

# ***UTILIZING THE PANDEMIC DISRUPTION TO IDENTIFY DISTANCE LEARNING CHALLENGES***

**Tamara Champa**  
*Pine Island School District, MN*

**Theresa Waterbury**  
*Winona State University, MN*

**Angela McQuinn**  
*Winona Public High School, MN*

The COVID-19 pandemic disrupted education beyond what was previously imaginable. This study was conducted immediately at the completion of the 2020 school year and focused on the challenges southeast Minnesota teachers experienced while teaching in an online environment. The survey was completed by 218 K–12 teachers. The purpose of this study was to investigate the challenges that teachers, in southeast Minnesota, experienced during the shift to distance learning and to investigate teacher preparedness in a distance learning environment. A literature review coupled with the survey results offer administrators and universities insight into the K–12 distance learning environments.

## ***INTRODUCTION***

The novel coronavirus, known as COVID-19, has swept the globe, and is now referred to as one of the greatest health crises in recent times. As the pandemic alarm bells were sounding in the United States, school districts across the nation took immediate steps to close their brick-and-mortar doors as they pivoted to a

distance learning model. In Minnesota, Governor Walz issued an executive order on March 15, 2020, directing all 335 Minnesota school districts to close their doors to plan for the possibility of distance learning. Schools were closed for a maximum of 8 days to ensure that distance learning plans were developed and in place for all Minnesota schools. In many districts, the closure to provide planning time was

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• **Tamara Champa**, Pine Island School District, 223 1st Ave SE, Pine Island, MN 55963. Phone: 507-951-4378. Email: tammy.champa@pineisland.k12.mn.us

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*The Quarterly Review of Distance Education*, Volume 21(4), 2020, pp. 51–63  
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ISSN 1528-3518  
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further limited due to the timing of spring break, in many districts the number of planning days were reduced to 5 or less. Two subsequent executive orders physically closed all Minnesota schools for the remainder of the 2020–2021 school year and migrated to distance learning. Distance learning had not been instituted on such a large scale with such short notice.

Schools across the state took on the role of not only educating the 425,000 enrolled students through distance learning, but also serving meals for all students 18 and under and were charged with providing childcare for all essential workers at no charge. Hattie et al. (2020) suggested that teaching during this time should not be referred to as distance or online, but rather as pandemic or crisis teaching. Teachers across the nation were given a fraction of time to transform their familiar in-person teaching pedagogy to reimagine and redesign their practice. Regardless of the experience with online teaching or the willingness to change their pedagogical approach, educators were forced to a nearly immediate online mode of teaching. The purpose of this study was to investigate the greatest challenges that teachers, in southeast Minnesota, experienced during the rapid shift to distance learning and to investigate teacher preparedness to teach in a distance learning environment. The results of the study are intended to reflect on the experience and provide insight for administration and universities.

## LITERATURE REVIEW

The literature review is divided into three sections: (1) an overview of the progression of distance learning, (2) teacher preparation for online environments, and (3) student engagement.

### *Progression of Distance Learning*

While the massive nationwide shift to distance learning was unexpected and found edu-

cators unprepared, distance learning is not a new way of teaching and can be traced back to as early as the 18th century. The earliest record of distance learning (1728) was an advertisement in the Boston Gazette offering shorthand lessons for anyone in the county, “Person in the Country desirous to Learn this Art, may be having several Lessons sent weekly to them, be as perfectly as those that live in Boston” (Philipps, 1728, as cited in Sleator, 2010, p. 28). While there was not synchronous two-way communication, teaching and responses were transmitted through the postal service. In 1873, the Illinois Wesleyan College became the first academic institution to offer degree programs “in absentia” (Emmerson, 2004, p. 2). As interest in obtaining college degrees grew coupled with increased family, financial, and geographic barriers, the interest in distance learning, often referred to at the time as correspondence learning, grew in popularity. Simultaneously, the concern with the quality of these programs also grew.

The first adult education correspondence school, known as the Chautauqua Literary and Scientific Circle, was founded in 1878 by John Heyl Vincent, in Chautauqua, New York (*Cincinnati Daily Gazette*, 1878, as cited in Kentor, 2015; Scott, 1999). Originally the Chautauqua Movement was created as a training program for Sunday school teachers. The concept grew to include general education and the arts. The Chautauqua University was established in 1883 to provide extension and correspondence courses, which continued until 1892 when a lack of resources forced the university to close its doors (Harting & Erthal, 2005). As the doors of the Chautauqua University closed, that same year, William Harper Rainey replicated the Chautauqua model as he introduced college-level correspondence courses at the University of Chicago (Scott, 1999). The popularity of correspondence learning continued to grow until the next advancement, which was Guglielmo Marconi’s invention of the spark transmitter, which became the first patent for radio in 1894 (Buckland & Dye, 1991). With this invention, educators began to explore

replacing the postal correspondence with this new inexpensive, immediate avenue to reach more learners. In 1919, University of Wisconsin professors used this technology to start an amateur wireless station, which in 1922 developed as the WHA, was the first licensed station dedicated to broadcasting educational material from the University Press (Engel, 1936, as cited in Kentnor, 2015). By the end of the 1920s, educational broadcasting had spread to 176 institutions across the country (Wood & Wylie, 1977 as cited in Kentnor, 2015). As the appeal of radio broadcasting continued to broaden, the additional interest in stations exhausted the number of available frequencies. In an attempt to protect the quality of radio transmission, the secretary of commerce at the time, Herbert Hoover, began denying licenses, which was met with a federal appeal that ruled that Hoover was required to issue licenses to anyone who applied (*Hoover v. Intercity Radio Co.*, 1923; Verduin & Clark, 1991). The increase in radio stations led to increased interference, which led to Congress passing the Radio Act of 1927, which attempted to regulate the broadcasting industry (U.S. Congress, 1927). The Great Depression in 1929 coupled with the regulatory requirements negatively impacted educational broadcasting with only 35 surviving (Buckland & Dye, 1961).

As new technology capabilities emerged, distance learning continued to develop and grow. Before the capability even existed, it was believed that the ability to “see” an instructor from a distance would forever change education. Evidence of this notion exists with Thomas Edison’s statement in 1913, “Books will be obsolete in the public schools. Scholars will be instructed through the eye. It is possible to teach every branch of human knowledge with motion picture. Our school system will be completely changed inside of 10 years” (Smith, 1913, p. 24). While commercial television did become part of the public domain in 1927, it was not used in education until an experiment at the University of Iowa in 1932 (Koenig & Hill, 1967). The use of television in education continued to grow

through the 1960s and 1970s as classroom teachers used the technology to demonstrate and explain concepts; however, there was little use for the specific purpose of distance learning (Verduin & Clark, 1991). The few television courses that were produced were poor in quality, which made it difficult to keep participants engaged.

While technology continued to evolve, computers entered the realm of education in the late 1980s. With the unveiling of the World Wide Web in 1989, the University of Phoenix became the first to provide an online education program offering both undergraduate and graduate programs (Kentnor, 2015). In the early 1990s, universities and colleges began experimenting with online learning, but the rapid growth of online education was ignited in 1998 (Arenson, 1998). By 2008, Allen and Seaman reported that over 4 million students were enrolled in online learning. Despite the enrollment numbers in 2008, many programs did not survive, which Arneson (1998) suggested was a failure on the part of educators to understand the differences between face-to-face instruction and online instruction.

Marcus (2004) expanded this concept suggesting that a lack of an understanding for online pedagogy was at the root cause for program failure. Researchers have repeatedly found that well-designed instruction that facilitates active engagement is essential for program success (Dykman & Davis, 2008; Gaytan & McEwen, 2007; Palmer & Holt, 2008). In 2011, 65% of universities and colleges identified strategic planning for their online learning programs as a critical element. Snyder et al. (2018) provide strong evidence of the popularity of online learning at the secondary level. In 2008, 16% of undergraduate students and 17% of graduate students were enrolled in at least one online course, and by 2016, these numbers had increased to 43% of undergraduate and 45% of graduate students.

The progression of distance learning has been built upon and expanded with each new available technology. The rapid growth of enrollment in distance learning demonstrates

that distance learning is no longer a trend, but rather an expected avenue for obtaining an education. Educational institutions at all levels have the responsibility to provide quality distance learning.

When quality distance programming exists, researchers have demonstrated that there is little difference in student performance and satisfaction (Skylar et al., 2005). A 20-year meta-analysis study found that 70% of students participating in distance learning outperformed their student counterparts who were participating in a traditional environment (Shachar & Nuemann, 2010).

### ***Teacher Preparation for Distance Learning Environments***

The movement to include field experiences in teacher preparation programs originated with John Dewey in the 1930s (as cited in Huling, 1998). Since Dewey's advocacy for experiential training, field experiences have been an integral part of teacher preparation programs to allow students to apply their pedagogical knowledge developed throughout their teacher preparation program and to allow for the observation of effective teaching. The experience was recognized as being such a critical component that in the 1970s, state departments of education required a field experience for certification (Moore, 1979, as cited by Archambault et al., 2016).

In 2016, Archambault et al. noted that despite the change in educational environments, very little in teacher preparations programs has changed, and specifically there has been little change to the field experience. When teacher education programs were studied in 2010, only seven programs across the nation (1%) addressed K–12 online learning. In a follow-up study in 2016, Archambault et al. surveyed 1,017 institutions to collect data on their preservice online experiences. Of the 1,017 universities, 363 responded, which provided a 37% response rate. Following the examination of the data, Archambault et al. (2016) found 4% or 15 universities reported specific preservice

experiences in an online environment. The 15 universities represented nine separate states which included: Florida (2), Georgia, Kansas (2), Louisiana, Michigan (2), New York, North Carolina, Ohio (4), and Pennsylvania. Programs not offering an online experience were asked if they thought their program should add an online component. While 41% responded that yes, they should, 59% indicated no interest. When universities were asked if they were planning to incorporate online learning experiences, 91% reported that they had no plans to offer this opportunity. In the results of the 2016 study, Archambault et al. reported that

the majority of the respondents from teacher education programs feel that the focus should be preparing future educators for traditional, brick and mortar schools as it currently stands. In addition, online education appears to many faculty to represent a small portion of the student population. Therefore, many do not feel the need to expose future teachers to a context they may view as small or niche. (p. 322)

While evidence exists that few institutions are preparing teachers to teach in an online setting, in 2015 all 50 states offered some type of online learning option for K–12 students (Germán et al., 2015).

As early as 2003, Irvine et al. identified the need for teacher education programs to expand to provide experiences for online environments. This early call for online training led to the International Association for K–12 Online Learning to produce a series of papers documenting promising practices in online pedagogy (Powell et al., 2015). A major gain was noted in 2007 when Iowa State University received a grant to incorporate online learning in their teacher preparation program. Their one-credit project titled, “Teacher Education Goes into Virtual Schooling,” paired two preservice teachers with one Iowa Learning Online teacher (Charania, 2010). During the course, preservice teachers kept a reflective journal, participated in online discussion forums, and observed their online mentor. Fol-

lowing the completion of the project, preservice teachers demonstrated an enhanced understanding of K–12 online learning (Compton, 2009).

In 2009, both the University of Florida and the University of Central Florida began offering pilot field experiences in online learning environments. Both universities partnered with Florida Virtual School to provide the experiences, but the programs differed in their approach. The University of Central Florida offered a 7-week experience for preservice teachers, while the University of Florida offered the experience as a 4-week graduate level option (Kennedy, 2010). Beginning in 2010, the pilot grew throughout the state by allowing preservice teachers the ability to complete half of their field experience (7 weeks) in a traditional educational setting with the remaining 7 weeks in an online setting with Florida Virtual school. Given this model, students can gain specific preparation and professional development to teach in both learning environments (Kennedy & Archambault, 2012).

Kennedy and Archambault (2012) asserted that for a teacher preparation program to be effective, curriculum needed to include not only traditional, face-to-face field experience opportunities, but also online ones. Evidence between 2010–2016 indicates a slow (3%) growth in online learning opportunities teacher preparation programs (Archambault et al., 2016).

### ***Student Engagement***

Nilson and Goodson (2017) warn that efforts to understand and improve student engagement should not focus on assigning fault. Prior to the COVID-19 disruption, student engagement had been receiving increasing attention from researchers, policy makers, and practitioners since 1984 (Bond et al., 2020). In fact, in 2014, Fredricks reported that teachers identified student engagement as the biggest challenge that they face in their classrooms. In today's complex, high-stakes soci-

ety, K–12 educators have an immense responsibility to transmit content, knowledge, and problem-solving skills to students. Teachers prepare lessons and structure their curriculum to ensure that standards are taught, learning is measured, and their students are engaged. What is often missing in this equation is actual engagement of students.

While it seems that the concept of student engagement is at the heart of every educational conversation and has been referred to as the golden ticket to student achievement (Drapeau, 2020), the intense focus on student engagement has been relatively short-lived. The first study that used the term engagement was published in 1984, with a simplistic definition of “student participation in school activities” (Natriello, p. 14). While the specific term was coined in 1984, Pascarella and Terenzini (2005) recognized related terminology beginning in the 1930s with time on task, and quality of effort in the 1960s and 1970s. Since the inception of the term, there has been little consensus on a clear definition. Schlecty (1994) provided a three-part definition noting that students who are engaged: (1) are attracted to their work, (2) they persist in their work despite challenges and obstacles, and (3) they take delight in accomplishing their work. Research conducted by Strong et al. (1995) sought to better understand student engagement through a student-centered project where they asked two very simple questions: “What kind of work do you find totally engaging?” and “what kind of work do you hate to do?” These two very basic questions quickly led to their identification of four essential themes to student engagement: success (students need mastery); curiosity (students need for understanding); originality (students need to express themselves); and relationships (students need to have involvement of others). The researchers coined the acronym SCORE, noting the necessity for the teacher to add energy.

Jackson and Zmuda (2014) caution educators to not confuse compliance with engagement. Realizing the strong difference between compliance and active engagement, Schlecty

TABLE 1  
Schlechtey's Levels of Student Engagement

| <i>Level</i> | <i>Category</i>      | <i>Description</i>                                                                                                           |
|--------------|----------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1            | Rebellion            | Students show no interest with the content.                                                                                  |
| 2            | Retreatism           | Students produce little effort and are emotionally withdrawn with the belief that they are not capable of doing better work. |
| 3            | Ritual compliance    | Students do the work to avoid negative grades or negative attention from the teacher or peers.                               |
| 4            | Strategic compliance | Students find value in doing the work for extrinsic rewards, including teacher attention, grades, and class rank.            |
| 5            | Authentic engagement | Students find activities meaningful and have the will to persist and learn.                                                  |

(2002) proposed thinking about engagement as an active process as he offered a continuum with five distinctive categories dependent on the students' commitment to the task, which is achieved when the student finds value and importance in the activity. Table 1 shows the continuum of Schlechtey's student engagement.

Jackson and Zmuda (2014) argued that most school policies and practices focus on Schlechtey's continuum levels three and four by producing compliant learners.

If we want to grow capacity in our students; unearth student talents, dreams, and aspirations; and instill perseverance through a focus on doing hard work, learning from mistakes, and revising one's work, we need to design classroom practices around securing real engagement. (p. 18)

Believing that the construct of engagement was too broad, Fredricks et al. (2004) provided a perspective that teachers would have more success in increasing student engagement if it were defined and reviewed as a multidimensional construct with behavioral, emotional, and cognitive dimensions. The behavioral dimension, which is observable, is used most often when student engagement is referenced by compliantly *doing*, such as turning in assignments and participating in class. The cognitive dimension is the student's psychological effort. While it is more difficult to observe, it is demonstrated through the stu-

dent's ability to set goals, solve problems, and monitor their success. The emotional engagement is the affective dimension, which addresses the need for the student to have a sense of belonging, trust, and security before engaging in discussions, seek help, or ask questions.

Since the early definition, the research community has made great strides in advancing the understanding of student engagement with several definitions and constructs; however, there has been little documented effect on the actual teaching practice. Frederick (2014) suggests that the published research is too complicated and technical; therefore, the research has failed to provide practical strategies to promote positive change in the classroom. As student engagement research continues to grow and permeate the field of education, there is a compelling need to move beyond the myriad of definitions to mobilize the research to build and develop specific strategies to improve student engagement. Following the closure of schools, due to the COVID-19 pandemic, Fisher et al. (2020), recognized that teachers made heroic efforts to educate their students, but they lacked the strategies to truly engage their learners. Hattie described the cascading shift to distance teaching as more appropriately labeled pandemic or crisis teaching (Fisher & Frey, 2020). Given the uncertain future, he encourages all educators to "build back better" by building a toolbox of engage-

ment strategies for multiple learning environments.

John Hattie (2009) is best known for his work titled, *Visible Learning*, which is the world's largest collection of evidence-based research of what works in education. Hattie's purpose has been to provide educators with an awareness of the impact their practices have on student learning. Since 2009, through research and synthesis of over 50,000 studies, Hattie has identified the level of effect on student learning of 195 interventions. Through a standard deviation calculation, Hattie (2009) notes that any reported effect greater than zero indicates that there is some positive effect on student achievement, but an effect size of .40 serves as the hinge point and should be considered as an above average intervention. An intervention with an effect size of 1.0 or greater is considered a *super factor*, indicating a two-grade increase in achievement. Following the nationwide shift to distance learning, Hattie (2020) conducted a meta-analysis of 21 studies with seven million students and determined the overall effectiveness of distance learning as .14. While the raw interpretation of this number suggests that distance learning proved to have a minimal positive effect, Hattie explains that when teaching and learning by distance are compared to the regular classroom, the difference is very minimal, noting that in some areas of study, there is a benefit to being in person, but there are also numerous benefits in other areas when learning by distance.

As the experience with distance learning is reflected on and considered in the future, Hattie (Fisher et al., 2020) states that it is critical to note that it is "not the medium that matters, it's the methods we use." Hattie identified teacher credibility as an essential factor to accelerate student engagement with a possible super factor effect of 1.09. Fisher et al. (2020) suggested credibility includes four components: competence, trust, dynamism, and immediacy. Student engagement is impacted through the perception of how the student views the teacher in each of the four areas. Frey (2020,

29:45) suggests that many teachers felt threatened in this area by the shift to the online environment. She provided the analogy of how similar the movement to distance learning was to the very first day teachers stood before a classroom of students. Similar to the first day, teachers need to give themselves permission to find their *sea legs*. While the environment is new and different, teachers need to be reminded that they are still masters of their content. Teacher competence needs to be communicated to students regardless of the environment. Teachers need to be thoughtful about their dynamism. Fisher et al. (2020) reminded teachers to think about how they are portraying their passion for what they teach. The need for immediacy is noted in how the teacher is providing closeness to the student. Does the student know and understand the level that the teacher cares about and believes in them? Credibility cannot be established without the student's ability to trust the teacher.

As teachers consider building and or improving their teacher credibility, teachers must also be mindful of the hidden curriculum. In a study by Good and Brophy (1987), low achieving students were found to be praised less often, called on less frequently, received less eye contact, had their ideas accepted less often, and had fewer friendly interactions. Educators need to be thoughtful in how students see their classrooms and help them move past negative mindsets that they may have about classes, which become roadblocks to their success in school (Bernabei et al., 2010).

## METHODOLOGY

A qualitative research design is emergent, interpretive, and used to collect participant responses based on personal experiences (Creswell, 2014). It was appropriate to use a qualitative approach in this exploratory study to identify the challenges that teachers, in southeast Minnesota experienced during the shift to distance learning and to learn how well teachers were prepared for distance learning.

Two surveys were developed by a school superintendent who led a districtwide distance learning initiative, a professor who teaches in leadership education, and a high school social worker. Before the surveys were distributed, institutional review board approval was granted. The K–12 teacher survey included demographic data, open-ended, and Likert scale questions. The survey was sent to 300 principals in southeast Minnesota public K–12 schools, instead of being sent directly to the K–12 teachers. The principals were asked to forward the survey to their teaching staff. This dissemination method was used to be inclusive with the schools' administration and respectful of the overwhelming demands on teachers. A reminder email was sent out three times within the 2 weeks prior to the end of the academic year. The researchers selected this time frame so the responses would be collected as the school year ended and the experience was fresh. A total of 218 teachers responded to the survey. Since the survey was distributed by the principals, the total number of surveys sent is unknown.

The second survey was sent to university faculty and asked, "How does your K–12 curriculum prepare preservice teachers for distance learning?" Five of 98 faculty responded to the survey. This low response rate was the catalyst to cross reference the university faculty survey with an email to the chairpersons of the seven public universities in the Minnesota State system. The question asked, "Can you share with me courses or specific coursework that prepares teachers to be educators in distance learning?" Additionally, a web search was conducted on each of the seven public universities education department websites. Three of seven university chairpersons responded to the email and information was gathered from two universities through their department web searches.

Thematic analysis is a method to condense open-ended survey data by using a three-step process in which data are categorized, summarized, and reconstructed to capture important concepts or themes (Given, 2008). Themes

were derived from the open-ended questions using thematic analysis. To improve the reliability of the themes, one researcher created the themes, and a second researcher independently verified the themes. Discrepancies were discussed with the research team before a final decision was made. The themes, Likert scale data, and demographic data were imported to SPSS for analysis. Frequencies and crosstabs were created for each question.

## **RESULTS AND DISCUSSION**

Demographic information provided evidence that 47% of teacher respondents taught in a district with student enrollment in the range of 1,000–2,500. Thirty-seven percent reported serving in a district with less than 1,000 students, and 15% reporting a district size of more than 2,500. When asked how long teachers had been in the profession, 52% reported teaching more than 15 years, 17% reported 11–15 years, another 17% reported 6–10 years, 13% with 1–5 years of experience, and only 1% of respondents were in their first year of teaching. To better understand the level of preparation that teachers had, researchers asked respondents to "indicate your level of experience with distance learning prior to COVID-19." Seventy-eight percent indicated that they had no experience, with an additional 5% reporting more than 1 month of experience, but less than 1 year. Fourteen percent of respondents indicated distance learning experience of more than 1 year.

Kindergarten through 12th-grade teachers were asked to further reflect on their preparation for distance teaching by asking them to think back to the university in which they were prepared for their teaching licensure. Teaching licensure programs are known as preservice and teacher candidate programs. How did your University's curriculum prepare you for online teaching? Seventy percent of the responding teachers reported that they had no preparation at the university level, while only 2% reported having a good university foundation for teach-

ing online. Outside of specific university preparation, 12% reported experiencing online learning as an undergraduate student, and 9% reported similar experiences as graduate students. While not specifically asked, 1% of respondents attributed their preparation to district-provided staff development.

Anecdotal comments supporting the above analytics included:

- “My masters was achieved through distance learning, so I have been a student using this model. I saw distance learning modeled by my professors and was able to see what worked well for me and what did not. I also saw how my fellow students interacted with each other in group discussions and projects.”
- “None, I don’t think anyone ever predicted that we would all need these skills.”
- “It didn’t. Distance learning to this magnitude was unthinkable. There was no way to prepare.”
- “I just completed my master’s degree, and there was no preparation for distance teaching.”

Although, Hattie et al.(2020) suggests teaching and learning has comparable outcomes regardless if the delivery is provided in a distance learning format or in a classroom, the combined analysis of the university faculty survey, emails to the education department chairpersons and a web search validate the K–12 teacher findings that preservice programs are not preparing students with distance learning technology and pedagogy skills. This analysis mirrors the earlier findings of Archambault et al. (2016) and Nilson and Goodson (2017) arguing preservice programs do not currently have specific coursework that addresses how to teach children using distance learning.

When teachers were asked to reflect on their two greatest challenges during distance learning, the top themes that emerged included student engagement at 42%, technology at 22%, and teacher workload at 10%. Beyond

these top three themes, other reported obstacles ranged from 1–4%; therefore, they were not included in this discussion. The following provides a brief review of the themes addressing the greatest challenges.

Teachers used a variety of responses to indicate student engagement as their greatest challenge. The most common response was that teachers struggled with getting their students to *show up* in the online environment. A number of teachers reported that they did not have the skills or training to engage students in the distance environment. A sampling of the comments included:

- “On a routine basis, 6 out of my 23 students were active online.”
- “Twenty-five percent of my students never responded. Many who were highly engaged in the traditional classroom.”
- “Students who were not intrinsically motivated struggled.”
- “Just getting students to show-up was a challenge.”
- “I didn’t know how to engage students.”
- “I learned how to engage students as I went.”

To further analyze the challenge of student engagement, the researchers ran cross-tabulations. Fifty-nine percent of the teachers who identified student engagement as their greatest challenge indicated no experience with distance learning. With the lack of preparation, it is no surprise that teachers recognized they did not have the skills or training to engage students in the distance environment. To overcome the engagement obstacle, teachers increased their communication to the students and families. The communication process varied and included sending personal videos, newsletters, and emails; making phone calls; and arranging home visits. These efforts are not sustainable as the teachers indicated they were overwhelmed with the level of work.

The lack of student engagement finding is similar to Hattie’s (2020) research that K–12 teachers lacked the strategies to engage their

students. Furthermore, he urged educators to “build back better” by creating engagement strategies for multiple learning environments.

The 22% of teachers identifying technology as their greatest challenge identified four main areas: lack of internet access (45%), device accessibility (17%), inconsistent technology platforms (17%) and a lack of teacher training (14%). For students without internet access, most of the schools provided hot spots, and several respondents mentioned the school and community partnered to provide internet access. Lack of internet is going to be an issue that is not easily resolved. A short-term solution is grant funding and community partnerships that provide the hot spot access, but long-term solutions will require a more systematic approach. Although 17% responded that device accessibility was a challenge, 13% of the teachers reported their schools had 1:1 devices. The teachers with 1:1 devices still reported distance learning was a challenge, even though their students had experience with technology devices. Inconsistent technology platforms (17%) were equally challenging to the teachers, yet 48% of teachers reported their platform was teacher directed, not building directed.

The technology challenge for current teachers and families need to be addressed by the school districts. This initiative will require an intentional focus by school administrators and a commitment to professional development for the existing teachers, as well as a commitment to provide appropriate technology to all students. Professional development will vary by school districts, but some type of technology academy, which provides a buffet of technology options, is optimal.

Teachers who reported their workload as the greatest challenge most often indicated the challenge as a result of balancing teaching with caring for their own children (43%), followed by the long hours required to connect with students (38%). As Fisher et al. (2020) discussed, the teachers were committed to edu-

cate their students, even though they spent an inordinate amount of time trying to reach out to them.

To understand how teachers addressed their challenges, a follow-up question asked them to describe how they overcame their most significant challenges. Teachers responded that they noticed an improvement when they increased their communication with both students and families (24%), followed by 19% who identified persistence as improving the situation, and another 8% improved their challenges by growing in their technology skills.

In contrast to efforts to overcome the challenges, 13% of the responding teachers indicated that they accepted the status quo. To further identify any trends in this response, cross-tabulations were run. The cross-tabulation showed that 67% of those accepting the status have been in the profession for more than 15 years.

As a conclusion to the survey, teachers were asked, if choices existed in the future, what learning environment would they prefer to teach in: online, hybrid, or traditional in-person. Sixty-one percent elected traditional in-person, 30% identified hybrid and less than 5% selected the online option. When cross-tabulations were run, the most significant finding was that of the 61% electing traditional in-person instruction, 61% of these teachers noted student engagement as their greatest challenge. These results are consistent with the teachers reported level of preparedness. McAleavy and Gorgen (2020) reported that for teachers to be comfortable, successful, and highly effective in an online setting, they must be trained to understand the essential components of effective pedagogy when delivering instruction in a remote context. Additional conditions for success in an online environment as reported by Kearsley and Blomeyer (2004) include the need for teachers to have first-hand experience as an online learner, and the need for teachers to have adequate time to develop and practice needed competencies.

## CONCLUSION

As the COVID-19 pandemic closed schools across the country, teachers put forth valiant efforts to continue the educational process. The authors of this research argue the pandemic is the catalyst for a disruption in the K–12 educational system. External disruptions are known to create transitions for lasting change. The educational landscape has been changed, and families are going to expect choice of curriculum delivery including traditional classroom, hybrid, and distance learning. Some students discovered distance learning to be more engaging and stimulating, while parents appreciated the flexibility in distance learning. Parents and students now have the expectation of schools to provide alternatives to the traditional classroom.

The transition to distance learning created challenges for the teachers, students, and families: no one was prepared for distance learning. Seventy percent of the teachers reported they did not have distance learning curriculum in their preservice teacher preparation programs, and 78% reported no previous experience with distance learning. K–12 preservice teacher preparation programs must take responsibility to provide preservice teachers with online technology and pedagogy skills and to provide distance learning clinical experiences. Teachers must be as effective in distance learning as they are in the classroom. The school districts need to take ownership of online technology and pedagogy skills with the current teaching staff. This may include working in partnership with regional universities or with online pedagogy experts in their region. The study indicated distance learning preparation for preservice and current teachers is not sufficient. Additionally, school districts need to include student technology in their strategy plans.

The number of universities reporting a component of online education in their preparation programs coupled with the results of this study suggest that overall, preservice teacher programs have made few strides in systemi-

cally preparing teachers for distance learning. With the increasing demands for online teachers and the reality of the possible necessity given the most recent pandemic experience, preservice teacher programs have a responsibility to provide teacher candidates with 21st century experiences in both brick and mortar and online environments. This global pandemic may be the tip of the iceberg as preservice teacher preparation programs expand their focus to include providing experiences for various teaching environments.

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