and school closures throughout the U.S., and they affected an estimated 1.5 billion learners globally (Lieberman, 2020; United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2020).

Researchers agree that schools should continue to provide instruction when traditional brick-and-mortar schools are suspended due to events like natural disasters or pandemics (LaPrairie & Hinson, 2007; Rush et al., 2016). The Centers for Disease Control and Prevention (CDC) urged school districts across the country to plan for short- and long-term shutdowns (CDC, 2020), and in early 2020, schools across the U.S. had to abruptly end face-to-face student education and move to distance learning practices. These closures created uncertainty, so public-school districts created immediate solutions so student learning could transition to an off-site location. Many public schools had emergency plans and processes in place; therefore, many districts already had instructional technology responses prepared for natural disasters or pandemics (LaPrairie & Hinson, 2007).

In July 2000, Safe Schools Against Violence in Education (Project SAVE) was passed into law in New York, allowing schools to promote safer, more effective learning environments (New York State Center for School Safety, 2020). Every year, school

districts in New York create emergency planning and response plans for their education departments. Some of these emergency plans discuss education in the event of a school closure (New York State Center for School Safety, 2020).

At the beginning of the COVID-19 pandemic, many public-school districts initially implemented distance learning to meet the needs of their students. Due to the urgency of the pandemic, there was only a short time to prepare for and implement the distance learning strategies. This sudden shift challenged both faculty and students. For New York, “closures affected more than 4 million public, private school, and college students statewide” (Brody, 2020, p. 1). School districts across the state shutdown from March 16, 2020, through the end of the school year on June 26, 2020 (Brody, 2020).

Literature Review

The Internet and other technologies remove walls created by distance. These digital and electronic platforms provide wide access to information, knowledge, and skills (Ozdamli & Uzunboylu, 2015). Technology has the capability to provide innovative ways for educators to teach, collaborate, communicate, and interact (Minsheiw & Anderson, 2015). We live in an evolving technological era. Therefore, it is an asset to understand the strengths of communicating and exchanging information through technology (Deming, 2015). With the integration of modern technology, primary and secondary teachers can use virtual platforms to teach and communicate with students and their families (Ames et al., 2020).

The U.S. has used traditional schooling methods since the 1800s (Avrich, 2014; Edwards, 2018; Mills & McGregor, 2014). The traditional classroom teacher (the moderator) controls the flow of information received by the students (Tularam, 2018). Online learning was not a term used until the mid-1990s when a learning system was created that later developed into Blackboard (Singh & Thurman, 2019). At that time,

online learning was based on the uploading of documents. We now use terms based on the evolution of online learning, such as: online classes, e-learning, online education, and blended learning (Singh & Thurman, 2019). According to Tularam (2018), online learning's teacher-led approach includes an instructor's lectures and students present in an online environment.

The growth of distance learning has been explored in several studies (Ertmer & Koehler, 2015; Richardson et al., 2016; Richardson et al., 2015). Distance education is defined as: "education that uses one or more technologies to deliver instruction to students who are separated from the instructor and support regular and substantive interaction between the students and the instructor either synchronously or asynchronously" (Trout, 2020, p. 2).

Although there are significant debates surrounding the concept of online learning, technology is the most clearly defined aspect of this type of learning process. Regardless of whether it is a blended learning or e-learning environment, online learning must include technology in the instruction process. Online learning can be defined as classes that are offered completely online (Singh & Thurman, 2019). Today, students across the world study at a distance (Ames et al., 2020; Barbour, 2017; Buckingham, 2017). Since the start of the 21st century, the use of online courses and virtual schools has increased; however, there is a lack of research on the effectiveness of online instruction in the K-12 learning environment (Harris-Packer & Ségol, 2015).

Technology in education includes many devices (i.e., mobile devices and phones, videos, slideshows, documents, webinars, chats, and message forums) and systems used in the physical classroom or an online learning environment (Giovanis, 2015). Harmes et al. (2016) defined educational technology as "digital devices, software, and connectivity that allow the use of digital content in the classroom" (p. 162). Technology

gives teachers an opportunity to use different applications and methods for teaching (Balta & Duran, 2015). Teachers use multiple sources of technology to encourage learning in brick-and-mortar school settings, as well as in distance learning environments (Ames et al., 2020).

Many studies have been conducted on the growth of distance learning in education (Ertmer & Koehler, 2015; Richardson, et al., 2016; Richardson et al., 2015). Current literature regarding online K–12 schools stated that the only instance of online education in K–12 is seen where students are taking supplemental online courses or attending full-time online courses through charter schools, not public schools (Ahn et al., 2015; Barbour, 2017; Borup et al., 2019). According to Harris-Packer and Ségol (2015), students enrolled in distance learning courses performed as well as or better than students in traditional courses. It was suggested, by these researchers, that the method of instruction is less important than its delivery. Researchers, concentrating on studies in Canada, indicated that K–12 online environments typically utilize asynchronous instruction (Barbour, 2013; Barbour & Adelstein, 2013). However, there is limited research on K–12 online learning environments with synchronous instruction (Barbour, 2015). In the synchronous learning environment, students can attend a live class, teachers can give instant feedback, and the class can participate in real-time interactions. Conversely, asynchronous learning is when content is posted to the learning environment. Students work independently rather than participate in real-time interactions (Dhawan, 2020); although, some of the learning activities in an asynchronous environment can have interactions that take place offline by the instructor or students (Dhawan, 2020).

There have been some K–12 programs that operated exclusively online before the COVID-19 pandemic. However, since the pandemic, public education has seen a shift in the traditional norms for delivering instruction. In 2019, most classrooms used pencils,

paper, and physical textbooks. Today, to adhere to social distancing guidelines from the Center for Disease Control and Prevention (CDC), many students use laptops to attend class via Google Classroom, Microsoft Teams, or Zoom, or attend a hybrid model of in-person and online instruction (Economic Policy Institute [EPI], 2020). To ensure the continuation of education during the pandemic, distance and digital learning was implemented throughout the world (CDC, 2020). Schools were forced “to implement distance education or online learning, e-learning, distance education, correspondence education, external studies, flexible learning, and massive open online courses (MOOCs)” (Rasmitadila et al., 2020, p. 91).

Public schools established learning management systems (LMSs) to achieve a synchronous or asynchronous learning approach (Hunter & St. Pierre, 2016; Rasmitadila et al., 2020). All members of the educational organization, from administration to faculty, collaborated to ensure that student education remained a top priority. According to Basilaia et al. (2020), some schools needed distance learning capabilities and educational platforms to simultaneously connect with and educate students. This required reliable Internet connection and lectures that were compatible with various devices. In addition, lectures needed recording capabilities and instant feedback options (Basilaia et al., 2020). These factors were significant changes from the established educational system practices.

During the pandemic, Dhawan (2020) found that “online learning modes can rescue us from these hard times” (p. 11). Strengths included flexibility in time and location, student centeredness, availability of online tools, and customization to learners’ needs. In addition, teachers would benefit from the ability to combine audio and video in communicating with their students (Dhawan, 2020). However, Dhawan (2020) found that “direct communication and human touch were lost” (p. 12). Due to the new forms of instruction, families, students, and teachers were challenged by the diminishment of

essential social skills, human contact, and social interactions (EPI, 2020; Vegas & Winthrop, 2020).

Prior to the pandemic, researchers explored student regression in academic skills during the summer months. Some studies noted that students may sustain their learned knowledge by participating in summer reading programs (Kilpatrick, 2016; Vegas & Winthrop, 2020). According to Soland et al. (2020), preliminary estimates revealed that COVID-19 impacted students at the start of school in the following ways: (1) 30% of their gains lost from the previous year in reading; (2) 50% of their gains lost from the previous year in mathematics; and (3) further impacts from major absences in school.

In the U.S., from May 2020 to June 2020, at least 80% of students used online resources for schools and 20% used packets sent to their homes (McElrath, 2020). These numbers may have been impacted by digital inequality, and students living in high-income vs. low-income homes. Digital inequality means that some students do not have adequate access to Internet and/or computers for each child in the household (Woolley et al., 2020). Other technical difficulties may also affect students' experiences and learning (Borup & Stimson, 2019; Dhawan, 2020; Lai, 2017; Rehn et al., 2018). In addition, learners vary in capability and confidence (Dhawan, 2020; Rehn et al., 2018).

Researchers discuss a relationship between teachers and technology (DiPietro et al., 2008), making it important for educators to identify the technological tools used to address course objectives. In addition, educators must be aware of students' challenges regarding technology access and use (DiPietro et al., 2008; Lai, 2017; Rehn et al., 2018). Rasmitadila et al. (2020) stated that teachers must include various instructional methods, media, applications, and motivations when they are in front of their students. Some of the tasks that teachers teach online may differ from the face-to-face environment. Educators should consider the following when preparing to teach online:

(1) instruction, (2) content, (3) motivation, (4) relationships, and (5) mental health (Martin, 2020). Therefore, teachers must be able to “overcome all the problems that occur in online learning responsively so that the learning continues to achieve the targets set” (Rasmitadila et al., 2020, p. 92).

This qualitative case study explores superintendents’ experiences with implementing distance learning practices, professional development provided to teachers, and barriers for students in K–12 public-school districts in two counties located in New York during the pandemic.

Research Design and Methods

The qualitative case study was selected for this research because the goal of the study was to “uncover and understand the experience of the phenomenon from the participants perspective” (Merriam & Grenier, 2019, p. ix). Qualitative research focuses on how people comprehend and encounter the world in a particular time and context (Merriam & Grenier, 2019). The qualitative case study focused on how superintendents in K–12 public schools shifted from on-site to distance learning practices during the COVID-19 pandemic. According to Wellner and Pierce-Friedman (2019), “the case study is designed to bring the researcher to a deeper understanding through either initial investigation or ongoing research, which adds depth to what is already known about a phenomenon to be examined” (p. 84). The case study research was conducted in natural settings. It is bounded by space and time (Snyder & Dringus, 2014). The study’s theoretical framework of constructivism was utilized as a guiding tool to view the study’s problem.

According to Vygotsky (1978), learning, which is a social activity, is enhanced as individuals share ideas and/or skills during developmental stages and social engagements. The constructivist theory of learning was based on the idea that learning

takes place when individuals exchange ideas (Burnett, 2010). Purposeful interactions and human brain stimulation help individuals construct meaning from their environment and world (Ippolito, 2015). According to the constructivist theory, meaningful learning takes place through engaging activities, experienced outcomes, and reflection (Vygotsky, 1978). This, in turn, promotes knowledge construction through learning technologies (Frohberg et al., 2009). This research design allowed the researcher to understand the superintendents' implementations across public-school districts in relation to distance learning practices. This key step identified factors that facilitate or impede student learning. In addition, it enabled superintendents and educators to design and prepare improved professional development opportunities for teachers in the case of a pandemic or other disaster. This research asked:

- How did superintendents of public-school districts in New York implement distance learning practices during the pandemic? What were the ramifications of these practices?
- How and what types of professional development were implemented to address distance learning practices? Did faculty feel prepared?
- What barriers were present during the COVID-19 pandemic that prevented students from learning through distance learning settings? How did the school district lessen the impact of those barriers?

This qualitative case study surveyed 30 public-school district superintendents in two counties in New York. First, it examined the New York superintendents' implementation of distance learning practices during the pandemic. Second, it explored initiatives, if any, related to professional development. Third, it identified barriers faced by students in the distance learning setting. New York was selected because of the researcher's location and the pandemic's impact on the state.

Superintendents from K–12 public-school districts (N = 117) in two suburban counties in New York were invited to participate in an online survey. The superintendent of each school was contacted via e-mail due to COVID-19 precautions. They were surveyed regarding their district’s implementation of distance learning practices. The e-mail also contained a consent form and a link to a SurveyMonkey online survey (see Appendix A). The superintendents and participating school districts were anonymous when completing the survey, which ensured confidentiality and anonymity. The superintendents had three weeks to complete the survey. A second e-mail was sent one week after the initial e-mail to remind superintendents to complete the survey. Thirty superintendents (out of a total of 117) completed the survey, resulting in a 25.6% response rate. The online survey instrument was comprised of multiple choice and open-ended questions (see Appendix A) on distance learning practices, professional development, and barriers for students when learning at a distance.

The researcher used NVivo to code and identify themes and/or trends in the data (Roller & Lavrakas, 2015). Themes were identified based on the implementation of distance learning in the school districts, professional development offerings, and barriers for students when learning at a distance. Coding data involved theme analysis and examination of information. Coding required asking questions while analyzing information to identify themes. Codes were developed, analyzed, and revisited to ensure accuracy.

Results

This research was grounded by Vygotsky’s (1978) constructivist theory of learning as a theoretical basis for how learning takes place, in a meaningful way, through engaging activities, experienced outcomes, and reflection. Connections between learning and constructivism supported this study because the research intended to delve into how

superintendents responded to student learning as education shifted from face-to-face learning to online learning during the pandemic. The study examined how distance learning was provided and the barriers to education. These ideas coincide with Vygotsky’s theory, which states that learning occurs through engagement with activities. Survey responses were entered into NVivo and themes were established for every question. Commonalities between themes and outliers were examined. The questions focused on distance learning practices, professional development, and barriers faced by students when learning at a distance. Factors were also identified to help educators plan for future pandemics or similar events.

A total of 30 superintendents from 117 public-school districts participated in the survey. The school districts were in two counties in New York. Sixty percent of the districts were in one county and 40% were in the other county. Student population was as follows: 23% of the public-school districts had a student population of less than 1,000 students; 53% had a student population between 1,000 and 5,000 students; 17% had a student population of between 5,000 and 10,000 students; and 7% had a student population between 10,000 and 15,000 students.

Table 1

Superintendent Participation by County in New York

County	Superintendent Participation
County 1	18 public schools
County 2	12 public schools

Table 2

Percent of Superintendent Participation by Student Population of Public-School District

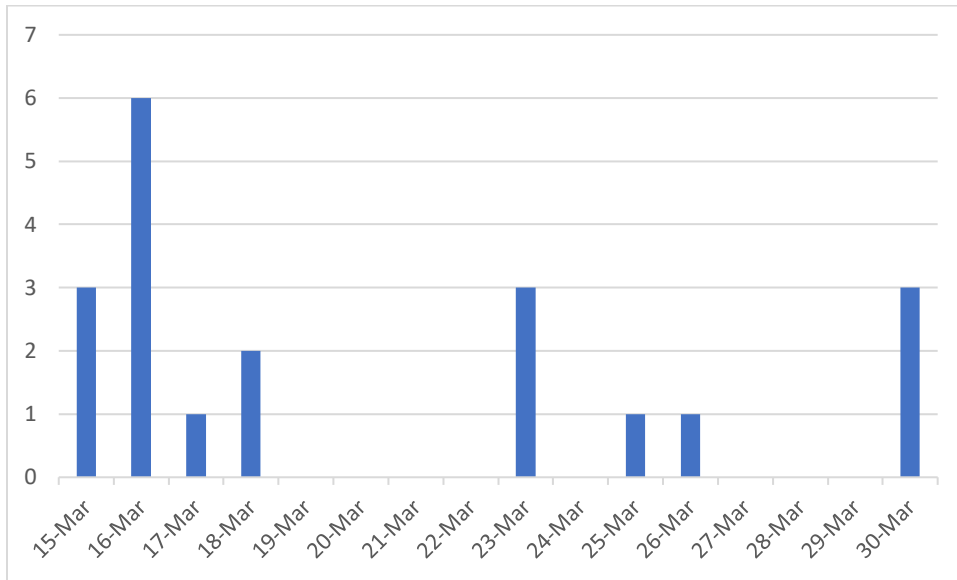
Size of Public-School District (by student population)	Superintendent Participation (by per cent)
Less than 1,000	6.9%
1,000-5,000	15.9%
5,000-10,000	5.1%
10,000-15,000	2.1%

Superintendents were asked whether their district has issued Chromebooks or iPads. They were asked to clarify what grades within the K–12 district had access to these technologies. Seventy-seven percent (77%) of school districts indicated that their students had access to district-issued Chromebooks or iPads. Twenty-three percent (23%) did not have access. The findings indicated that most of the school districts provided equipment to their students during the pandemic.

This information illustrated issues regarding online learning in 23% of the schools. Some public schools may not have the financial means to provide each student with a Chromebook or iPad. Therefore, these students may be at a disadvantage for distance learning. The findings indicated that this technology would allow learning to be more accessible to K–12 students. School districts that do not provide the means to access the technology will have students who cannot take advantage of this educational initiative.

Figure 1

Implementation of Distance Learning Practices by Days in March



As a result of the pandemic, school districts implemented distance learning practices at varying times and degrees throughout March 2020. During the first few days of school closures throughout New York, 67% of the school districts implemented distance learning practices. The remaining school districts implemented distance learning practices during the second week of the closures.

Fifty percent (50%) of the school districts sent learning packets home as they started to implement distance learning. The other half of the school districts implemented distance learning through Google Classroom or posted assignments to a website in a synchronous environment. The superintendents noted several reasons why the approach to distance learning improved each week. First, some districts provided professional development to teachers; therefore, the educators were more familiar and comfortable with the distance learning practices. Second, some superintendents indicated that distance learning improved after the distribution of devices like

Chromebooks and iPads. Third, superintendents noted that each week presented opportunities to identify and implement effective approaches to short- and long-term learning for their K–12 students.

The findings indicated that most of the school districts acted swiftly in implementing distance learning practices. However, the implementation was varied and at different degrees. These findings may reflect on students' locations within the two counties in New York. Students may have received different responses to distance learning based on the district. Other students may have received a different level of education. For example, there is a significant discrepancy on education if one district distributed packets and the other district hosted live sessions on Google classroom for students with a district-issued Chromebook.

This study aimed to examine how distance learning was provided to students. One survey question asked if school districts used Google Classroom for asynchronous instruction and/or if Google Meet, Zoom, or Microsoft Teams platforms were used for synchronous instruction. Ninety percent (90%) of school districts were using Google Classroom for asynchronous instruction. Regarding synchronous instruction, 97% of school districts were using at least one of the three platforms for live meetings.

The findings indicated that almost all the school districts surveyed were using at least one of the three options for synchronous learning. In addition, a significant number of districts were using Google Classroom for asynchronous learning for students in K–12 public-school settings. This question did not elicit in what aspect of Google Classroom was being used. Some teachers may have utilized the platform without being proficient in its use.

Superintendents were asked if they felt that faculty and staff were prepared for distance learning during the pandemic. Fifty-three percent (53%) felt that their faculty and staff

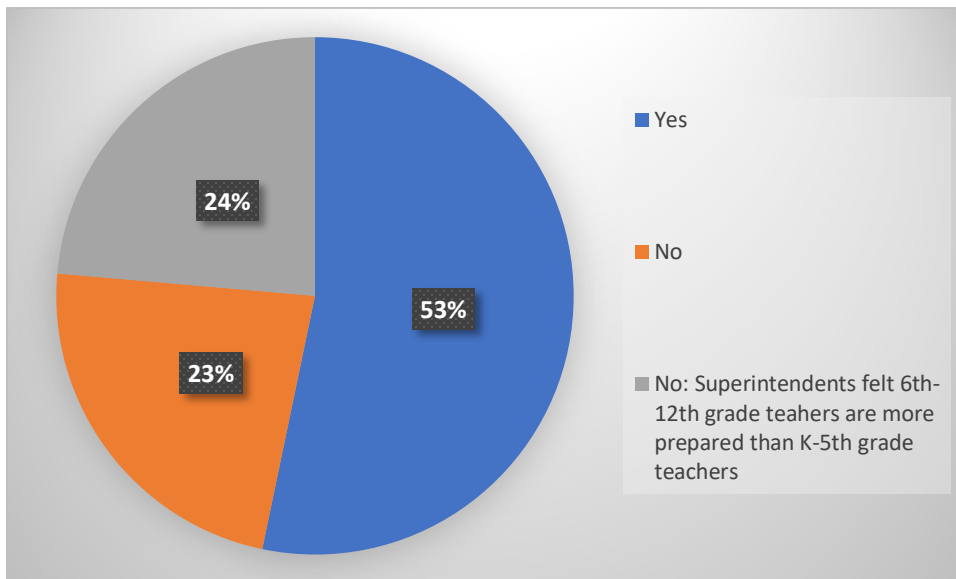
were prepared. Of the 47% that said no, half of them felt that faculty at the secondary level were more prepared than K–5 teachers. Many superintendents commented that teachers in grades 6–12 had a better understanding of using digital learning platforms to drive instruction and teachers in grades K–5 had little or no experience.

This finding revealed a divide in responses regarding teacher preparedness.

Superintendents felt some faculty were not prepared. In addition, they felt that the K–5 teachers were not fully prepared for distance learning. The responses to this question were split, which indicated that not all teachers were prepared for the unavoidable move to distance learning. This question indicated that teachers in the elementary grades need more training and development opportunities to be able to educate their students in the same capacity as those in the higher grades.

Figure 2

Teacher Preparedness in Distance Learning Practices



Other research questions asked how professional development was administered to teachers and staff. Superintendents were asked if professional development was provided to prepare teachers for distance learning. One hundred percent (100%) of the

districts indicated that professional development was given to teachers to advance distance learning practices. The school districts had various degrees of professional development implementation, number of offerings, and topics. Most of the districts' professional development topics focused on the use of different distance learning platforms. Of the 30 school districts that received professional development before the pandemic, 23% received professional development on distance learning and resources. The findings indicated that all districts offered their teachers professional development on ways to educate students through distance learning platforms. Some of the districts required professional development opportunities every week. Other districts offered it on conference days and required the training for teachers who were unfamiliar with distance learning practices. The discrepancy between district requirements is problematic. Some teachers may be intimidated by learning technology, opting not to take advantage of optional professional development offerings.

Superintendents were asked if they felt that students were able to learn through distance learning. Of the 30 surveyed, 60% felt that students were not able to learn in this manner. In addition, all the superintendents who answered "no" added that the following types of students may have experienced difficulties with distance learning: students with disabilities, needy students, students with emotional issues, English language learners, students who are not task oriented, and students with COVID-19 issues in their house.

Superintendents were also asked if students would be at an educational disadvantage by the school year's abrupt ending and the distance learning requirement during the pandemic. There was a divide between the "yes" and "no" answers. Some superintendents typed "maybe" in the comment box. The superintendents across the study indicated that a global pandemic will not put students at an educational

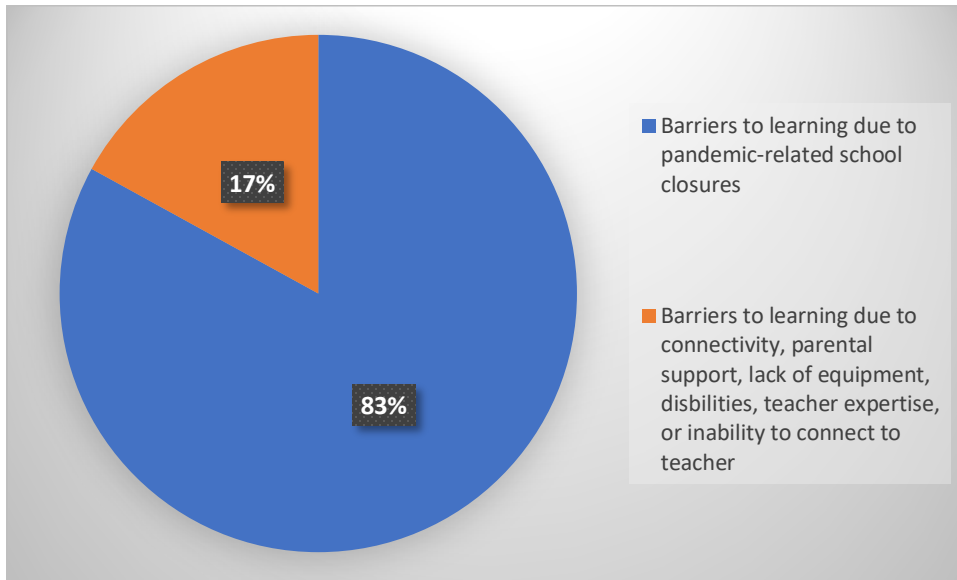
disadvantage. Instead, they felt that, at the time of the study, it was too difficult to assess the negative impact(s) of the COVID-19 pandemic on the student population.

These findings revealed many reasons why it may be hard for students to learn at a distance. Due to the pandemic, distance learning was the only educational option for all students. The superintendents who indicated that students are unable to learn at a distance gave examples as to why this type of learning environment would not be feasible. Students who are most at risk for learning at a distance are those who require either academic or social support in a regular school setting. The superintendents also indicated that students were at a disadvantage by learning at a distance. However, they felt that this may not be apparent in the short term. With the implementation of distance learning in schools, teachers are aware of the differentiation in our schools' student body. Therefore, teachers must offer differentiations in learning, even in a distance learning environment.

Students faced several barriers in learning due to the immediacy of the pandemic-related school closures. Eighty-three percent (83%) of the superintendents indicated barriers. The other 17% noted specific barriers like connectivity issues, parental support, lack of equipment, inability to connect to the teacher, disabilities, and teacher expertise. The survey asked how the school districts eliminated or lessened the impact of barriers. One hundred percent (100%) of the superintendents shared ways in which the school district helped students learn from a distance. Some school districts provided equipment, hardware, and access to hotspots, engaged students in regular meetings through the telephone or computer, and/or arranged for mental health teams to support students.

Figure 3

Barriers to Distance Learning



The findings indicated that superintendents identified and addressed barriers to learning so all students could be educated at a distance. The barriers focused on hardware and software. As indicated, not every school district was able to provide equipment. Therefore, this issue was a strong barrier in distance learning.

Discussion

In this study, superintendents from 30 public school districts in New York worked quickly to provide students with educational resources during the COVID-19 pandemic. The analysis of the surveys found that the onset of the pandemic (March 2020) forced all 30 superintendents to act immediately or within one week to provide education to K–12 students in their public-school districts. Some schools distributed educational packets distributed to students as an initial distance learning practice. Other districts (77%) indicated that their students had access to district-issued Chromebooks or iPads. Of those districts, 23% gave access to students in grades K–12.

This study found that school districts had various levels of response, including immediate use of distance learning practices, asynchronous learning via Google Classroom, or at-home learning packets. Ninety percent (90%) of the school districts used Google Classroom for asynchronous instruction (three districts did not). Regarding synchronous instruction, 97% of the school districts used at least one of three platforms (i.e., Google Meet, Zoom, or Microsoft Teams) for live meetings. These numbers mirror U.S. Census Bureau data (McElrath, 2020) indicating that at least 80% of U.S. students were using online resources for schools while and the other 20% were using packets sent to their homes from May 2020 to June 2020. The only difference between this study's findings and the U.S. Census Bureau data (McElrath, 2020) is that the school district percentages in this survey began in March because New York was one of the first states affected by the pandemic.

Even with the stay-at-home order, the study's 30 school districts were able to provide education to their students. As indicated by Trout (2020), the use of distance education allows for different technologies to deliver instruction to students who are separated from their instructor. The varied forms of distance learning allowed teachers to teach and communicate with students (Ames et al., 2020). Public-school districts could continue educating their students at the start of the pandemic; however, the way they were educated and through what variation of distance education were determined by the superintendent of each public school district.

An unanticipated finding of this study was that 77% of the school districts provided educational hardware (Chromebook or iPad) for their students. This large percentage may not be a representative number because only 30 of the 117 public-school district superintendents from the two surveyed counties answered the questionnaire. It was also unclear if this equipment was already in place or if the districts purchased and distributed new equipment at the start of the pandemic. As Woolley et al. (2020)

suggested, the number might have been higher if not for disparities between students' home incomes and digital inequalities (Internet and/or computer access for each child in the home).

Additional findings indicated that professional development for faculty, specific to the delivery of online education, was implemented in the public-school districts. There was an almost even split between the surveyed superintendents regarding the question of preparedness of instructors to move to distance education: Fifty-three percent (53%) of the respondents felt their faculty and staff were prepared; 47% did not feel their faculty and staff were prepared. Of the 47%, almost all the superintendents felt that the secondary level faculty and staff were prepared, but they noted that the K–5 teachers were not as prepared for distance learning practices. Another intriguing result regarding professional development was that all the school districts indicated that teachers received professional development to help in distance learning practices. It is unclear on what topics and what types of development were provided. The findings also indicated that the school districts varied on the implementation, frequency, and topics of professional development. As stated in the literature, teachers must be able to use different instructional methods, different media, and/or different applications (Rasmitadila et al., 2020). Therefore, these topics should be covered in professional development.

The findings of the study revealed barriers that may have prevented students from receiving education through distance learning platforms. Barriers included connectivity issues, parental support, lack of equipment, inability to connect to the teacher, disabilities, and teacher expertise. Some of the school districts were able to eliminate or lessen the impact of these barriers by providing equipment, hardware, and access to Wi-Fi hotspots, engaging students in regular meetings, and arranging mental health teams for students impacted by these barriers. However, other school districts were

unable to provide educational opportunities for these students. For example, school districts may have been unable to educate students if financial limitations prevented the district from distributing hardware. Digital inequality can be addressed if students across all the districts have the same exposure and access to Chromebooks and online learning.

Several superintendents stated that parental support was a barrier. In some cases, parents did not have the time or knowledge to assist their children in this new digital environment. School districts should provide education and resources to help parents cope with this form of education. The Economic Policy Institute (2020) stated that families, students, and teachers are also experiencing challenges with a lack of essential social skills. Schools are part of the “village” that develops students. Across the globe, students and their guardians are suffering from this move to distance education because they rely on the care and security provided public schools (Vegas & Winthrop, 2020).

Superintendents also reported that some students were at a disadvantage in a distance learning environment. As explained by several researchers, technical difficulties experienced by students can affect their learning (Borup & Stimson, 2019; Dhawan, 2020; Lai, 2017; Rehn et al., 2018). The Economic Policy Institute (2020) stated that online learning and teaching is only effective if students have access to the Internet and computers. In addition, teachers must receive proper training in online instruction.

Furthermore, all learners are not the same (Dhawan, 2020; Rehn et al., 2018). Differences can include disabilities, students with high needs or emotional issues, English language learners, students who are not task oriented, and students with COVID-19 issues in their house. The Economic Policy Institute (2020) suggested that learning styles and outcomes vary greatly; a number of factors that may shape how a child learns.

Certainly, additional research in the area of parent support would help prepare K–12 school districts for distance learning and would give parents tools to support their children in this environment.

An unexpected result identified in this study was that many superintendents were unsure how to answer the survey question regarding how the pandemic would impact their students in the future. Prior to the switch to online instruction and learning, schools were concerned with students' regression in academic skills. Research showed that students lose learned information during the summer months; yet they have an opportunity to sustain their learned knowledge by participating in summer reading programs (Kilpatrick, 2016). Many of the superintendents felt that all students would face disadvantages in their academic careers due to the uncertainty caused by the pandemic. In addition, the superintendents felt that it was and will be difficult to assess the pandemic's negative impact on education. More research is needed in this area as the COVID-19 pandemic continues. Soland et al.'s (2020) research predicts that after a year of distance education due to COVID-19, and the summer break before the next school year starts, students could start the next year with 30% of their gains lost from the previous year in reading and 50% of their gains lost from the previous year in mathematics. According to Soland et al. (2020), these percentages are further impacted by extended school absences, which can lead to greater learning losses.

The current study assessed how distance practices were executed in K–12 school districts. Future research should explore how these distance practices will be advanced, maintained, and/or reintegrated. Also, future research should compare the academic standing of students from different school districts. As observed in this study, the implementation of distance practices differed between districts. Therefore, future studies should examine these differences between states and countries.

Conclusion

This qualitative case study provided an understanding of the distance education practices implemented during the initial wave of the COVID-19 pandemic, from March to June 2020, by 30 superintendents of K–12 public schools districts in two counties located in New York. This article explored education and the COVID-19 pandemic, as well as superintendents' ability to implement distance learning methods for their K–12 public-school students. Overall, the pandemic presented these districts with unpredictable challenges.

The findings indicated that superintendents implemented varying approaches to distance learning to educate their students (Ames et al., 2020; Buckingham, 2017; Rasmitadila et al., 2020). As discussed, 77% of the school districts supplied students with Chromebooks or iPads. Teachers and staff received various forms of professional development training. The pandemic has taught us that applications and technologies must match the educational goals. Mandatory professional development with K–12 teachers will help districts assess applications, technologies, and educational initiatives. Professional development can focus on innovative subjects on the use of different platforms, tools to engage students in a distance learning environment, solutions to managing problems in an online classroom, or motivating students in Google Classroom. Superintendents should utilize faculty and staff to prepare contingency plans to face future challenges. Using the study, educational professionals can also discuss solutions to barriers in distance education (i.e., access to technology, parental support, absences).

The study presented several limitations. First the study surveyed 30 of the 117 K–12 public school districts in the two participating counties. This is a small percentage of the actual school districts within New York. The results may differ if the research included

other districts in the state or other states in the U.S. In addition, this study was a case study that detailed superintendents from two counties in New York. Due to the limited number of participants, generalizations may not be valid. The findings give insight into methods and means used in providing alternative education for students in public schools. Future research should evaluate the effectiveness of these distance learning practices.

Barriers to education include access to technology, parent support, and digital inequalities. Research should explore the educational resources available to students, families, and public-school districts. Studies should focus on providing K–12 students with equal access to distance learning environments through reduced barriers and increased opportunities, particularly during an event like a pandemic. In addition, researchers should examine the academic and social standing of K–12 students to understand student needs and provide tools to achieve success.

Future studies should examine the role of superintendents in preparing for challenges, and their experience with online learning and technologies. Analyzing this information may provide insight and conclusions about how the superintendents could have responded to the pandemic. Some superintendents' reaction to the pandemic may have been influenced by their experience with technology and online learning. Additionally, some superintendents may have been in their role for a longer time, allowing them to provide more efficient guidance to their teachers during this pandemic.

Technology will help us face future disasters (Meyer & Wilson, 2011). The results of this study should influence administrators and faculty to be proactive in their technology use, allowing educators to seek innovative ways to educate their students. Public-school districts should survey and examine their successes and areas for growth as identified during the pandemic. Faculty and administration should analyze diagnostic tests and

tools regarding each student's academic and social standing. In turn, the district can provide students with resources based on these standings. Public-school districts can use the online teaching experience during the pandemic to create a higher level of preparedness for future events. In doing so, the district can help children advance and grow during an unforeseen event.

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Appendix A

Distance Learning for Long Island School Districts

Welcome to My Survey

Introduction

My name is Dr. Kimberly Roff, an Associate Professor at Touro College. I am sending forth this communication in an effort to recruit for a study of Covid-19 on our teaching and learning practices for Long Island School Districts utilizing distance learning methods. Your participation is completely voluntary, and I am here to address your questions or concerns at any point during the study.

Eligibility

You are eligible to participate in this research endeavor if:

1. You are a Superintendent of a Long Island school district.
2. Your school district is located within Nassau or Suffolk County.

Activities

Participating in this study will include a 5-minute survey online through Survey Monkey.

Risks

This research contains no known risks to participants. In order to decrease or minimize risk participants can choose to omit any question and/or stop participating at any time during the research.

Benefits

There are no direct benefits if you choose to participate in this study. However, potential benefits include helping school districts structure ongoing professional development for teachers regarding distance learning procedures.

Privacy and Confidentiality

In this study, certain identifying/private information may be collected. Any information you provide will be kept confidential to the extent allowable by law. Some steps I will take to keep your information confidential are: I will use Survey Monkey for the online survey. There is no identifying information linked to you.

I will secure your information with these steps and your involvement in this study will remain anonymous and will not affect your current or future employment in the district. Your participation is voluntary. All submissions are anonymous. This information will be password secured.

How the Results Will Be Used

This study will be shared in a journal article and will be available to be read.

Contact Information

If you have questions, you can contact me at: kimberly.roff@touro.edu or you can call at 631-495-5668.

If you have questions about your rights in the research or if a problem or injury has occurred during your participation, please contact the NCU Institutional Review Board at irb@ncu.edu or 1-888-327-2877 ext. 8014.

Voluntary Participation

If you decide not to participate, or if you stop participation after you start, there will be no penalty to you: you will not lose any benefit to which you are otherwise entitled.

Question Title

1. Have you read the informed consent, and do you agree to participate in this survey?

- Yes
- No

2. In which county is your school located?

- Nassau
- Suffolk

3. How many students are in your school district?

- 15,000–20,000
- 10,000–15,000
- 5,000–10,000
- 1,000–5,000
- Under 1,000

4. Do your students have district-issued Chromebooks or iPads?

- Yes
- No
- What grades have access to them?

5. When did your school district start distance learning and how was it implemented?

6. **Is Google classroom utilized in your distance learning?**
- Yes
 - No
 - If yes, in what capacity?
7. **Is Zoom, Google Hangout, or Microsoft meetings used to provide distance learning?**
- Yes
 - No
 - Yes, which one was used?
8. **Do you feel that your staff and faculty were prepared for distance learning?**
- Yes
 - No
 - Why or why not?
9. **Was professional development given to staff and faculty to prepare them for distance learning?**
- Yes
 - No
 - What kind of PD and who received it?
10. **Do you feel that all your students are able to learn through distance learning?**
- Yes
 - No
 - Why or why not?

11. If students are unable to be educated through distance learning, what are the barriers preventing them?
12. If there are barriers that prevent some students from being educated through distance learning, what has your school district done to lessen the impact of those barriers?
13. Do you feel that students will be at an educational disadvantage as far as academically next school year.
- Yes
 - No
 - Why or why not?