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## **New Normal: How School Operation and Learning Changes in a Pandemic**

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New Normal: How School Operation and Learning  
Changes in a Pandemic

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Education in Curriculum and Instruction

by

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This thesis is approved for recommendation to the Graduate Council.

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## **Abstract**

According to past and present studies, pandemics impacted many aspects of society, including education. The current COVID-19 pandemic, which lasted for more than a year during the study, has brought notable educational changes at every level of education. This research was conducted to explore the extent of educational changes during a pandemic and the deviation between the education plan and its implementation in Northwest Arkansas public school districts. The study's data was collected from school district public documents and teacher interviews from school districts classified as low to high SES in suburban and rural areas. Both sources were analyzed and coded to find the emerging themes, overlaps, and differences from both documents and interviews data collected. The changes found in education during the pandemic revolved around health and safety, the teaching and learning process, policy, and the involved parties' work-life balance. For the shift between educational planning and implementation, the same two themes emerged (health and safety, teaching and learning process) with the addition of communication. Overall, this study outlined different teachers' education experiences from different backgrounds, suggestions, hope, and encouragement for the current and future education.

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## **Chapter I Introduction**

This study explores what Northwest Arkansas school districts have done to ensure school operation, specifically identifying how the teaching and learning process has been conducted in response to the COVID-19 pandemic. The study focused on the teaching and learning process, curriculum, and policy that affected school operations due to COVID-19 during the 2020-2021 academic year. The study includes a document analysis from 14 district's websites related to changes that happened due to COVID-19. Teacher interviews were also conducted to more fully understand how the written documentation was realized in day-to-day practice and the challenges brought about by the studied transition.

### **Purpose of Study**

The purpose of this study was to determine the extent of change in the teaching-learning process, curriculum, and policies of school operation in Northwest Arkansas during the unprecedented time of the COVID-19 pandemic. In addition, the application of these changes in practice were studied by interviewing teachers from various school districts in North West Arkansas. Challenges faced during the implementation process were also included.

### **Background**

At the beginning of 2020, schools and universities around the world closed face-to-face operations, and the teaching and learning process moved to online learning due to the circumstances surrounding the COVID-19 pandemic. There have been many changes in curriculum and policy in education at the university level during this time (New York Times, 2020). At the University of Arkansas, choices of learning were provided for its students including reduced in-person classes, online learning, or both (blended learning). But what about at the elementary school or high school level? Are there changes in the teaching and learning

process outside universities? How have these changes impacted the curriculum and policy of public school districts?

Digital Learning Collaborative's 2020 report indicated that in most states, only 2% of students were enrolled in online schools during 2018-2019, and no state had more than 4%. However, many face-to-face students have experienced online learning as part of state virtual schools' supplemental courses. Based on the Digital Learning Repost Collaborative in 2019, throughout the United States, supplemental courses of state virtual school enrollment reported 80% of enrolled high school students, 14% of middle school students, and 6% of elementary school students participated in these supplemental courses. The data from the Arkansas Department of Education's (ADE) data center revealed student enrollment in 2019-2020 and 2020-2021 was 479,432 and 473,004 respectively compared to 49,351 enrollments (Digital Learning Collaborative, 2020) for supplemental online courses throughout the whole state of Arkansas. These data show a need for enormous preparation to accommodate the transition of learning from mostly on-site learning to a blended or entirely virtual format depending on the circumstances. Previous studies of online learning focused more on charter schools (Gemin et al., 2015; Wang and Decker, 2014) and specific programs to teach students specific content areas in school (Filsecker & Hickey, 2014; Freitas et al., 2015; Li et al., 2017; Shin et al., 2012; Sun & Chen, 2016; Wang et al., 2013). At present, every school has seen the need to develop and implement virtual learning to ensure teaching and learning can still be conducted during this pandemic.

The most comparable situation to the COVID-19 pandemic in U.S. history was the influenza pandemic in 2009. At the time, research surrounding this previous crisis was most abundant in the area of health (Cauchemez et al., 2014; Fumanelli et al., 2016; Gemmetto et al.,

2014; Milne et al., 2008). The research reviewed about education during this time focuses more on the staff and student safety of versus in-class learning online learning during the epidemic (Cauchemez et al., 2014; Egger et al., 2012; Gemmetto et al., 2014). The education research at that time was also focused on disruptive consequences of the epidemic, such as students' free meals, reduced wage (Rainey et al., 2016), compromised low-income families (Hutchins, 2009), and significant financial loss (Brown et al., 2011; Wong at al., 2014). Few of the research studies discussed the teaching and learning process, changes in curriculum, and policy on school operation during that time.

### **Significance of Study**

This study contributes to the changes in education, especially in documenting the progress of integrating technology in education. The study documents the teaching-learning process of the elementary, middle, and high school students, the changes in curriculum and school operations documented on school district websites and carried out in day-to-day practice. While the research scope is limited to Northwest Arkansas, it may be possible to conduct a similar study in other areas and broaden the scope to the state or national level.

### **Primary Research Questions**

There are two research questions that emerge in response to the purpose of this study:

1. What are the extent of the curriculum and education changes precipitated from the COVID-19 pandemic that teacher and faculty members experienced in real practice?
2. Are there any deviations found by teachers or faculty members regarding the plan and implementation of teaching and learning during COVID-19 pandemic?

## **Summary**

This study rises from the limited availability of research related to the teaching and learning process due to prolonged unprecedented circumstances, in this case the COVID-19 pandemic. Previous research conducted during unprecedented circumstances focused on health and safety procedures, the negative impact of school closures, and financial loss. Therefore, this study intended to explore the changes that happened in the schools themselves. The study's focus was on how the teaching and learning process differed due to the pandemic in Northwest Arkansas schools. Data analysis was conducted using 14 school district's websites, followed by teacher interviews to gain a more in-depth picture of the teaching and learning process and the challenges faced during the pandemic. The study's results contributed to the body of research regarding changes in teaching and learning methods and the integration of technology in the classroom. Other unique findings have been included.

## **Chapter II Literature Review**

This study is conducted to find the extent of educational system change during the pandemic as compared to normal academic years specifically in the teaching-learning process, curriculum, and school operations. To further understand and frame the current study, literature was reviewed for the following topics: (1) the effect of unprecedented circumstances in education, (2) development of education in the United States, (3) teaching and learning methods, and (4) the effect of COVID-19 pandemic on education. The effect of unprecedented circumstances in education was reviewed to gain an insight on how external circumstances effect educational system. Development of the educational system in the United States was reviewed to understand the history of educational system that shaped the system currently in place. Teaching and learning methods such as virtual, blended, and on-site learning were reviewed to understand the different teaching and learning processes that resulted from these differing approaches. Finally, it was fitting to know the extent of COVID-19 effect from the studies published during this challenging time.

### **Effect of Unprecedented Circumstances in Education**

There are four unprecedented circumstances that have potential to impact education: Natural Disasters, Pandemic, School Closure, and War/Terrorism.

#### ***Effects of Natural Disasters on Schooling and Children***

Kousky (2016) found extensive effects of natural disasters, particularly in children's physical and mental health. Based on the research, it was found that natural disasters may cause property damages (health-care facilities, educational institutions, private properties, etc.) which can hinder health institutions and school operations; both are crucial for children's well-being. For example, during Hurricane Katrina in 2005, people struggled to gain much-needed health

care and medication due to the number of casualties surpassing the health care availability (Abramson & Garfield, 2006). This caused prolonged untreated illness to develop into asthma, behavioral problems, and even disabilities in learning.

Natural disasters also have a long-term effect on health (Currie & Rossin-Slater, 2013; Guha-Sapir et al., 2007), education, and socio-economic status (Kousky, 2016). Currie and Rossin-Slater (2013) found that pregnant women during Hurricane Katrina gave birth to children with health problems (underweight, premature, gestation, and respiratory problems). The authors concluded that the situation was caused by the increasing stress level the expectant mother faced during the hurricane. Another similar circumstance comes from the Indonesia Tsunami in 2004, where 1188 Acehnese participated in a study to measure the after-effect of Tsunami on health (Guha-Sapir et al., 2007). It was found that 43.5% of the participants were diagnosed to have a chronic disease with children in the center (4.3 times higher than other populations).

Jacoby's (1994) research about school drop-out found that family income is one of the main reasons parents stop their children's schooling and even ask them to contribute to household income (Kousky, 2016). Heckman (2007) found that children's unfavorable environment could have a long-term impact on learning. The author shows that the earlier children have learning intervention (under ten years of age), the higher the probability is that they will grow into a competent adult compared to children who did not. It was also found that impact from interventions may not be as significant if children receive them at a later age. Both studies indicate that when facing an unexpected circumstance such as a natural disaster, the situations described in this research are likely to happen.

### *Effects of Pandemics on Schooling and Children*

Almond (2006) researched the 1918 influenza pandemic and discovered that this pandemic caused a delay in schooling (1 to 5 months) for people who decided to complete their high school education or stop their education due to various circumstances (black males and females were more likely to drop out). The pandemic also had a health impact for adults born between the end of 1918 to 1919 as they were diagnosed with work-limiting disabilities (17% up to 25% of the population, including non-white males and females). In turn, they received less wages from their jobs, accounting for the disparity of socioeconomic status between white and non-white people. Moreover, the census data from 1980 indicated that there was a 25% decrease in educational attainment compared to 1960-1970, which implied that people (more pronounced in black and non-white) born during the 1918 pandemic had a shorter life expectancy rate. This is in line with Helgertz and Bengtsson's (2019) research findings that suggest males born during the second quarter of 1919 had higher health and mortality risks in elder age, and they may have had three months shorter lifespan as compared to other cohorts.

Other studies about the influenza pandemic impact are all in the same tone. Lin and Liu's (2014) study of the Influenza pandemic in Taiwan found elderly people whose mothers gave birth during the 1918 pandemic had a higher probability of contracting respiratory diseases (asthma, bronchitis) and other high mortality diseases (diabetes, kidney). Neelsen and Stratmann's (2012) research in mother mortality rate due to influenza pandemic 1918 in European countries showed children born during the time were more likely to have worse health conditions than Lin and Liu's 2014 study. The study also found these cohorts were less likely to graduate high school, thus lowering their wage, similar to Almond's (2006) finding and increased the probability of never getting married (Neelsen & Stratmann, 2012).

Nelson's (2010) research of the influenza pandemic in Brazil also found that people born in 1919, particularly in the 2nd quarter, had a lower literacy rate. The male population who was born from the 2nd to the 4th quarter in 1918 had lower literacy attainment from the study. In contrast, Guimbeau et al. (2020) research, also from Brazil, found males had a higher literacy rate than females in the 1940s as the result of a developing country culture giving more priority to males. Additionally, high mortality death in women due to respiratory disease in 1917-1920 may have lowered female literacy rates. The study also recorded productivity in the agricultural sector and found a short-term effect on productivity effect during the 1920s and labor productivity decline due to respiratory deaths. As for the developmental impact, Velde's (2020) research showed that while coal mining and business-like shops and theaters experienced economic impact and reduction of the workforce due to infection, the impact was only temporary.

### ***Effect of War and Terrorism on Education***

Other unprecedented circumstances that could influence education are War and Terrorism. Similar to the previous causes, death, displacement of family members, and destruction of the educational system (less enrollment, high drop-out rate, destroyed school buildings, and low wage) were the most significant consequence (Ichino & Winter-Ebmer, 2004; Jarwowski, 2014; Lai & Thyne, 2007). According to Lai and Thyne (2007) civil war had a significant impact on enrollment, especially in males due to conscriptions (Ichino & Winter-Ebmer, 2004; Jarwowski, 2014). Civil war also caused family displacement, facilities destruction, and even death, throwing children into a vulnerable state (Lai & Thyne, 2007). In addition, prolonged expenditure for civil war reparation was another factor that disrupts learning (Lai & Thyne, 2007).

In contrast to decreasing enrollment impact of males in Lai and Thyne's (2012) research, Jarwowski (2014) found an increase in female drop-outs during WWII. From 1940 to 1944, there was a change in employment status for both young males and females. As a result of male conscription, job opportunities that were not open to women before were available, consequently increasing the school drop-out rate for women. However, because of their low educational level, women received low pay for their effort that, based on Ichino and Winter-Ebmer (2004) research, lower educational attainment influences future earnings. Ichino and Winter-Ebmer's (2004) research compared countries who were participating from the early stage of WWII (Austria and Germany) to countries that participated in the latter stage (Sweden and Switzerland). They found that countries that were heavily involved in WWII were affected significantly in education and socio-economic level. Moreover, both countries were affected by the Nazi movement and the Great depression during 1930-1939, which added to the 23-26% decrease in education and 9-16% decrease of future earnings from surrounding cohorts.

Meanwhile, terrorism has a unique relationship with education. Based on Krueger and Malečková, (2003), both highly educated and lower educated people could become a part of terrorism as defined using the example of a suicide bomber. Brockhoff et al.'s (2015) study further explained that countries with lower educational average (elementary level) and social conditions (more likely in developing countries) may have a higher terrorism level. They also found that having higher education (university level) may reduce terrorism, but only if the country conditions (more so in developed countries) were favorable. However, higher education could increase awareness of terrorism profits (Brockhoff et al., 2015; Krueger & Malečková, 2003). As an example, prevention measures like learning about terrorism in an educational setting affected increasing tolerance of the terrorist (Therault, 2017). There were many positive

results from adding this type curriculum for student learning. Phillips et al.'s (2004) research on parents' and children's reactions to 9/11 found elementary children in the study became more active, more aware, and took part in relief efforts related to terrorism. Studies on terrorism also found mental health impacts on children that pushed the school to develop a social-emotional support system to mitigate them (Mansen & Narayan, 2012; Phillips, 2004; Weist et al., 2002).

### ***Effect of School Closures***

School closure is a consequence of emergencies that have been discussed previously (natural disasters, pandemic, war, and terrorism) in this literature review, as well as other factors. Wong et al.'s (2014) study about school closure in the United States from 2011-2013 classified causes of the closures as "...*weather, natural disaster, school building or utility problem, violence, illness, environmental problem, teacher strike, death of staff or student, and other reasons.*" (pg. 3). They identified weather (79%) and natural disasters (14%) as the most common cause of school closures. However, closing due to weather on average lasted for >1 day while closure caused by a natural disasters, environmental problems, and teacher strikes were likely to be unplanned with an average of > 4 days of closure and had severe consequences (ex; Hurricane Sandy in fall 2012 resulted in 13,759,663 students to lose days of schooling). More specifically, Rainey et al.'s (2016) study about teacher strikes in 2012 found eight school closure days. That was the same as Tsai et al.'s (2017) study of previous school closures during the 2009 influenza pandemic in Illinois and a median of 6 days (range from 3-10 days) in Egger et al.'s (2011) study in New York. Besides students missing education time, other factors made school closures undesirable.

For most families, school is not just a place for children to gain an education. School is the heart of all the support that children require to succeed academically and secure their day-to-

day life (Masten & Narayan, 2012). Based on Brown et al. (2011), school closure disrupted children's needs and loss of parents', teachers', and staff productivity. In Tsai et al. (2017), concerns during pandemic caused by the school closures are childcare arrangement and missing free or reduced-price school meals. Rainey et al. (2016) listed a more detailed consequence, including loss of education time, reduced wage, and safety measures (for a more detailed table, see Rainey et al., 2016). The pandemic also caused a financial burden for minority populations, which mostly comprised low-income families (Hutchins, 2009).

Despite the negativity surrounding temporary or prolonged school closure, it positively impacted health and safety measures. During a natural disaster, while education has been essential, health and safety were the priority. As previously discussed in the effect of natural disaster, high mortality rate, building destruction in health care, school, personal properties (Kousky, 2016) caused long term health problems (Currie & Rossin-Slater, 2013; Guha-Sapir et al., 2007), that hinder their life and education (Abramson & Garfield, 2006). In this situation where patient vs. health care worker ratio were unbalanced (Abramson & Garfield, 2006; Barkemeyer, 2006), inadequate health care facilities due to the destruction of buildings and power outages (Barkemeyer, 2006), and families separated from each other (Abramson & Garfield, 2006), reuniting children with their families to recoup their loss and gather their bearings was the best course. In a pandemic, the positive effect would be the lower spread of the virus (Egger et al., 2011; Gemmetto et al., 2014). The preventive measure would help decrease the spread of the virus, enabling everyone to get back to normal. Of course, during war and terrorism, the views mentioned previously also apply.

## **Educational Progress in United States**

Based on Rury's (2020) book "Education and Social Change," two hundred years ago, the United States school system was sparse. The educational institution was concentrated in urban areas in a single room or building, while most rural areas only had a small one room house or did not have any place for schooling. School buildings were not separated according to age or education level, and instruction was conducted during a 3-to-5-month time period. At this time, there was no teacher education. Most teachers learned the same way as their students and were only slightly more knowledgeable than their students. Another popular schooling system was apprenticeship – a form of education more linked to specific work based on regional demand.

During the 1800s, industrial development, demand for land expansion, and more workers set a stage for civil wars and the great migration (Au et al., 2016; Rury, 2020). During the early 1800s, the Indian and Mexican American populations were at war with Americans due to land disputes. Eventually, they lost the war against the United States and needed to sign a treaty and migrate according to the agreed border territory. Asian and African populations were brought to the United States to fill in the industrial boom's labor demand (Au et al., 2016; Leong & Okazaki, 2009; Rury, 2020). This situation where many races were settling together in one nation added even more thoughts about developing education (Au, 2016; Au & Hollar, 2016; Dussias, 2001; Rury, 2020; Walker & Soltis, 2004).

The turning point of American education was the emergence of the modern school system called the common school in the late 1800s to early 1900s (Au et al., 2016; Rury, 2020; Walker & Soltis, 2004). This movement met a varying degree of opposition from every social stratum.

For Americans, with the launch of common schools, there were more public educational institutions at the primary and secondary levels (Rury, 2020). High school and college education became ubiquitous. The adaptation of coeducation and movement from several education leaders allowed females to have more opportunities and academic involvement. However, opposition was raised when government and educational leaders tried to desegregate schooling between Americans and other ethnic groups (Au et al., 2016; Rury, 2020).

In addition to what has been discussed above, there were many active reformation efforts in education around this time (Au et al., 2016; Rury, 2020; Walker & Soltis, 2004). Another prominent educational system progress is movement from Pedagogical progressive and Administrative progressive (Rury, 2020). Pedagogical progressive championed by Dewey, Parker, and Kilpatrick's concerns lay on the method of learning at that time. Dewey, in particular, believed in a more humanistic education that connected student learning in school with their life and society in a classroom setting. This view is contrary to Administrative progressive, which was active at the same time. Administrative progressive's concern was meeting the demand of society. Therefore, school and education development and decisions needed to follow the demands of society. This view had more success than pedagogical progressive, especially due to parents' authoritarian views and religious influences.

The progressive administrative view was successfully adapted due to the unopposed interest between educational leaders, political leaders, and society's needs (Rury, 2020; Walker & Soltis, 2004). After World War II, there were many civil rights movements, presumably as an aftereffect on the news about Nazis, which opened the American mind to rethought about discrimination and racism (Rury, 2020). This launched Affirmative Action (a program that helped people from other racial statuses attain a spot in higher education), Head Start (a program

that helped students not only with academics but also gave physical assistance such as food, school supplies, even housing assistance), the No Child Left Behind Act (Au & Hollar, 2016; Dussias, 2001, McCarty, 2009), and many more.

There was also concern about educational outcome disparities (Dussias, 2001; McCarty, 2009), especially after the Sputnik launch (Rury, 2020; Walker & Soltis, 2004). To quell the masses, Ronald Reagan launched "Nation at Risk," which was the beginning of developing a common curriculum and standardized tests (Au, 2016; Au & Hollar, 2016; Dussias, 2001, McCarty, 2009; Rury, 2020). To do so, an effort to desegregate schools was launched across the nation in 1954 by U.S. Supreme Court (Aronson & Gonzalez, 1988). This prompted a migration of southern American families from urban to suburban areas called "White Flight" to protest against desegregation (Rury, 2020). Eventually, the desegregation effort succeeded and brought a new chapter in education history, the Elementary and Secondary Education Act in 1965, which evolved into the No Child Left Behind Act (Rury, 2020; Walker & Soltis, 2004).

Common School was changed to K-8 (Goldin, 2009). High school was reinvented from 4 years to 3 years and called 9-12 while universities implemented a higher level of degrees (Goldin, 2009; Rury, 2020). No Child Left Behind was also responsible for training teachers, providing textbooks and school supplies, developing common learning standards and curriculum, providing other support besides academics for students, and more (Rury, 2020; Walker & Soltis, 2004). For example, the launch of No Child Left behind secured the establishment of the Tribal Education Department in 1991 that helped Indian education become more structured and provide more resources and support for Indian children (Dussier, 2001). Another example was IDEA formation (Individual with Disability Education Act) in 1975 (Skiba et al., 2008).

While No Child Left Behind did not root, another movement that called for privatization in education called "school choice" emerged (Au et al., 2016; Au & Hollar, 2016; Rury, 2020). Charter schools was a new school system resulting from the school choice movement. It was described as free from the political, economic, and social forces (Forman, 2005; Renzulli & Roscigno, 2005; Rury, 2020; Wells et al., 2002). The charter schools' law was passed in 1991 and allowed individual schools more autonomy from state and district policy in their operation (Wells et al., 2002). This movement prompted the development of private schools targeting a specific market, school vouchers (government funding for school-based on parent and student choice), homeschooling (Au et al., 2016; Bauman, 2002; Rury, 2020), and other types of educational systems (distance learning, blended learning, online learning) that continue to develop into the present day (Collins & Halverson, 2018; Holmberg, 2005; Siemens et al., 2015).

Distance learning, previously known as correspondence learning, was around since the early 1800s (Holmberg, 2005; Siemens et al., 2015), simultaneous with industrial growth (Au et al., 2016; Rury, 2020). An early definition of distance learning was an exchange of information by using a letter (Holmberg, 2005) before the computer's invention in 1944 that changed education yet again (Molnar, 1997). In the beginning, computer implementation was mostly used only at the university level (Molnar, 1997). Technology in education started to take hold after the internet and the launch of the World Wide Web, which marked the beginning of blended and online learning (Siemens et al., 2015).

Presently, education is still evolving and based on the brief discussion above, there is always room for improvement. Despite the success of desegregation in schools, due to the launch of school choice and other factors, there is still segregation between American students and African American students at the school level or even classroom level (Allen & Jewel, 1995;

Kohnen & Lacy, 2018). According to Kohnen and Lacy's (2018) research, despite learning in the same building, white students and black students learn in separate classrooms and rarely mingle with each other. They are also more vulnerable to receive harsh disciplinary measures in schools (DeMatthews et al., 2017; Losen et al., 2015).

For Asian Americans, education research painted them as high mobility and high achieving (Chun, 2014; Sue & Okazaki, 1990; Yeh, 2002). The Asian culture adds to the illusion that students did not have academic (besides language barrier) difficulties nor need additional support psychologically (Pang, 1990; Yeh, 2002). Despite the generally acknowledged success of Asians to acclimatize in American society, inclusion in the national curriculum and education support system is still ongoing (An, 2016; Leong & Okazaki, 2009; Yeh, 2002).

There is much disparity in Special education (SPED) due to either underrepresentation or overrepresentation of children in SPED (Losen et al., 2015; Skiba et al., 2008). According to Skiba et al. (2008), disproportionality was the remnants of the history of inequality of education in the United States that are still in effect today. In SPED, minority children are more likely to be identified as SPED than their white peers due to school segregation, low English language proficiency, and false notion of cultural diversity (Artiles & Trent, 1994). This assertion agrees with Losen et al.'s (2015) findings that non-white children, even those identified as SPED, are more likely to be penalized in the school setting than white children.

Technology in education is also not without shortcomings (Kohnen & Saul, 2018; Selwyn & Bulfin; 2016; Simanjuntak et al., 2019; Philip & Garcia, 2013). As part of the education system, technology in schools is regulated (Philip & Garcia, 2013; Selwyn & Bulfin; 2016). Students find ways to work around the restriction of technology use and internet sites (Selwyn & Bulfin; 2016; Simanjuntak et al., 2019) either by hiding their phone, using private

VPN, and using technology outside of the classroom or only around tolerant teachers.

Simanjuntak et al. (2019) studied cyberslacking and found 90% of participants use the internet for personal use instead of engaging with learning. In this scenario, Philip and Garcia (2013) cautioned teachers to instruct students how to balance between using technology for learning and entertainment.

### **Virtual, Blended, and On-site Learning**

Three learning environments were reviewed in the literature: virtual, blended, and on-site learning.

#### ***Virtual Learning***

Virtual learning keeps developing, and presently there are various types of virtual schools from the public, private, charter, district-wide, and state-wide virtual schools (Barbour & Reeves, 2009; Digital Learning Initiative, 2019). There are also various definitions of virtual learning (Anohina, 2005; Britain & Liber, 2004; Dillenbourg et al., 2002). Britain and Liber (2004) define virtual learning as an online learning management system (LMS) used to deliver learning content. Dillenbourg et al. (2002) define virtual learning as an online learning space intentionally designed to provide the student with learning information and content while supporting social exchange. Anohina (2005), who analyzed the use of terminologies in virtual learning, define it as an umbrella term that comprised Resource Based Learning, Technology-Based Learning, Distance Learning, E-Learning, Online Learning, Internet Based Learning, Web-based Learning, and Computer-Based Learning.

There is a long list of virtual learning benefits found based on previous research (Barbour & Reeves, 2009; Britain & Liber, 2004; Falduto & Ihde, 2007; Lueken et al., 2015; Toppin & Toppin, 2016). According to Barbour and Reeves (2009), the advantage associated with virtual

learning is "*...expanding educational access, providing high-quality learning opportunities, improving student outcomes and skills, allowing for educational choice, and achieving administrative efficiency*, (p. 402)" which is similar to Britain and Liber's (2004) argument.

Based on Falduto and Ihde (2007), virtual learning enables students to have an alternative learning choice due to various internal and external factors. Lueken et al. (2015) approved virtual learning due to its capability in supporting special needs students. Toppin and Toppin (2016) add to virtual learning ability with further social-emotional support with at-risk students and cost-saving benefits. However, the list of its challenges is just as long (Barbour & Reeves, 2009; Hawkins et al., 2012; Isenhour et al., 2000; Zhang & Lin, 2020).

Barbour and Reeves's (2009) review on past research found that online learning success depends on student characteristics such as "*...independent orientations towards learning, highly motivated by intrinsic sources, and have strong time management, literacy, and technology skills...typically associated with adult learners*. (p. 402)" This could mean children may have a more challenging time adapting to the virtual learning environment. Isenhour et al.'s (2000) study of implementing virtual learning in the classroom found issues such as technology limitation, scheduling constraint, communication issues, and management overload (monitoring and supporting student learning progress). This sentiment was echoed by Zhang and Lin (2020), who found learners were not satisfied by content, student-teacher interaction, and managerial learning routines provided in virtual learning. Additionally, Hawkins et al. (2012) found that virtual learning creates a disconnect between teachers and students which manifests itself in the area of student learning outcomes. Virtual learning also makes it harder for a teacher to build a community to collaborate and exchange information as there will be something lacking in virtual communication (Hawkins et al., 2012).

## ***Blended Learning***

Blended learning is another learning innovation commonly found in today's classroom (Hubackova & Semradova, 2016; Kintu et al., 2017; Tang & Chaw, 2016). It has emerged since early 2000 (Rasheed et al., 2020), and based on Hrastinski (2019), three notable blended learning definitions have been adapted. Graham (2006) defines blended learning as a combination of face-to-face instruction and mediated instruction via computer. This definition has been cited 3,137 times (Google Scholar, 07 March 2021). Garrison and Kanuka (2004) define blended learning as "*the thoughtful integration of classroom face-to-face learning experiences with online learning experiences,*" and it has been cited 4,616 times (Google Scholar, 07 March 2021). Lastly, Allen and Seaman (2010) define it as a "*Course that blends online and face-to-face delivery. A substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings*" (2021, cited by 839 based on Google Scholar).

Although blended learning is more widespread in secondary and higher-level education (Dziuban et al., 2018; Hubackova & Semradova, 2016; Tang & Chaw, 2016), it has been increasing at the K-8 level (Digital Learning Collaborative, 2019, 2020; Staker & Horn, 2012) in recent years. Various research showed the advantages of blended learning in various subjects through student engagement, effectiveness, and achievement (Borba et al., 2016; Lam et al., 2018; Schechter et al., 2015; Stockwell et al., 2015). Borba et al. (2016) reviewed innovation in the Mathematics content area with the development of technology. Based on their review, technology enhanced mathematical learning. It allowed students to experience interactive media (video, pictures, LMS platforms, MOOCs, etc.) that enabled collaborative works and various internet resources that engaged students' learning.

Lam et al. (2018) studied blended learning effectiveness in writing, specifically in teaching argumentative writing. They created an instructional design and incorporated gamification at the Junior high level and found that blended learning increased student participation and collaboration when writing their draft. Schechter et al. (2015) investigated the advantages of blended learning in developing low SES learning reading proficiency. The study was a success in that student participants who were placed two-grade levels below their supposed level (Schechter example was 2nd-grade students who studied at the kindergarten level) were able to advance to the next grade (83%), and some students even advanced two grades to their supposed level (17%). Meanwhile, in STEM education, Stockwell et al. (2015) found using blended learning instructional design helped students practice problem-solving skills and improved on-site learning attendance.

Even though there are many benefits in blended learning, previous research provides cautions and suggestions regarding this learning type. Borba et al. (2016) warned teachers and educators to focus on blended learning's educational aspects and not get caught up in implementing the latest technology. Stockwell et al. (2015) faced challenges when they tried to design blended learning (experimental group) that could emulate the on-site learning (control group). Student understanding of digital literacy was another factor that determined student success and satisfaction in blended learning (Kintu et al., 2017; Rasheed et al., 2020; Tang & Chaw, 2016), along with teacher professional development in blended learning (Borba et al., 2016; Hubackova & Semradova, 2016; Rasheed et al., 2020; Schechter et al., 2015). Technological issues such as availability of equipment and internet connection for access were also mentioned (Hubackova & Semradova, 2016; Rasheed et al., 2020).

### ***On-site Learning***

Unlike traditional learning of the past, on-site learning today integrates various technology into the classroom. Therefore, for the sake of clarity, my view of blended learning is more in-line with Allen and Seaman's (2010) definition that stated there is a reduction in a face-to-face meeting as opposed to Gagne (2006), whose definition was the combination of classroom learning with technology instructions.

Based on early research, studies comparing e-learning and traditional learning show a more favorable impression toward e-learning (Hannay & Newvine, 2006; Zhang et al., 2004). The assertion was also confirmed in a blended learning context (Borba et al., 2016; Lam et al., 2018; Schechter et al., 2015; Stockwell et al., 2015). As technology became more developed and more research was conducted, more advantages on e-learning and blended learning were found alongside the disadvantages (Borba et al., 2016; Clayton et al., 2018; Lam et al., 2018; Schechter et al., 2015; Stockwell et al., 2015).

Zhang et al. (2004) stated that "*In a traditional classroom lecture, students can simultaneously observe and listen to an instructor, and watch PowerPoint slides or transparencies (p. 77)*" This could presently be done with online conference applications like Zoom combined with Blackboard, as used by the University of Arkansas. Moreover, based on Hannay and Newvine's (2006) study, undergraduate students preferred online distance learning due to the flexibility and convenience.

Clayton et al. (2018) found that undergraduate students prefer traditional on-site learning compared to blended or online deliveries, unlike previous generations. The research results showed students preferred traditional learning because of its engagement ability, personal learning style and control, familiarity, credibility, learning environment, and profound learning

possibility. In addition, despite the increase of students' enrollment in blended and online learning programs, it was not as high as on-site learning at the K-8 level (Digital Learning Collaborative, 2019). Furthermore, some activities were best experienced in person.

For example, Dennis (2003) found that Problem Based Learning (PBL) was more suitable when implemented as on-site learning. PBL activities, particularly in STEM, required students to design, collaborate and construct using different types of materials, tools, and constraints (Havice, 2009; Weaver, 2017). While there was no significant difference in achievement, students who learned PBL hands-on were faster in grasping the lesson and completing the project than students who learned from online deliveries.

Another example of learning best suited for on-site learning was play-based learning (Cutter-Mackenzie & Edwards, 2013; Hewitt, 2001). Both Cutter-Mackenzie and Edwards (2013) and Hewitt (2001) recognized the importance of play in children's learning. Hewitt listed the advantages of structured play by using building blocks as tools to learn words and reading. Mathematics can instill problem-solving and collaborative works from an early age. Meanwhile, Cutter-Mackenzie and Edwards explained that "*It is important that young children's learning in the area of environmental education provides more than a series of experiences that do not connect with knowledge*" (p. 196). This outcome was difficult to achieve in blended or online learning as play-based learning was laden with instructional materials. Play, according to Cutter-Mackenzie and Edwards's study definition, also implied the student's need to be present for the activities.

### **COVID-19 pandemic and education**

The current COVID-19 pandemic has disrupted the teaching and learning process to an even larger scale than previous unprecedented situations reviewed in this study (Abidah et al.,

2020; Burgess & Sievertsen, 2020; Daniel, 2020; Dreesen et al., 2020; Ellis et al., 2020; Kaden, 2020; Marinoni et al., 2020). Based on UNESCO data, COVID-19 affected approximately 1.6 billion students, 91% of the world-enrolled students (UNESCO, 2021). Fortunately, research on the COVID-19 pandemic covers a broader topic range than previous research about pandemic recommendations. Previous research on education about the 1918 influenza pandemic mostly focused on the long-term impact of students' physical, mental health, and individual social-economic development (Almond, 2006; Guimbeau et al., 2020; Helgertz & Bengtsson, 2019; Lin & Liu, 2014; Neelsen & Stratmann, 2012; Nelson, 2010). Similarly, research about the 2009 influenza pandemic was dominated by health and safety measures, family struggles due to school closure, and economic consequences of school closure (Brown et al., 2011; Cauchemez et al., 2014; Egger et al., 2012; Fumanelli et al., 2016; Gemmetto et al., 2014; Hutchins, 2009; Milne et al., 2008; Rainey et al., 2016; Wong et al., 2014). In addition to the above-mentioned concerns, present research included rethought of teaching and learning process, school operation, creating student, teacher, and parent support systems, and teacher preparation in education (Abidah et al., 2020; Burgess & Sievertsen, 2020; Daniel, 2020; Dreesen et al., 2020; Ellis et al., 2020; Kaden, 2020; Marinoni et al., 2020; Reimers & Schleicher, 2020).

Due to the lockdown imposed by governments throughout the world for the safety and wellbeing of their communities in combating viral infections, most learnings for the 2019-2020 and 2020-2021 academic years moved online (Abidah et al., 2020; Burgess & Sievertsen, 2020; Daniel, 2020; Dreesen et al., 2020; Ellis et al., 2020; Kaden, 2020; Marinoni et al., 2020; Reimers & Schleicher, 2020). To assist the transition of on-site to online learning, Reimers and Schleicher (2020) provided a framework that comprised a comprehensive list of strategies and considerations to navigate through COVID-19, including health and safety measures,

communication and collaboration with the community, parents, and government bodies, instructional and curriculum development and method of deliveries, school operation and support systems (social-emotional, health, physical assistance, etc.) and funding availability. These proposals were echoed by Daniel (2020) that particularly gave importance to student and parent support in addition to staff and teacher training. Dreesen et al. (2020) also noted the importance of having a backup plan in education to combat emergencies.

The research reviewed that was published during the early stage of COVID-19 was marred with the skepticism of online learning success and its ability to ensure continuation of education (Abidah et al., 2020; Burgess & Sievertsen, 2020). Based on Abidah et al. (2020), the study found similar worries of online learning implementation, which were misguided use of technology as teachers were unable to monitor students directly and the abundance of managerial responsibility that discouraged the teacher. Burgess and Sievertsen (2020) agreed that while online learning could create a bond between parents and children in learning, as the parent would gain an insight into their children's development and creativity. The study also mentioned it could cause many frustrations during a prolonged arrangement. Based on the research that came after, the result was an overlapping story of success and difficulties in transitioning to online learning (Dreesen et al., 2020; Ellis et al., 2020; Kaden, 2020; Marinoni et al., 2020).

Dreesen et al. (2020) found that the most challenging barrier for online learning was the internet's availability in low and middle-income countries (less than 50% of the population). This was also true in Marinoni et al.'s (2020) research which found difficulties of transition due to unavailability and limited technology support from an institution that could be distributed to the student. The disparity in teacher professional development in preparing them for the transition added to the transition difficulty (Marinoni et al., 2020). This also affected the work schedule, as

Kaden (2020) reported increasing work hours and load during the initial transitions. Moreover, some fields of study, particularly in STEM, needed laboratory facilities that were not available or had a limited time constraint further impacting the educational process (Kaden, 2020; Marinoni et al., 2020).

Despite the challenges, there were positive impacts of this wide adaptation of online learning (Daniel, 2020; Ellis et al., 2020; Kaden, 2020; Marinoni et al.,2020). Ellis et al. (2020) found that the COVID-19 pandemic enabled teachers and educators to stand up and break formal learning constraints. The flexibility afforded by government bodies during extenuating circumstances afforded educators to have more control and innovation possibility in all aspects of their job from instructional design, curriculum, and assessment processes of their teaching and learning (Ellis et al., 2020; Marinoni et al.,2020). Kaden (2020) also found greater support for teacher professional development, while Daniel (2020) suggested the long-term effects of online learning in alternate learning delivery methods for future implementations.

Presently, these initiatives have been in progress for quite some time, and there could be changes in every aspect discussed above. Based on UNESCO data as of 09 March 2021, the impact of COVID-19 in education has been reduced to less than 140 Million students affected, which comprise only 8.3 % as compared to its peak.

## **Summary**

From the literature reviewed, it could be seen that education has much room for improvement. Based on the review of unprecedented effects in education, past research showed similarity between the four sub-topics reviewed (natural disasters, school closure, pandemic, and war/terrorism). All topics showed short term impacts in education such as loss of education time, and long-term impacts on individuals involved, such as prolonged health concerns and socio-

economic prospect. The history of the educational system in United States provided a glimpse of the complexity of the educational system used at this time, including the important turning points and movements throughout the history from different perspectives. The teaching-learning methods reviewed the benefits and disadvantages of the three sub-topics (virtual, blended, and on-site learning). In virtual and blended learning, the benefits could be the flexibility and the technological possibilities in education that could be brought to students. The negative side of these types of learning were student technology-literacy skills and the lack of reliable internet connections not allowing them to perform on a similar level as when they learned on-site. There was also the sense of detachment due to limited social connection with peers and teachers. For on-site learning, it was the opposite. Present on-site learning integrated technology in the classroom is unlike the past. There are some learning modalities like PBL STEM, and play-based learning that were better implemented in person than online. However, based on the COVID-19 and education current studies, providing learning options for education was a necessity to prevent past situation recurrence (ex: loss of educational time). The challenges of the educational process during the COVID-19 pandemic were explained.

### **Chapter III Methodology**

The literature reviewed showed additional research to understand teaching and learning situations and conditions during an unprecedented situation like a pandemic. The purpose of this study was to determine changes in school operation, curriculum, and technology integration in classroom learning due to the COVID-19 pandemic. To meet this purpose, I analyzed public documents of 13 districts in Northwest Arkansas from elementary to secondary level. In addition, teachers from various grade levels were interviewed to provide a comprehensive illustration of changes that happened on paper with its application in day-to-day teaching and learning.

#### **Sampling Procedure**

There are 14 districts in Northwest Arkansas. Based on the data from DESE Arkansas, I divided the districts into categories based on their percentage of students who received free and reduced lunch (high and low SES) and the district location (suburban and rural areas). According to ESEA Title I – A and the School Meals' Community Eligibility Provision Report (Skinner & Aussenberg, 2016), in order for a school to be eligible for Title I funding, at least 40% of the students attending the school must receive free or reduced lunch.

For document analysis, each of the 14 school district's websites public documents **created by** each school district were browsed and analyzed to understand the changes that happened due to the pandemic. One of the districts – Decatur – was excluded from this research due to the unavailability of public documents on their website related to the COVID-19 pandemic.

Due to the time constraint, convenience sampling was used to assemble interview participants (Ary et al., 2019). Several criteria were set for the interview participants; the

participants must be an active elementary and/or secondary teacher and worked in either high or low SES school in Northwest Arkansas suburban or rural districts. Teachers from both elementary and secondary schools across the SES brackets in both suburban and rural districts were included to have a better representation of educational change during the pandemic.

### **Data Collection Procedure**

To gather data for the document analysis, public documents available on each district's website in Northwest Arkansas were accessed. I focused on documents that were created by the district to mitigate COVID-19 impact and released during 2020-2021, the year when lockdown and school closure affected everyone severely. Based on Bowen (2009), document analysis for the qualitative research method is not limited to formal documents that are found in libraries, institutional records, and archives but could include other written or printed forms such as agendas, scrapbooks, photobooks, programs scripts, etc. The data collected in this study ranged from superintendent letters, brochures, power points, videos transcripts, pdfs, Google documents, schedules, and booklets.

Prior to the interview, Institutional Review Board approval was requested and received. Teachers that met the criteria were invited for an interview through e-mail with a consent letter attached. After the contacted teachers replied and signed their consent to be part of the study, an interview schedule based on teacher availability was discussed. The interviews were conducted and recorded through virtual Zoom meetings. I asked the participants were asked a series of pre-approved interview questions, took notes, and recorded the interviews. I, along with my advisor (the co-researcher) had access to the interview notes and the recordings. The data was kept in a password-locked file on a password-locked computer that only myself and my co-researcher knew. I kept all printed materials and written notes in a locked cabinet. To ensure the

confidentiality of the participants, coded names were assigned. The audio and video recordings were only kept for transcription purposes. After the audio and video recordings were transcribed and clarified, the audio and video recordings were destroyed.

Table 1. *Interview Participant School District Data (Source: DESE Arkansas)*

Fiscal Year	District	Classification	Enrollment	Total Free and Reduced	Percent Free and Reduced	Full Priced Paid
2019/20	District 1	HIGH SCHOOL A	3057	490	16.03%	2567
School District 1 Summary			17848	4009	22.46%	13839
2019/20	District 2	MIDDLE SCHOOL	528	196	37.12%	332
School District 2 Summary			2231	840	37.65%	1391
2019/20	District 3	ELEMENTARY SCHOOL A	401	157	39.15%	244
School District 3 Summary			2556	876	34.27%	1680
2019/20	District 4	ELEMENTARY SCHOOL B	670	223	33.28%	447
2019/20	District 4	HIGH SCHOOL B	2216	1749	78.93%	467
School District 4 Summary			22164	15798	71.28%	6366

For the interview, six invitations were sent to three elementary teachers and three secondary teachers from different school districts in suburban and rural areas and received agreement from five participants to be interviewed for this study. Two elementary teachers were interviewed: one from a suburban school and one from a rural school. The other three participants were secondary school teachers: two from suburban schools and one from a rural school. See Table 1 for school demographics.

*Table 2. Participant Demographics*

School District	Grade Level	Subject Taught	Teaching Experience	Gender
School District 1	9-12 grade	French	25 years	Female
School District 2	7-8 <sup>th</sup> grade	Social Studies and Science	1 year	Female
School District 3	1 <sup>st</sup> grade	All core subjects, heavy in Reading and Phonics	6 years	Female
School District 4	5 <sup>th</sup> grade	All core subjects	9 years	Female
School District 4	11 <sup>th</sup> grade	English	7 years	Male

The participants are quite spread out in terms of their background (see table 2 for teacher participant demographics). The participants worked in suburban and rural areas with different funding resources. Their teaching experience ranged from a first-year teacher to one with over 20 years of classroom experience. The content areas also varied from elective courses to core curriculum content across varying grade levels.

### **Instrumentation**

Data were collected from two sources: Northwest Arkansas school district public documents and teacher interviews.

#### ***Northwest Arkansas School District Public Documents***

Northwest Arkansas school district public school websites was accessed to collect district public documents. Only materials that were publicly accessible and created by the district were collected and analyzed for this study. Other materials available in the district were collected

only if the district's document was deemed to be incomplete. Another reason for non-district created data to be collected was to determine if the district strictly followed the materials they referenced.

### ***Interviews***

Upon the completion of the document analysis, I conducted interviews using a sample of teachers from the study's school districts. Prior to the interview, each participant signed an informed consent letter given to them via interview invitation e-mail. The interview was scheduled based on participant's availability either by meeting in person or Zoom according to participant preference, convenience, and to preserve the participants' health and safety during the pandemic. Semi-structured interviews were used to allow participants the flexibility to answer questions while maintaining the discussion theme (Merriam, 2009). The first interview question focused on participant demographics (ex: teacher training and teaching experience). The remainder of the interview questions focused on day-to-day teaching and learning experiences as well as their personal views about current education and the future development in learning. See Appendix C for a copy of the semi-structured interview protocol. Each interview lasted approximately 15 minutes but no longer than 30 minutes.

### **Data Analysis Procedure**

The data collected in this study were analyzed using the qualitative method of public document analysis and interview analysis. Both document and interview analysis are coded using initial coding before being themed using axial coding (Saldana, 2009). Initial coding was employed to gain a detailed view of the data while enabling comparison and contrast with others. After the initial coding, axial coding then allowed me to compile and reduce initial codes into categories to discover major themes from the data. The coding for document analysis was done

using Microsoft Excel, while interview transcriptions were coded using Word document comments. The interviews were transcribed online using Temi, Rev, and Otter.ai websites. All the programs worked well as I only needed to make minor corrections on each transcription. The quotes from transcription that will appear in chapters 4 and 5 in this study are not verbatim but have been edited to remove participant verbal tics. There were no other changes in the transcription content aside from the removal of the tics.

### **Summary**

This chapter outlined the methodology used for the study. For document analysis, only public documents created by the districts that could be accessed from the district websites were chosen. Other documents available on the district website were examined if the data collected from documents created by the district were deemed incomplete. To gather interview participants, convenience sampling was used due to the time constraint. The participants' criteria were collected to obtain a representation of K-12 teacher perceptions from high and low SES schools in both suburban and rural districts. After the data collection, initial coding and axial coding were initiated to discover major themes within the data.

## Chapter IV Results

This chapter discusses the results of the document and interview analysis of this study intended to address the research questions, "What are the extent of the curriculum and education changes precipitated by the COVID-19 pandemic that teacher and faculty members experience in real practice?" and "Are there any deviations found by teacher or faculty members regarding the plan and implementation of teaching and learning during COVID-19 pandemic?" The data are presented in the form of narrative text.

### Northwest Arkansas School District Public Document Analysis

There are five themes identified from the analysis of Northwest Arkansas school district public documents: (1) Health, (2) Supports, (3) School District Operation, (4) Teaching and Learning, and (5) Communication. See table 3 for a list of the themes and their open codes.

Table 3. *Document Analysis Coding*

Themes	Open Codes
Health	Health Guideline Health and Safety Procedure Health and Safety Curriculum Health Awareness Promote Health and Safety Awareness Health Service Health Service Availability Health Service Priority Health Service Scope/Accomplishment Health Examinations Health Issues Health Policy Health Update High Risk Circumstances

Table 3. (Cont.)

Themes	Open Codes
	<p>Covid Facts</p> <p>Covid Impact</p> <p>Covid Symptoms</p> <p>Covid Monitor</p> <p>Covid Updates</p> <p>Vaccination</p> <p>Further Information</p>
Supports	<p>School District (Vital Organization)</p> <p>Health Support</p> <p>District Assistance Scope</p> <p>District Support</p> <p>School Support</p> <p>Emergency Support</p> <p>Job Training</p> <p>Health Care Training</p> <p>Teacher Training</p> <p>Teacher Support</p> <p>Teacher Resource</p> <p>Illness and Covid Leave</p> <p>Family/Parent Support</p> <p>Parent Resource</p> <p>Staff Training</p> <p>Staff Resource</p> <p>Individual Care Support</p> <p>SPED Support</p> <p>ELL Support</p> <p>Language Support</p> <p>Academic Support</p>

Table 3. (Cont.)

Themes	Open Codes
	Technology Support Tutorial Social-Emotional Support Food Assistance Physical Support Physical Needs Shelter Assistance Student Support Goal Student Success Factors Student Center School Renovation School Supplies Support Transportation Socio-Economic Challenge Emergency Support Support Identification Procedure Social Worker Availability Give Support Further Actions Support Availability Lessen Family Burden Past District Supports Limited District Support Availability Further Information Information Hub
School District Operation	School Operation Plan School Operation Guideline School Operation Limitation

Table 3. (Cont.)

Themes	Open Codes
	<p>School Operation Challenge</p> <p>Flexibility in Planning</p> <p>State Guideline</p> <p>State Teaching-Learning Guideline</p> <p>State Policy</p> <p>Health Coordinator Responsibility</p> <p>Health Staff Responsibility</p> <p>Health Support Requirement</p> <p>Staff Procedure</p> <p>Employee/ Staff Responsibility</p> <p>Staff Training Curriculum</p> <p>Limited Staff</p> <p>Counselor Responsibility</p> <p>Teacher Qualification</p> <p>Employee Assessment</p> <p>Work Time Policy</p> <p>District Operation</p> <p>District Policy</p> <p>District Priority</p> <p>District Support Policy</p> <p>Policy Change Guideline</p> <p>Policy Approval</p> <p>Policy Violation Consequence</p> <p>Student Drop-off and Pick-up Procedure</p> <p>Visiting Procedure</p> <p>Visiting Requirement</p> <p>Visiting Limitation</p> <p>Visiting Exception</p>

Table 3. (Cont.)

Themes	Open Codes
	<p>School Procedure</p> <p>School Tuition</p> <p>Emergency Circumstance</p> <p>Emergency Level Determiner</p> <p>Emergency Precautions</p> <p>Emergency Protocol Practice</p> <p>Emergency Support Eligibility</p> <p>Emergency Support Procedure</p> <p>Funding</p> <p>Donation</p> <p>School Events</p> <p>Exception Policy</p> <p>Exception Procedure</p> <p>Food Assistance Procedure</p> <p>Food Assistance Limitation</p> <p>Social Worker Responsibility</p> <p>Social Emotional Curriculum</p> <p>Social Emotional Guideline</p> <p>FAQ</p> <p>Committee Requirement</p> <p>Curriculum Development</p> <p>Curriculum Development Guideline</p> <p>Instructional Design/Plan/Model</p> <p>Instructional Material/Requirement/Example</p> <p>Learning Method Recommendation</p> <p>Learning Plan Development</p> <p>Discussion</p> <p>Compiling Data</p>

Table 3. (Cont.)

Themes	Open Codes
	<p>Collaboration</p> <p>Technology Support Requirement</p> <p>Technology Support Procedure</p> <p>Program Assessment</p> <p>Curriculum Evaluation</p> <p>Enrolment Procedure/Information</p> <p>Learning Choice/Method Commitment</p> <p>Eligibility Requirement</p> <p>Further Information</p> <p>School District Assurance</p> <p>Covid Leave Benefit Requirement</p> <p>Disciplinary Procedure</p> <p>Transportation Procedure</p> <p>Recess/Play Procedure</p> <p>Breakfast/Lunch Procedure</p> <p>Water Filling Procedure</p> <p>Attendance Policy</p> <p>Attendance Amendment</p> <p>Attendance Procedure</p> <p>Absence Consequence</p> <p>School Supplies Eligibility</p> <p>Future Plan</p>
Teaching and Learning	<p>Emergency Learning Procedure</p> <p>Address unfinished curriculum/materials</p> <p>Learning Choice/Method/Availability</p> <p>Blended Learning</p> <p>Synchronous Learning</p> <p>On-site Learning Procedure/Experience/activities</p>

Table 3. (Cont.)

Themes	Open Codes
	<p>Online Learning Procedure/Experience/Activities</p> <p>Online Learning Advantage</p> <p>Learning Disadvantages</p> <p>Learning Objectives</p> <p>K-5 Learning Procedure</p> <p>6-12 Learning Procedure</p> <p>Alternative Learning</p> <p>Tutorial</p> <p>Learning Priority</p> <p>Learning Preference</p> <p>Learning Autonomy</p> <p>Learning Changes</p> <p>State Learning Standards</p> <p>Routine</p> <p>Further Academic Endeavor</p> <p>Assessment</p> <p>Assessment Methods/Examples</p> <p>Curriculum</p> <p>Curriculum Content</p> <p>Online Curriculum</p> <p>Curriculum Implementation</p> <p>Reading Curriculum</p> <p>Math Curriculum</p> <p>Problem-solving Skill</p> <p>Life Skill</p> <p>Social-Emotional Learning</p> <p>Social Emotional Challenge</p> <p>Schedule</p>

Table 3. (Cont.)

Themes	Open Codes
	Student Activities Student Responsibility/Expectation Virtual Learning Requirement Remote/Virtual/Online Learner Skill Requirement Academic/Learning Challenges Emotional Challenge Teacher Responsibility Family/Parent Responsibility LMS Platform Technology Integration Technology use Privacy Policy Learning Technology Requirement School Supplies Further Information
Communication	Communication Method Communication Level District Announcement Communication Procedure Cooperation Further Information

***Health***

Health and safety procedures followed by health guidelines and health support was the most prominent code encountered in the analysis of the public documents. Every school district demonstrated that they followed the DESE, ADH, and CDC guidelines when creating their district plan to ensure the 2020-2021 academic year continued as safely as possible. From the 13 districts analyzed, six provided daily updates on the COVID local spread (Bentonville,

Farmington, Fayetteville, Gentry, Gravette, Springdale), and one provided a link to access COVID-19 spread throughout Arkansas (Westfork). Every school district encouraged daily screening for students, and they had a varying degree of health and safety protocols enforced for students, staff, and parents. The health and safety protocols most commonly found were wearing a mask, reminders to use hand sanitizer, and physical distancing of six feet apart from each other.

Prairie Grove, Greenland, Lincoln, and Farmington provided one or two masks for every student and employee. Springdale provided funding for every employee to purchase their face coverings. Rogers and Fayetteville provided extra disposable masks for students who forgot to bring their own, and Pea Ridge did so in limited supplies. Most districts also gave an exception for students who could not wear the mask due to medical constraints. Some districts allowed mask breaks for students, teachers, and staff throughout the day with proper health and safety procedures in place (Westfork, Rogers, and Springdale). Greenland also provided water bottles for every student.

Most district websites listed COVID symptoms, how they spread, and recommendations to minimize them. Greenland, Lincoln, Gentry and Elkins only had COVID prevention and recommendations while Pea Ridge had COVID outreach and prevention measures. Some districts also had protocols for visitors during pandemics (Springdale, Rogers, and Farmington), sanitizing protocols for the whole building (Bentonville and Farmington), after each class (every district), and after each route for the school bus (Lincoln and Bentonville). Most districts encouraged parents who could drop off and pick-up students personally to do so (Gravette, Lincoln, Westfork, Bentonville, and Farmington). They also provided available health care information around the district. Others also included health and safety protocol training like how

to safely wear and take off masks and effective disinfectant use (Farmington, Pea Ridge, Bentonville, and Lincoln). In addition, Springdale provided health care training such as heart saver, stop bleeding, and CPR. Specifically, Bentonville also listed other emergency drills like fire drills, tornado drills, and lockdown drills to prepare everyone facing mentioned emergencies.

### ***Supports***

The school districts offered various supports from academic, social-emotional, and physical assistance. Every school district provided free and reduced lunches from Monday-Friday in school. Some districts allowed parents to order online and pick them up for virtual students (Elkins, Rogers, and Westfork). Others provided meals for weekends (Fayetteville), and had schedules of free food for everyone from age 0-18 to pick up (Bentonville, Gentry, and Greenland). Bentonville also had a section addressing food allergies students may have.

Every district assured that Special Education student supports would be run as they had been prior to the pandemic, and language supports would be provided as needed. They also assured counselor availability for social-emotional support. While other districts stated that some programs in Special Education and English Language learning needed students to be in person (Bentonville, Farmington, Fayetteville, and Gentry), Pea Ridge stated that everything for these programs would be moved online. Bentonville had a FAQ for addressing Special Education student need. Fayetteville had different and more detailed sections of the plan of how Special Education, ELL, and Gifted and Talented students were to be accommodated during the academic year. Larger districts like Bentonville, Springdale, and Rogers listed counselor, social worker, and other employee work responsibility, especially in screening students, and allocated support and funding based on individual needs. Fayetteville, Springdale, Rogers, Bentonville,

and Prairie Grove provided their counselors, social workers, teachers, and school administrators training in social-emotional curriculum and explained the partnership they held with Ozark Guidance/Arise Health. Meanwhile, Pea Ridge focused more on identifying faculty, staff, student, and family mental health in developing a plan and building a task force to provide services.

Every district provided technological supports by providing Chrome Books and chargers preinstalled with the necessary applications for learning. Gravette and Springdale also provided iPads for students with special needs, but only Pea Ridge stated that iPads or Tablets would work as well for general students. Some districts provided a limited number of home internet connections for students eligible for either free or reduced lunch or in hardships such as homelessness (Gravette, Lincoln, Springdale, and Farmington). Others (Fayetteville, Prairie Grove, and Westfork) listed low-cost internet providers and hot spot locations (Fayetteville and Prairie Grove), including the password for students to use when accessing the internet (Rogers). Most school districts also provided a technical team that could be contacted to help students and parents with technological issues (Bentonville, Lincoln, and Rogers). Gentry school district provided a paper packet during the emergency school closure at the end of the 2019-2020 academic year. Pea Ridge did not but assured families that the school district was working on mitigating technology and internet connection shortages.

Many school districts also listed various resources and encouraged parents to contact them when in a dire situation such as homelessness or other extreme situations of hardship (Lincoln, Prairie Grove, Springdale, Bentonville, and Farmington). Some districts provided tutorials (Lincoln and Rogers) or training (Gravette, Prairie Grove, Farmington, and Rogers) for parents and students on how to operate the learning management systems (LMS) platform and

access materials for learning. Simultaneously, students in other districts learned how to use the platform during the teaching-learning process (Greenland). Prairie Grove school district provided documents and learning resources in students' home languages. Springdale school district also provided language supports as their website was presented in several languages (English, Spanish, and Marshallese). In addition, some school districts (Gravette, Greenland, Lincoln, Westfork, Gentry, and Pea Ridge) also provided FAQs to answer parent questions and concerns regarding the students' academic year.

Besides support for students and parents, many school districts also had employee support for emergency paid leave related to COVID-19 (Lincoln, Springdale, Fayetteville, and Bentonville). In addition, Springdale provided free childcare for essential workers. Fayetteville also had a section for substitute teachers.

### ***School District Operation***

School district operations were highly related to the health and safety of the school community. The school districts have undergone renovation ranging from spacing and mapping classroom seating arrangements, re-arranging recess and lunch schedules (every district), repurposing empty spaces (Bentonville, Farmington, Fayetteville, Gravette, Greenland, Lincoln, and Rogers), adding water bottle filling stations (Bentonville, Gravette, Greenland, Lincoln, Springdale, Rogers, and Westfork) and prohibiting the use of water fountains (Bentonville, Fayetteville, Gravette, Lincoln, Springdale, Rogers, and Westfork) to installing protective barriers such as plexiglass in congested areas (Greenland). Springdale even renovated all school buildings by re-arranging rooms, adding protective barriers, increasing health care spaces, and purchased a year's worth of cleaning supplies and disinfectant. Similarly, Rogers removed reading corners, carpets, pillows, unnecessary furnishings, and installed dividers to provide extra

layers of protection. Bentonville erected classroom barriers with detailed specifications for creating and installing them, while Farmington provided floor markings and a bathroom break schedule. Many districts implemented student drop-off and pick-up procedures, hall-way procedures (Bentonville and Farmington) and ensured that athletics and music courses followed the current health guidelines from ADH and CDC. Procedures to board school buses were also in place. For example, Bentonville, Lincoln, and Westfork had seating charts based on student names and household. Students also needed to board and depart the bus in a particular order (Westfork). Lincoln considered adding more stops on their bus route to reduce congestion of dropping off and picking up students from one location. The district also staggered classes to reduce crowding, cancelled face-to-face events, and relocated possible events to a virtual setting.

### ***Teaching and Learning***

Most districts delivered questionnaires for the parent to fill in regarding the teaching and learning method to gain insight on parents' views. Based on the results, the school districts constructed and provided options to cover everyone's needs. There were three learning methods that students and parents could experience in the 2020-2021 academic year due to the pandemic: On-site Blended Learning, Virtual Learning, and Pivot Learning. When choosing learning methods, especially for parents and students that considered virtual learning, some school districts listed required skills a student must have if the family desired to choose virtual learning in order for smoother operations (Rogers, Bentonville, Farmington, Gravette, and Westfork). The skills listed were self-motivated, independent learner, good technology literacy, time management, communicator, learning commitment, and student readiness academically.

There was a variation of blended learning models depending on the school district, but most districts had students who learned on-site from 2-3 days with the remainder online. During

on-site learning time for a student who chose blended learning, the older students would be able to rotate through the classroom while younger students needed to stay in their classroom (Westfork). Greenland, Bentonville, and Lincoln school districts stated that students would not remain in the same classroom but transition to other classrooms during the day. Rogers stated that students would remain in the same classroom throughout the day. As part of academic support, some districts allowed students to check out library books (Lincoln, Greenland, Gravette, Rogers, and Springdale). The book would be quarantined for 72-96 hours upon return (Bentonville and Fayetteville).

Pivot Learning was administered only in an emergency situation while school districts needed to close due to unexpected circumstances such as another COVID-19 outbreak. Some districts also allowed virtual school students to join athletics and extracurricular activities on-site. However, buses to and from school would not be provided for them (Prairie Grove, Greenland, and Farmington). Lincoln and Westfork were the exception in that they provided bus transportation for every student that needed it.

At the beginning of the new semester last year in Fall 2020, most districts allocated time to address unfinished curriculum and materials because of sudden closure for mitigating COVID-19 pandemic spread (Prairie Grove, Farmington, Gravette, Greenland, Lincoln, Springdale, Rogers, and Westfork). This was also when parents and students were given training and resources as school districts were using the LMS platform throughout the new academic year. The school districts used various LMS platforms for their blended and online learning. For the elementary level, the LMS was chosen based on the ease of accessing and navigating the platform.

Whether students and parents chose blended or virtual as their learning method for the school year, a certified district teacher was available as the main instructor for students to reach out to and make appointments. However, most districts reminded students and families that they needed to commit to whatever method of learning they chose for an entire semester as they would only be able to change it after the semester had finished or in extenuating circumstances (Gentry, Springdale, and Farmington) that would be evaluated on a case-to-case basis by the district officials. Greenland and Gravette were the exception; they did not require students and families to make a semester-long commitment but allowed them to have freedom of changing from blended to virtual and vice versa anytime they deemed appropriate. Another factor that students and families must be aware of when choosing school format was that assignments submitted might not be graded by the main teacher but by a third party such as Lincoln Learning or Virtual Arkansas (Prairie Grove). Every school district had a schedule to meet the teacher for academic support. In addition, Pea Ridge assigned a mentor teacher for each student, and they were scheduled to have weekly virtual meetings.

During this transitional period, most districts provided teacher training to prepare them for teaching using blended, online, and virtual learning methods. The districts provided training ranging from four days of autonomous learning using the LMS platform and various resources provided by the district (Fayetteville) to professional training (Gentry, Westfork, Rogers, Springdale, and Farmington) like boot camp and online conference (Gravette, Lincoln, and Prairie Grove). Besides professional development for blended and online learning, school districts provided other training to improve teaching and learning. Fayetteville school district provided NWEA MAP Assessment training for their teachers. Prairie Grove and Farmington school districts provided training for teachers regarding Arkansas Reading initiative. Lincoln and

Fayetteville provided social-emotional training, trauma-induced learning, and ethical challenges in remote learning.

All school districts also listed student responsibilities and requirements for teaching and learning. This mainly related to student attendance and submitting assignments on time. For on-site students, assignments were mostly submitted during class, while online and virtual students had more relaxed deadlines. Because most of the online and virtual student learning was asynchronous, their log-in time and assignment submission became part of their class attendance count. Again, if there were no reports or extenuating circumstances that was permissible for a student to miss engaging in learning, the teacher would count the student as absent (Springdale, Rogers, Fayetteville, and Bentonville). Regarding assignment submission, Pea Ridge had an academic honesty and plagiarism section in their school district document. Moreover, every district gave detailed documentation of teacher responsibility and parent responsibility in supporting students throughout this highly stressful situation.

### ***Communication***

Every district stated that a communication plan would be created. Some districts had communication through phases (Gravette, Lincoln, and Westfork) while others gave updated information daily or as soon as it was available (Prairie Grove and Gentry). Springdale listed five levels on their communication plan in addition to daily and weekly updates. Every district assured families that they would receive the updates through multiple methods such as e-mail, websites, social media, calls, or texts. They also encouraged parents to keep received communications for student health and academic progress throughout the academic year.

## Teacher Interview

I interviewed five teachers from elementary and secondary schools from suburban and rural districts in Northwest Arkansas. Several different themes were identified from the interview; (1) Teaching-Learning Process, (2) Support, (3) Health and Safety, (4) Policy, (5) Perspective, (6) Communication, and (7) Future Education. See Table 4 for the open codes and themes that emerged from the interview data.

In this section, teachers from the elementary level will be referred to as 5th-grade teacher and 1st-grade teacher, respectively, according to the grade level they taught. The secondary teachers were addressed according to their content area specialties and in this study will be referred as French Teacher, ELA Teacher, and Social Studies.

Table 4. *Interview Transcripts Analysis Coding*

Themes	Codes
Teaching-Learning Process	Teaching Experience Online Learning Procedure On-site/Blended Learning procedure Hybrid Learning Emergency Learning/Pivot Learning /Remote Learning Common Curriculum Curriculum Development/Design LMS Platform Learning Assessment School Activities/Events Address Unfinished Learning ESL Learning Procedure GT Learning Procedure SPED Learning Procedure Social-Emotional Learning

Table 4. (Cont.)

Themes	Codes
Support	Technology Support Teacher Support Student Support Academic Support Social-Emotional Support Teacher Training School Physical Alteration Health Support Parent Support
Health and Safety	Health and Safety Procedure/Guideline Lunch Procedure Recess Procedure
Policy	State Attendance Policy State Assessment Policy Exception Policy Health and Safety Policy
Perspective	Health and Safety Challenge Teacher Perspective Teacher Responsibility Teacher Training Challenge Learning Change Parent Response Parent Challenge Parent Responsibility Student Learning Challenge Student Cooperation Student Learning Adaptability

Table 4. (Cont.)

Themes	Codes
	Increased Workload/Workhours Teaching Challenge Teaching Preference Technology in Learning Issue Technology in Learning Advantages Limited Communication Less Collaborative Work Less Social Interaction Flexibility in Education
Communication	Communication between Colleagues Student-Teacher Communication Parent-Teacher Communication Communication Channels
Future Education	Future Teaching Plan Future School Plan Future Learning Parent Responsibility Student Learning Method Suitability Teaching Preference Solution for Teaching-Learning Challenge Limited Student/Parent/Teacher Support

***Teaching-Learning Process***

At the elementary level, both the 5th-grade teacher and 1st-grade teacher taught their students all content areas. The 5th-grade teacher taught from social studies, science, math, and English Language Arts (ELA), while the 1st-grade teacher taught reading, writing, math, science, social studies, and phonics. Their students stayed with them most of the time. The 5th-grade

teacher stated an exception for specials (i.e., PE, music, art, and library) and lunchtime. The 5th-grade teacher has 24 on-site students and two blended students in her class. The students that chose blended learning spent half of the week online and the other half on-site and were known as part-time students. The teacher explained that she had six blended learners at the beginning of the pandemic, but now it has been reduced to two learners. She confirmed that most classes in her school had, on average, two blended students in each classroom. Both on-site and blended learners learned using Google classroom, where the teachers posted all materials and information.

Besides on-site and blended learning, school district 4, where the 5th-grade teacher was employed, also provided a full-time online program. All these findings are similar to what was written on the documents retrieved from their website. The new finding was students who learned on-site had different teachers from students who chose online learning. Our 5th-grade teacher taught and graded the students in both on-site and blended learning for her assigned classroom.

Meanwhile, the 1st-grade teacher monitored students during lunch and recess time. She had 22 on-site students and three online students. The on-site students were learning face-to-face, and they could learn in groups while maintaining distance from each other. The teacher had manipulatives for students to learn math and phonics. She also used a computer to teach the on-site learners. For virtual students, school district 3 (where the 1st-grade teacher was employed) used the Lincoln learning buzz platform to access their lessons and submit their work. However, unlike the 5th-grade teacher, the 1st-grade teacher did not teach the virtual students in her assigned classroom. Some teachers specifically taught virtual learners that would be responsible

for teaching online students. However, she was responsible for grading the three virtual students' assignments.

Besides regular assignments, students in the school district 3 had three state tests at the beginning, middle, and end of the academic year. For the testing at the beginning and the middle of the year, on-site and online students both took the test online. Regardless of their learning choice (on-site/blended/online), every student must come to school for the end of the year testing in person.

Both teachers confirmed changes in school activities and events. The 5th-grade teacher stated that students could participate in athletics and music. However, the students did not sing nor play a recorder, which the students used to do before the pandemic. She also shared other activities created by her school.

*I think they do try to make things fun and challenging to just think of ways to keep kids connected...not necessarily the way we used to. For example, on our snow days we would have Zooms, but we also had some family building activities that the families could do together.*

The 1st-grade teacher stated, "...in the upper grades, they're still able to be in the band and in athletics, and they're still able to participate in those programs after school hours so that being virtual does not affect extracurriculars." She also shared activities built by the school district to engage both on-site and virtual students. Both on-site and virtual students have Assembly, a celebration for students who receive awards. The school also has Zoom meetings for virtual students during the festive times. "...every holiday like Christmas and Halloween, spirit weeks for Red Ribbon Drug-Free week, they have done some fun things on Zoom." The on-site students also had a class party.

There have not been many changes in the teaching and learning process for Special Education (SPED) and Gifted and Talented (GT) students. The 5th-grade teacher stated that both

the SPED and GT teachers had done a great job communicating with students and monitoring their learning progress. The curriculum for both SPED and GT is the same as for a general student. The only difference was SPED students would receive modified work while GT students may have additional content for them to peruse. The 1st-grade teacher gave a similar answer. She stated that students identified as either SPED, GT, or English Language Learners (ELL) would be pulled by the specialty teachers depending on their needs, *"They are still met with, and it's a small group, so they're able to do distancing and continue that program as normal."* She assured that the students in the program mentioned would still have the same curriculum and standards as general students. *"They're very big on inclusion and they try to keep them in the mainstream classroom as much as possible. They don't want them missing any whole group instruction or social time."*

The secondary school teachers interviewed also revealed different teaching and learning procedures. In school district 1, where the French teacher is employed, there are on-site blended learning, full-virtual learning, remote learning, and hybrid learning. The French teacher stated that blended learning is conducted on-site. The students will learn using technology in the classroom instead of having half of their week on-site and half of their week online like what was done in the 5th-grade teacher interview. For virtual learners, the French teacher handles all the teaching-learning processes by herself because she explained that there were fewer students enrolled in this elective course this year. However, for other language classes like Spanish, they could have different teachers handling blended on-site and fully online students. Remote learning in school district 1 also has two different types. Either asynchronous learning where the teacher meets students online or students are assigned to do some work and independently submits them to complete learning. Then there was hybrid learning, which the French teacher indicated that

she did not need to do but would love to learn more about it. She stated that hybrid learning is where teachers need to teach the on-site students and online students simultaneously.

In school district 4, where the ELA teacher was employed, a student could choose to learn by blended learning or full-virtual learning. The ELA teacher stated that he had three different blended learning schedules for his students. Like the 5<sup>th</sup> grade teacher interview result, a secondary student who chooses blended learning spends part of the week in school and the other part at home. The ELA teacher did not teach virtual students except when his blended students needed to be quarantined. School district 4 had a separate school where virtual students are hosted, and the ELA teacher did not have any involvement with virtual students in this case.

In school district 2, where the Social Studies teacher was employed, most of the students were learning on-site. The Social Studies teacher stated that they did not go online until the first district snow day. She stated that the school district provides virtual learning options for students, and she confirms that district teachers were the ones who handled the teaching-learning process. They used Edgenuity for virtual learning, and as far as she knew, the district bought the curriculum and instruction for that system. She assured me that the curriculum met the state education standards. She also mentioned some 9th-grade teachers moved their classes online and created the curriculum for that. This was not intentional."*...I think it was because there were too many students and they needed you to want to take those on...*"

In districts 1 and 4, the teachers used Google Classroom as the central platform of learning. They were responsible for uploading curriculum, instruction, information, and assignments there. School district 2 used Schoology as the central platform of learning. Besides the main learning platform, the French teacher in school district 1 used Quizlet, FlipGrid, and

self-created interactive notes to engage student learning. The ELA teacher liked to implement art projects in his classroom and tried to find different applications to facilitate this. For the Social Studies teacher she primarily assigned work papers for students. At the beginning of the pandemic, they did much online learning. However, it has decreased, and most teachers in school district 2 use technology as a supplementary learning source.

For assessment, besides regular assignment grades, students still have final and standardized testing. The ELA teacher stated that in his school, finals were not mandatory but were optional for students who needed something extra to make up their grades. He also stated that schools had made an on-site schedule for standardized testing for every student. The Social Studies teacher confirmed that their school was also doing the standardized testing on-site. She had hoped that students did not need to do standardized testing during this time, but the State required it.

For school activities and events, French teacher stated that in her district students still do athletics, but other school events for example parent-teacher conference had moved online. The ELA teacher and Social Studies teacher stated that athletics and other extracurricular were available for the students. For school events in school district 4, the ELA teacher stated that parents did not participate much in the online conferences. In school district 2, the Social Studies teacher planned a field trip for students. She brought half of the students in the morning, screened, and contact traced them. Her district also tried to create events to increase student engagement, such as teacher-student dodge ball games, trivia games, and cup stacking competitions.

All secondary school teachers interviewed discussed how their school maintained curriculum and support for SPED, Gifted and Talented (GT), and ESL students. Unlike at the

elementary level, French teachers, ELA teachers, and Social Studies teachers taught these students themselves (in district 4 elementary interview, students in these categories had a different teacher teaching them). The French teacher and Social Studies teacher stated that they received documents about the students and their needs, and they would design and adjust students learning accordingly. They were confident that students learned a similar curriculum with enrichment or modification as needed. Every secondary teacher interviewed stated they did not see a significant difference in students' learning that fell into SPED, GT, and ESL during the pandemic.

### ***Support***

All teachers interviewed confirmed that the school had made physical alterations to accommodate students, teachers, and staff health and safety according to the CDC's health and safety issues. The 5th-grade teacher and Social Studies teacher stated that their school changed classroom seating arrangements, recess, and lunch schedules. The 5th-grade teacher also stated that her school changed physical spaces like the cafeteria and hallways. The 1st-grade teacher stated that her school used barriers in offices, classrooms, and playgrounds. "*...we have clear plastic. I can turn my screen and show you we have clear dividers.*" Farmington also had an extra cubicle for students who came back from being virtual learners to in person. "*...we have offices with little plastic dividers. In our office, we have lots of extras so when we get a new student, we just bring them in and set it up.*" The 5th-grade teacher also stated her school provided an extra mask for those who forgot or needed them.

Every district provided students with a Chromebook. The Social Studies teacher noted that it was the first time her district had ever provided a one-on-one Chromebook for every student. In school district 4, both the 5th-grade teacher and ELA teacher confirmed that their

schools provided a hotspot for students who needed it, and they mentioned many public places where the students could access the internet. In school district 3, students who chose virtual learning would be given Chromebooks to take home, while on-site learners had access to the class computer. Both teachers from districts 3 and 4 stated that their school had tech support if students found difficulties operating their computers. The 1st-grade teacher stated that she helped her classroom students with these issues when she could.

*I just help them because most of the time it's a pretty easy issue that I can walk them through. Our technology team is so busy this year. I try to help as much as I can. If it's something that I'm really not sure about, I'll pass it to them.*

Students also received social-emotional support. Districts 1 and 2 taught the social-emotional curriculum to their students. The French teacher stated, "*Then you try to teach them mini-lesson on social-emotional learning. That's a new thing.*" The Social Studies teacher said, "*my school is trying to figure out how to infuse social-emotional learning into all of our lessons.*" She also mentioned that her school had counselors that students could talk with. The 1st-grade teacher also shared the work of the counselor in her school.

*Our counselor is really amazing. She is constantly calling the virtual students that aren't here so she can physically check in on them. She asks them how they are, how the work is going, if they're having any issues with the virtual work. If there's a sickness due to the pandemic, she's calling to check in that way. If she notices that there are certain students that are not completing their work, she will call and check on them to see if they need support, and she's even made some home visits just to check in and make sure everything's okay.*

There were also support for parents trying to help their children in learning. The French teacher created a newsletter on student work and submission deadline. "*I e-mailed them personally and also do newsletter. For instance, I said a week before spring break that there's a deadline Thursday at 5:00 PM because I knew that some people would ask to turn in on Friday.*" The ELA teacher stated their school provided digital resources that parents could access. "*We*

*send out a lot of stuff that is digital."* The 1st-grade teacher said that the online instruction that students have was pretty straightforward for parents to follow and help the students. *"On buzz, the students that are fully virtual have a clear deadline. That expectation is pretty clear on that platform and there are video lessons that go with those..."*

All teachers interviewed received training to prepare them for online learning. The 5th-grade teacher talks about the support that she had in preparation for teaching her students and the school's support for students. At the beginning of the pandemic, schools provided tutorials for the teachers to use technology such as Zoom, Google Classroom, and other communication tools. The 1st-grade teacher had a similar experience that her school provided a lot of Zoom training for Google Classroom and Seesaw last Spring. Her school invited Ozark guidance counselors to come and train them on social-emotional learning. *"they talked with us about how to support the children. They also gave us some tips about how to keep ourselves safe and some ways that we can eliminate stress...some breathing techniques and different things like that."* She also received health and safety training from the school nurse. *"Our nurse did some training with us on COVID. We felt a little bit more knowledgeable about that, and how to handle these different situations."*

The French teacher had to finish 24 hours of professional training. School district 1 invited trainers and provided many resources for professional development. The ELA teacher stated that he had been given a few trainings at the beginning of the year and then converted curriculum and instruction to an online format. Both the 5th-grade teacher and the Social Studies teacher stated that their school district teachers created a curriculum that they would use throughout the academic year together. The Social Studies teacher adds that her school operated several online programs and used school learning directives.

Besides support in the form of teacher training, the teachers also received health and safety support. The government allocated time for teachers to have an extra paid leave if they or their family were exposed to COVID-19. All the secondary teachers interviewed confirmed that their school had that. Only the ELA teacher used their leave when they were exposed to COVID last year. The 1st-grade teacher stated that while she was quarantined before Christmas break last year, she still taught online, and a substitute teacher was found for her class. *"I was recording myself teaching so that the students were still interacting with me. Our instructional facilitator was really helpful that week with helping the sub with the technology."* All teachers were grateful to have this option during this difficult time.

### ***Health and Safety***

All school districts followed the CDC guidelines and did a great job following the health and safety directives. For classroom learning, all districts stated that students must be six feet apart and wear a mask at all times. At the beginning of the pandemic, the 5th-grade teacher stated her students had their lunch in their classrooms and sat with the same people. The teacher confirmed that students still needed to only mingle with people they knew from the same classroom to prevent COVID spread and facilitate easy contact tracing. Her school also figured out the lunch schedule. *"they have worked out where there could be just one grade in the cafeteria...now they're spaced six feet apart in the cafeteria."* This situation is similar to the 1st-grade teacher experience.

Her students have lunch inside their classroom. They cannot play with their friends from another classroom.

*With recess, there are two classes at a time on the playground. We actually have an orange plastic fence dividing the playground. I go out with one other teacher's class; my class is on one side and her class is on the other side so they can see each other over the fence. However, they're not really able to play, which is sad*

*because you know that some of their good friends from kindergarten are in other classes, but just due to safety, that's what we've had to do this year.*

They also have guidelines on how to keep their distance in hallways,

*We stay in a line, and we've taught them that we have tiles on the floor. We've taught them to stay two or three tiles apart from the person in front of them, or we've taught them to put out a bumper (we say it's like a car bumper), and they can put out their bumper and make sure they have a safe amount of space.*

During activities like athletics and music, students are required to use a mask. The 5th-grade teacher stated that *"I think in athletics they can take a break, but they keep the mask on, and in music they don't. I think they don't even sing. They also usually teach the recorder, and they're not doing that this year."* The French teacher stated that there were students who specifically went online because they wanted to participate in athletics but did not want to get sick due to prolonged exposure if they chose on-site learning, *"in choir they sing, they go, and they check in for that hour. The kids distance between all the singers."* She also stated that in a specific sport, they kept the mask on. *"I saw the basketball team practicing and most of the girls are there with their mask on..."*

### ***Policy***

The policy found in the interview was related to the school district operations. The 5th-grade teacher mentioned an exception policy for mask wear. If students need to rest, they could have a mask break, but they need to be six feet apart from each other. According to district 4's document analysis, the mask break was allowed for everyone as long as health and safety guidelines are followed. The French teacher mentioned that her district had a full mask policy. *"Most of the time, I think they also keep the mask on. We have full mask policy and students have their mask on at all times."* She also mentioned government required teachers to give accommodation for SPED students. *"I will read the test aloud to them, and they give me the*

*answer. I think kids need that a lot... we have to do it. That's the law."* There was also a grading policy from the government,

*At the end of last year, we all had to give our students grades from March, from the day we went remote. I have some students that in March didn't do anything for six weeks and I had to give them an A when they should have had a C. It was an official request from the state governor.*

Social Studies teacher stated that in her district, students who refused to wear a mask were sent home. She also mentioned the change in state attendance policy of their school. "*just with the more lax attendance requirements that the state has implemented...*" Both the Social Studies teacher and 1st-grade teacher also mentioned the government requirement for standardized testing.

### ***Perspective***

In day-to-day learning, teachers noticed challenges students faced during the pandemic. The 5th-grade teacher noticed students struggling to adjust to the new routines. She needed to remind students of health and safety protocols like washing hands and keeping everything clean. She said that she worked to persuade students who asked why they could not meet and play with their friends from other classes. This situation where there were less communication and collaboration in learning held up student learning development. "*So that is a little bit challenging because students help support other students' learning. It's not necessarily always easy to do by yourself. They help each other; they collaborate.*" This is something that they were unable to do during the pandemic. Fortunately, students have been very cooperative in these regards, mainly because they wanted to be back in school. In contrast, the 1st-grade teacher stated her students adapted to the learning situation well.

*The kids have adapted more quickly than the adults have. Adults have a way that we do things, you know, without the dividers and the masks. And I feel like it's been harder for adults to remember to keep their mask up and keep space and not*

*hug the children. The kids just have really been adaptable and flexible, and they've just really gone with it.*

The 1st-grade teacher did find that she needed to remind students about keeping each other safe.

*"I have to remind them often about distancing and to pull up their mask when they are not at their workspace. But they do it no problem, no fussing. They've really adapted well."* She also stated that she has been able to keep collaborative learning in her classroom but with modification.

*We still do partner work and group work. At the carpet, I usually have about half the class still at their seat and then half the class on the floor so that they can be spaced out. Still it's a little bit hard for them to see when I'm doing a whole group lesson with those dividers up.*

The 1st-grade teacher was doubtful about the online assessment required by the State that virtual or blended students needed to undergo. *"I'm not sure how valid those are, you know, if somebody was in the background helping; there's no way to really know."*

Secondary schools also had a similar challenge in the daily teaching-learning process.

The French teacher did not find any issue in her class as she taught a small class. However, both the Social Studies and ELA teachers had many students in each classroom (20 students on average), making it impossible to follow health and safety directives. In the ELA teacher's case, students were the ones that chose their learning schedule; therefore, the school was unable to allocate or predict the space throughout the school, not just in a specific class. For the Social Studies teacher, she stated that her school was a small community where teachers taught one and a half subjects. Furthermore, her Professional Learning Community (PLC) only consisted of three people this academic year, instead of four as was typical. This made it hard for her school to accommodate students due to the imbalance of the teacher-student ratio.

Besides the health and safety challenges, the French teacher questioned the effectiveness of online group work. *"Not sure they're keeping it to French because I can't supervise everybody. The Google Meet is not like Zoom; by the time you go in and out of each group, your time goes very fast."* The ELA teacher also admitted that blended online students in his school have less group work due to its asynchronous nature. He stated that teachers might underestimate student's technology literacy.

*I think that we have a kind of a false sense of the amount of technology that students grasp. They may be really good with their phones, but with the computer, they're not necessarily as good. Asking them to complete all of their instruction online is difficult for a variety of reasons.*

This view is different from the French teachers and 1st-grade teacher who stated that students have been adapting well to using technology for education. The French teacher said, *"They always know how to use things... they know about their program. You can use that, do similar things."* The 1st-grade teacher said that her students teach their parents how to use their technology for learning. *"...when the kids are home for a blended learning day, or if they are sick and quarantined, they are actually showing their parents how to work it."*

All the teachers found challenges in their school district's professional development to prepare them to teach online. The 5th grade teacher stated that, *"I feel like it has been more just experience through the last year. I don't necessarily think that we've had extensive training in online teaching."* The French teacher stated that she was grateful for all the training and resource gave by her school, but,

*A lot of it we have to do on our own time and then yes, our school provides us with a lot of technology training that we can use as professional development. They are well organized. Our trainers are fantastic people. At the same time, school sent us all this information, like when we transition to online and I was completely overwhelmed.*

The ELA teacher feels that, "*we've kind of been left on our own to figure it out. I feel like I've had to relearn how to do my job. I feel like I started almost back at zero.*"

The common challenge that they had in the elementary and secondary level was student assignments. The 1st-grade teacher and all secondary teachers interviewed stated that they had been trying and failing to make students work and submit their assignments. The French teacher stated,

*Like on Monday we do an assignment. We do most of it together. Then they have two extra activities left. I wish they would do it and submit. Some kids don't submit it with the first deadline and then I have to send a reminder. Sometimes they don't submit it even two weeks later. And I'm like, 'this is your last reminder or you're going to have a zero.' But I already reminded them three times.*

The ELA teacher stated,

*Some students would say 'I like some of the lessons the way they're going. I can work through them at my own pace.' But often there is no follow-through; students who say they're going to work on something later at home do not, or they don't submit the work.*

The Social Studies teacher said, "*...it depends on the kid, but for the most part if I have a large number of students quarantined, I'll probably have 30%, maybe 20% do their work.*" The 1st-grade teacher said,

*I have one student who had a lot of incomplete work. I'm having to e-mail them a lot... we just had report cards go home yesterday for the third nine weeks and there were some assessments that he had not completed yet. That's been a challenge.*

The teachers brought forward several reasons for this situation. The 1st-grade teacher stated that her virtual student was busy due to the therapies they needed to attend. The French teacher stated that it was probably because parents are working and the students are senior high, so they expect students to be responsible and do their work. The ELA teacher stated that his students' parents have high mobility and are more concerned about making sure students have a place to live and

food to eat, inevitably making parent-teacher communication secondary. The Social Studies teachers thought this happened due to the flexible attendance policy implemented by the State. Parents knew about it, and because the students could do their work online, they could have a holiday and more family time earlier than expected.

*We haven't been able to file like a FINS case against a student who isn't showing up. Typically, you can file through the local courts when a student isn't showing up to school... up until just a few months ago, I don't think we've been able to do that. There hasn't really been a way for schools to enforce attendance.*

Every teacher in secondary education interviewed agreed that the pandemic had an impact on their work-life. The French teacher stated that she worked for many hours, but she found that she needed to spend more or less an hour more than the past years. The ELA teacher stated that it was hard to find a balance between life and work at the beginning of the pandemic due to the teaching and learning scheduling issues. However, it has been better for the 2021 semester. The Social Studies teacher did not have a preconceived notion of how the workload should look for a teacher in a typical year as she started teaching during the pandemic. However, from what she has heard from the senior teacher on her team, there has been an adjustment that veteran teachers needed to make to prepare for teaching at this time. Based on the interview, the additional work time stemmed from changes in teacher responsibility.

Before the pandemic, the French teacher explained that her responsibility was to create a curriculum, teach students, assign grades, communicate with parents, and help students who needed it. During the pandemic, these responsibilities were added by administrative and documentation requirements for everything teachers have done. She explained that because she handled on-site blended and virtual learners this year, she needed to think about a different teaching method, create different content and instruction to make sure both blended on-site and online learning are similar. She also stated that the school required more communication with

parents this academic year. Therefore, she sent e-mails and created a newsletter for parents about student work and deadlines. During parent-teacher meetings and professional development provided by the school, she also needed to document and submit those notes to the administration. She was required to grade and do everything online, which was very different from years past. The ELA and Social Studies teachers had similar experiences in creating online learning materials for their students and grade students online.

In contrast, the 1st-grade teacher found that she liked the current system that her school had. "...whatever I've posted has been much easier through technology than if I had to make worksheets and put booklets together. Technology has made it way, way easier." Like the French teacher, she had to create different lesson plans for on-site students and online students to make it easier to pivot from on-site to online learning during an emergency. She felt technology enriched her teaching process.

*I have everything right here in a little folder on SeeSaw. I can go back and look at their work at any time. I'm not having to keep papers and things like that. My kids love the video feature on SeeSaw. They'll turn on the video and they'll read to me. They'll tell me about the story that they read, or nonfiction facts about the books that they read. For math, they'll get on and they'll explain their thinking or make a video and explain their strategy. That's the kind of thing I can take anecdotal notes on, listening to them do that in person. But having a video of it and being able to go back and watch any time is pretty great.*

The teachers agreed that the school had been trying to be flexible in its operation. The 5th-grade teacher said, "*the school is really trying to be flexible and help support kids when we see a need arise.*" The French teacher stated that she had been trying to be flexible in teaching.

*Now I've been much more flexible with the way I grade. I have always been flexible with my students. To me, it's more important that they are about to do the work than when they turn the work in. You see what I'm saying? I give them some flexibility, and with a virtual system, they have all week to turn the work in.*

The ELA teacher said his school gave assessment options for students. *"They were optional; they weren't required. Most teachers had an exam but made it optional for students. If they needed to increase their grade, they could take the exam and increase their grade."*

### ***Communication***

The teachers had different communication methods to reach out to their students and parents. The 5th-grade teacher primarily used e-mail for communication. The 1st-grade teacher also used e-mail and Zoom. The French teacher used Google Meet and e-mail. The Social Studies teacher also used Google Meet and call. *"...for the most part, I'll call a parent or someone on our team will call them."* The ELA teacher used e-mail and calls to keep in touch. *"...with parent contact, I will send e-mails or I will call."*

All teachers from every grade level stated that they had great communication with their colleagues. The 5th-grade teacher stated, *"Now we don't do as much vertical with the younger, grade levels. We don't necessarily meet like we used to, but we still have good communication within my team... just spaced apart."* The 1st-grade teacher said she was able to communicate with their colleague. *"The virtual teacher that does phonics and reading groups, I've been in constant communication with her."* All the Secondary school teachers talked about their PLC. The French teacher said she and one of her colleagues who also teach French have constantly communicated and collaborated. *"We create pacing guides together. Then we were going to design the pacing guide for the school year...such as what chapter, what content."* The ELA teacher said he and his PLC team had to meet daily. *"... we're able to work together to figure out how to convert some things and how best to present them."* The Social Studies teacher also worked with her PLC. *"We will discuss things like standards and objectives that we want*

*students to meet in our professional learning communities. For the most part, our seventh-grade team meetings are more school business or student concerns rather than curriculum."*

The interview showed varying student-teacher interactions. I wanted to emphasize that the interaction stated here is student-teacher interaction outside of classroom learning. The 5th-grade teacher said that her school has a different teacher for teaching and support.

*Sometimes if I'm teaching in person and the student can't find a resource that I've listed, or it's not linked correctly, the support teacher would go in and find that for the student, or at least come get me. We do have some supports in place.*

The 1st-grade teacher allocated time to catch up with her virtual students and build social interaction between her on-site students and her virtual students. *"every Friday in my class during snack time, I turn on Zoom and my virtual students come. I pick a few kids to come over and interact with them through Zoom, or they listen to a read-aloud and we talk about our favorite part of the week."* The French and Social Studies teachers had office hours to contact them if students needed help. The French teacher shared that, *"...normally students that don't do as well or the students who need extra help. I will fill a second class of 90 minutes."* The Social Studies teacher was happy that her students wanted to reach out to her. *"Hey, miss (retracted for confidentiality), how do you do this? Or can you explain this? Or can you Google Meet with me and help me with this lesson?"* The ELA teacher responded that he may not be able to help some of his students outside from classroom due to limited support system (no other teacher or assistant to reach out if they could not contact the primary teacher).

*If they can't get ahold of me to help them, they're kind of on their own. We have people that work in the tech department, but they're mostly computer repair. It's not necessarily them getting help to work on a program that they need for an assignment.*

At the elementary level, parents had higher involvement in student education compared to secondary education. The 5th-grade teacher was grateful that parents supported the students

during this challenging time. *"I think it's been a challenge for them. When we have students that were quarantined and then they have to be home from work, they help the students stay on top of their learning. I feel like the parents have been super supportive of us at school."* The 1st-grade teacher also shared her gratitude to parents for their support in student learning.

*I have some parents that really want to be involved and have asked me to send things home with their students who worked from home so some of my parents try to be involved that way. We do have class parties, but parents are not allowed in the building because of COVID. I will have parents sign up you know a month in advance to bring different supplies for the party, and that's how they are involved. I have a lot of parents this year that have been really eager to help and send things, so that's been nice.*

Meanwhile, all secondary teachers interviewed agreed that there was less parent response during the pandemic. In particular, it was tough for them to reach the parents, as had been discussed previously. Additionally, the French and ELA teachers shared parent response experience through a parent-teacher conference in their respective schools.

The French teacher stated before the pandemic, and she could meet 20 parents in a day with 3 hours duration in person. In the pandemic, she needed to schedule the meeting online and only meet ten before the spring break. Like French teachers, ELA teachers had the parent-teacher conference online via Zoom. *"...teachers were scheduling Zoom conferences with kids and parents for parent-teacher conferences this year. From what I heard, there wasn't very much participation."*

### ***Future Education***

At the end of the interview, everyone agreed that current teaching-learning practices would have a future impact on learning, especially with technology use. The 5th-grade teacher stated that she learned many good things from the changes that happened because of the pandemic. She learned how to be more flexible in learning. Technology helped in bridging

schools and students who were unable to be on-site to have quality education. The 1st-grade teacher already planned to continue using the technology and platforms that she learned to use in her teaching-learning during the pandemic.

*Even when the pandemic is over, I'll continue because I have found that it's a really great tool for differentiating. I can push out different lessons and everybody can get their computer and be working at the same time. They are working on something different than their neighbor, but it's what they need. It's pretty cool.*

The 1st-grade teacher also shared her prediction of future learning for her school.

*Like I said before about differentiating through technology...I don't think that's going away. For me, my kids are not going to be on the computer all day long because they still need to talk to each other and interact and get their hands on different things. But it's been really good for differentiation. And I didn't even mention before that our snow days were not real snow days. This year, the kids were still learning. They just logged on to my virtual planner and they did all the assignments for phonics and math because I had already done that. They knew exactly where to go to it. I don't think that is going to go away. I think that in the future, our inclement weather days will just be blended learning days; they'll just pivot to the technology and they're still going to be completing schoolwork. I think real snow days are gone.*

However, in contrast, with elementary grade students whom both the 5th-grade teacher and the 1st-grade teacher said adapted well, every secondary teacher interviewed admitted that a student is not suited to learn entirely online. The French teacher stated she could see some students who felt comfortable learning virtually could continue learning online. The ELA teacher stated that their school had planned on continuing blended learning, but they set criteria and limited them to upper-grade level students. *"I hope that it doesn't impact it a lot because my experience has been that it's not successful for most students."* He further explained that,

*It's this really strange situation where in a typical year, I would have a whole range of grades...very few A's, mostly B's and C's, and then, you know, a handful of D's and F's. But now it's all grouped at either end. Students either have an A or a B or they're failing. There's not a lot in between.*

The teachers interviewed also shared their hope for the future of education. The ELA teacher would like to have had more professional development. He saw an increase in his student mental health issues, and he would love to have had social-emotional learning directions. *"we don't have enough. We have one social worker and this year, 2000 students."* Meanwhile, the French teacher would like moderation on the teacher training as she felt a bit overwhelmed on top of all the responsibilities that she needed to complete. She also wanted to see a difference in students, parents, and the school's education role. She wanted students to take the initiative in their learning. *"we are getting kids used to people worrying about their education. You know, I think the role of students really need to step in more. That's not our philosophy from administration."* She wanted parents to be more responsive. *"the role of parents is they need to check their kid's grade or fully read my e-mail and then respond to me."* However, she understands that parents might be overwhelmed by the increase in school contact. *"They don't always respond, but I know that they get my e-mail. I can't even imagine being a parent getting so much more contact."* She wanted more support in finding a solution to the current education challenge. *"it's my responsibility to inform the parents when their student is failing, but you know, if the kid has not done anything for six weeks, someone else needs to get involved here, not just me."* The Social Studies teacher would like to have more educational changes from standardized learning into education based on student needs.

*I think I would love to see educators as a whole and the education system as a whole respond more to what students need than rather just go forward and figure it out, or just rely on the resilience of students rather than adapting and changing to what they need. We are the ones who decide these standards.*

She would love to see additional social-emotional intervention in her school.

*I think we're really good at catching the big things. I would love to see some of those students who maybe are flying under the radar, who maybe aren't having*

*high levels of anxiety, but still have that anxiety...I would love to see us kind of find ways to react to them and find ways to support them.*

Overall, the teachers agreed that they had a very different teaching-learning experience this year, and they are looking forward to a standard academic year as they have known in the past. *"I hope that I can go back next year and it's safe enough to have a typical year and I can teach the way I know is right,"* said the ELA Teacher. The Social Studies teacher stated,

*Something I'm looking forward to doing once things move back to more normal, where we can more safely do some of those more collaborative ideas...I think just adapting mentally; that's been tough... just accepting that I can't do this idea. Let's come up with an idea that I can.*

The French teacher indicated, *" I think as a language teacher, at some point students need to speak and ask a question. However, on Zoom, they are all supposed to stay on mute. That's something that I miss is the contact. And then in a full classroom..the oral presentation."* The 1<sup>st</sup> grade teacher said *"I much prefer to be with the kids on site...teaching virtually with children at home is really, really hard. It's really hard."*

Some of the teachers wanted to share/encourage other teachers to keep going. The 5<sup>th</sup>-grade teacher said, *"I think students are going to be behind. But I think they'll be okay. I think we'll get caught up and we'll get the hang of it all, and they will be okay."* *"I think that teachers have really shown off this year and really proven that no matter what, we're going to find a way to do our job,"* said the 1st-Grade Teacher. The French teacher also praised her colleagues saying, *" We really have amazing teachers here at (name redacted for confidentiality measures), you know? And yeah, I see everybody put their heart in it."*

## **Summary**

This chapter provides the data analysis result of the document and interview analysis. There are five themes identified from the analysis of Northwest Arkansas school district public

documents: (1) Health, (2) Supports, (3) School District Operation, (4) Teaching and Learning, and (5) Communication. From the interview, several different themes were identified; (1) Teaching-Learning Process, (2) Support, (3) Health and Safety, (4) Policy, (5) Perspective, (6) Communication, and (7) Future Education. The document analysis result outlined the school district plan of the above-mentioned themes, while the interview analysis focused on how these themes are realized according to the participant's view and experience in teaching and learning.

## **Chapter V Discussion**

This chapter discusses the findings of this study to answer the two research questions: 1.) What is the extent of curriculum and education changes precipitated by the COVID-19 pandemic that teacher and faculty members experience in real practice? and 2.) Are there any deviations found by teacher or faculty members regarding the plan and implementation of teaching and learning during the COVID-19 pandemic? The answers were derived for the first research question from both document analysis and teacher experience of teaching before and during the pandemic. For the second research question, the factors that caused deviations from the academic year plan during COVID-19 were explained.

### **Research Question One**

There were several changes to the education system that teachers found during the pandemic: health and safety, teaching and learning methods, a few policy changes, and the work-life balance of students, teachers, and families.

As has been discussed previously, every district in Northwest Arkansas had health and safety precautions. Previous research on health and safety precautions during pandemic school closure had a positive effect in lowering infection rate (Egger et al., 2011; Gemmetto et al., 2014). It was also found that school closure time, based on Rainey et al.'s (2016), Tsai et al.'s (2017), and Egger et al.'s (2011), was in days rather than weeks or months as in the COVID-19 pandemic. However, these studies did not mention whether there was teaching and/or learning occurring during the span of school closure. However, during the COVID-19 pandemic, some districts provided AMI (Alternative Method Instruction) from the beginning of the current outbreak (Greenland, Westfork, Gentry, and Springdale). Through the teacher interviews, it was discovered that if there was a COVID-19 outbreak during the 2020-2021 academic year, there

was a plan to have the on-site students pivot to online learning. This was possible because there was a lot of teaching and learning methods and tools provided by each district.

Based on the literature review, a lot of new teaching-learning methods have emerged throughout educational history (Rury, 2020). The schools' current learning method (virtual, blended, on-site) existed before the pandemic. The research conducted during the current COVID-19 pandemic also stated that the learning during this pandemic has been primarily online (Abidah et al., 2020; Burgess & Sievertsen, 2020; Daniel, 2020; Dreesen et al., 2020; Ellis et al., 2020; Kaden, 2020; Marinoni et al., 2020; Reimers & Schleicher, 2020). However, based on the teacher interview, it was an adjustment from previous day-to-day instruction. *"I do think it's a lot different in the sense of the way that we run a classroom...just making changes on how close the children are in proximity to each other. Also, our group activities have changed."* (5th-grade Teacher). *"I do three virtual classes and that's completely new for me."* (French Teacher). *"Throughout the year we've been working on converting our curriculum. It was a completely new set up."* (ELA Teacher). The 1st-grade teacher said teaching students with dividers is a new challenge for her. Students sit in front of their cubicle with their mask on as a suggested CDC health and safety measure, *"because when I'm teaching at the front of the room, not everybody can see me from their workspace."*

There were a few policy changes found from data analysis. Based on school district document analysis, there were policy changes on health and safety directives created explicitly by the government for COVID-19 and Teacher Leave Support related to COVID-19. The interview provided additional information on the attendance policy (School District 2) and grading (School District 1). The Social Studies Teacher found that the government relaxed the attendance, *"I think with the more lax attendance requirements that the state has implemented,*

*I've noticed that our attendance is just so low here because of COVID."* The French teacher said that the State government requires a teacher to be flexible in grading, *"I have some students that in March didn't do anything for six weeks and I had to give them an A when they should have had a C. It was an official request from the state governor."*

Based on the interviews, the pandemic disrupted the work-life balance of students, teachers, and families. For students, most of the teachers interviewed said it was hard for students to adapt to the current learning format. *"There's not as much collaborative learning as have we utilized in the past. So that's a little bit challenging because students help support other students' learning. It's not necessarily always easy to do it all by yourself. Like they help each other, and they collaborate."* (5th-grade Teacher). The French teacher feels students may have struggled with the new routine, *"I think it's a little stressful for them because they have seven classes. Everything is online...some students are fairly young. I mean, can you imagine being a 15-year-old alone in front of your computer all day long?"* The ELA teacher found several factors that influenced students' teaching-learning experience; students may not have enough technological literacy or have less social interaction with both families and their peers. Both of these factors may influence their mental state.

*I have students whose parents, you know...one parent may work the night shift. One parent may work the day shift. They don't see either parents throughout the day...Our students who would normally get, face-to-face time with friends and time in class, they're not getting that. I know that I've seen an increase in mental health issues in my students this year...more than I have in the past.*

The Social Studies teacher could see her students struggling, but she is proud of their progress.

*I try and make things fun for them because it's a really tough time to be a seventh-grader. I've had conversations with them about that. Like, 'Guys, I'm so proud of you for coming to school. It's such a hard time...you're wearing masks and you're not having to. This isn't how you imagined your seventh-grade year, but you're coming to school, and you're doing what you're supposed to be doing. And you all*

*have good attitudes about it.' And so I'm really proud of the ways that the students have been resilient, but I can definitely see that it is tough for them.*

The 5th-grade teacher found it was a bit challenging to keep students following the health and safety procedures, "*Wash your hands, wash your hands...but it is a lot of reminding, and it's them asking- why can't I play with somebody in the other class?*" The French teacher said she put more hours in for work than a typical year,

*I can say that I at least work one to two more hours a day. Probably. Yeah. It's been stressful, but sometimes I have to stop and say, 'I am going to stop. I need to go home. It's a pretty day, you know?'* And then I leave.

The ELA teacher had similar experience as the French teacher,

*It was hard to keep a schedule because students were working on a different schedule than I'm used to working on. But this year I've been pretty good about keeping boundaries, and I'm able to get everything done at work so I don't have to bring it home.*

The French teacher and ELA teacher's statement is in line with Kaden's (2020) research result.

Based on Kaden (2020) during the beginning of the pandemic, the research participant had a hard time adjusting to the new routine but, as the semester goes the teacher managed to handle it (after 6-9 weeks of adjustment). In addition, the French teacher found she had to do a lot more managerial procedures, which is similar to Abidah et al.'s (2020) findings that adds to teaching burden and discourage teacher to do their job.

As a first-year teacher, the Social Studies teacher found many challenges in teaching, but she felt the most challenging aspect was trying to keep the student engaged. "*I think having students consistently show up and do the work or do the work that's posted and be able to engage meaningfully in the work. I think has been the hardest thing.*" For the 1st grade teacher, balancing work and family in the pandemic, especially when she did not have any option but to teach online, was challenging.

*It was hard to just like that have to be home and manage the technology from home. I have two toddlers. So, I had them home with me quarantined at that time. I was having to be a mom and be a teacher at the same time. And that was really difficult. That was really hard.*

Families also encountered some barriers in adjusting to their children's schooling. *"I think it's been a challenge for them. When we have students that were quarantined and they have to be home from work, they help the students stay on top of their learning."* (5th grade Teacher). *"I think parents probably are overwhelmed with their own work they are doing and then they have their kids virtually at home. They have younger kids...they're probably working full time with their own work. You know, with a high schooler, they expect their kids to do their work, but still...you know."* (French Teacher). *"I know that it is primarily because my students' parents are all working, and they may be working two or three jobs. They're concerned about putting food on the table for their kids and, you know, talking to me is secondary."* (ELA Teacher). The ELA teacher's experience is similar in what have been found by Hutchins (2009) that the pandemic impacted low-income families most. These findings from the 5th grade teacher, the French teacher, and The ELA teacher point to the reality of Burgess and Sievertsen's (2020) study that this learning method arrangement (blended/virtual learning), if applied during a longer time could cause disruption of families' work-life balance.

The 1st-grade teacher did find a significant adjustment problem with her students' families. On several occasions during the interview, she mentioned that adults, like parents and teachers, may have a more challenging time adjusting to the current learning than the students.

*I think that the parents have had a harder time than the students. The students have adapted really well, transitioned, and been very flexible as things have changed throughout the year. The parents have been more concerned, of course. I understand that they're concerned about their children's safety and the things that we're doing at school; some are concerned about the masks and some want them to wear masks all the time. And some want them to have a break. Then there's the playground...they should be able to take the masks off and play with anyone they*

*want because they're in the fresh air, and others are afraid, and really want them to still keep their mask on and keep space. Some parents respect that the school is closed to parents, and they can come in the office, but not any further than that. Some totally understand it's for the safety of the kids. And then some feel that it's affecting the kid's social and emotional well-being and they are not happy about that. They're not happy about not being able to come to parties and assemblies and things. Most parents, I would say, have adapted and understand that the school is doing what's best for the student's safety. But there are some that just have differing opinions, but no major issues with parents in my class. They have been very supportive.*

## **Research Question Two**

There are some deviations found in the teaching-learning process when implementation practice was unable to proceed as previously planned by the districts. The differences can be found in health and safety precautions, the teaching-learning process, and communications (student-teacher and parent-teacher communication).

In the area of health and safety precautions, the ELA teacher mentioned his school was unable to accommodate those due to the differing student schedules, the number of students per class, and unavailable space that could be repurposed.

*It's not possible to social distance in the classroom, especially six feet...and now the recommendation is three. The idea with blended learning was that we would decrease the amount of students in the classroom, but I only saw it decrease in some classes by four or five students because students were given the option for what schedule they chose to be on. Some classes have 10 students. But in some classes we still have 25 to 28. ...if people are saying that school was safer this year, the only thing that was safer is that we were wearing masks. Distancing was impossible.*

Based on the district demographic data, the ELA teacher's school is considered a Low SES school, which may account for the limited resource and support availability.

The Social Studies teacher stated that her students were not six feet apart from one another.

*For the most part, as far as distancing, my students are definitely not six feet from one another. We track where they are in the room, so they all have a seating chart*

*that they have to follow at lunch. In my classroom, if I change that seating chart, we have to update it on a spreadsheet because of COVID restrictions so I'm able to contact-trace all of them.*

Her school falls into Mid-High SES however, most of the students in her school learned on-site.

She also mentioned that her school is a small community which may influence this issue.

*Our school district is really small. There is about a teacher and a half for each subject. I have seventh-grade social studies, and then we have another teacher who also teaches seventh-grade social studies, but he teaches half the day doing seventh-grade social studies, and he teaches the other half in eighth grade. So our district is pretty small. My PLC is about three people for the most part. Typically, PLCs are made up of four people.*

The 1st-grade teacher said that even though her school has done everything they possibly could to ensure student health and safety, there was a challenge in keeping it all together.

*My normal class size is 25. So, 17 was a dream at first because I was like, 'I can do so many things with this small group.' But even with 17 kids, it was impossible to arrange their desks to where they had a full six feet of distance. It was just impossible. That's been a little bit challenging.*

For teaching and learning, in contrast to what has been found by Ellis et al. (2020) and Marinoni et al. (2020) about the teacher ability to have more control and innovation during this pandemic, this study found that there were more challenges that teachers face in the day-to-day learning. Most teachers interviewed stated that there was a time when they could not teach students according to their ideal view.

The French teacher worried whether the current learning, especially blended and online learning, could engage students, mainly because in language students need a lot of practice to reach mastery. *"It's just some time on Google Meet. You are always wondering how much am you reaching them? I can't always see if they're not doing something else at the same time."* The ELA teacher had a similar experience as a fellow language teacher. *"because my class is an English class and it is discussion-based, that hasn't happened this year."* He also found that he

needs to find alternative ways to do his teaching-learning routine, and it has been an adjustment as he felt that he had to re-learn how to do his work. *"I typically do several art projects in my class, and I would have students drawing something on paper or creating something tangible. I've had to find a digital way for them to create that."* The Social Studies teacher said, *"I think with COVID, a lot of teachers are kind of in survival mode and they're doing what needs to be done rather than thinking about how they can bring in math and science and history and English all together."* The 1st-grade teacher said due to her affectionate nature, it was hard for her to restrain herself from showing encouragement to the student without using physical gestures.

*I love to make a circle and model something in the middle of the circle. So keeping distance has been really difficult. I'm a hugger with my class. I'm really big on making them feel like a class family and making them feel loved. It's been hard to not touch at the beginning of the year; our counselor helped us come up with some social distance greetings for the morning time. We have air hugs and air fist bumps and different things like that. But that's been hard for me.*

Both document analysis and interview results confirmed communication happened through various means and between parties. However, the communication response was not as expected. In particular, communication between student-teacher and parent-teacher only went through one way instead of creating meaningful interactions. The ELA teacher shared his experience on the limited communication he had with his students due to limited student support. *"We don't have that. If they if they can't get ahold of me to help them, then they're on their own."*

During an event where communication occurred, the result is not as expected.

*Some students would say, 'I like some of the lessons the way they're going, I can work through them at my own pace.' But often there is no follow-through. Students who say they're going to work on something later at home, do not. They don't submit the work.*

The French teacher also shared this experience. *"If this kid doesn't want to attend my class and he's not turning in work as well, they need to fail, and that's it. Maybe they learn something from*

*it. If we're always behind them pushing them, I feel like we're taking a lot of accountability away from the students."*

All secondary school teachers struggled to keep communication with families. *"I've had very little parent contact this year. That is an issue with my district. We struggle with parent contact and I will send emails, and I will call, but I don't get responses"* (ELA Teacher).

*We all know that we contact parents. If a child is not doing well, we at least make one or two contacts. And then if it doesn't get better or, the kid doesn't show, and the parent doesn't want contact anymore. Fine. But at least you try, you know?* (French Teacher).

The Social Studies teacher stated that if she did not see her students engaged in learning, either she or another person on her team would call the families. However, she may not receive a response.

*We did have a lot of cases like that, where I had only seen the student nine times. Once they sent someone out and talked to them. We sent them a certified letter and then I saw the student again at school, but I think she since has moved away. She hasn't come back this semester, but for the most part, I'll contact a parent or I'll call or someone on our team will call them.*

## **Limitations**

There were a few limitations present in this study. The research was limited to scope the of Northwest Arkansas school districts. The data analysis was only derived from public documents created by the school districts, and while the interview participants' backgrounds were diverse, they were limited in number. Finally, my limited experience with conducting interviews may influence data disparity between one interview from another.

## **Future Research**

This study presents a glimpse of the education process during the COVID-19 pandemic. Further research could replicate the study to other areas or expand the scope to either the state or national level. Future research could also focus on one or two themes that emerged from this

study to obtain richer and more in-depth analysis results. Future studies could diversify the participants to teachers and faculty members, staff, other school essential workers, families, and students to gain a better narrative of the education at present and how it should proceed into the future. I personally feels the last recommendation is important, especially when 4 out of 5 teachers interviewed agreed to have in-person learning despite all of the positive experiences from the current learning and school operation implementation that they have shared throughout the interview and knowing the plan that their school district was going to try to implement for education soon. Understanding the different perspectives from all parties involved in education would help set a more inclusive future education plan involving all stakeholders.

### **Summary**

This chapter discussed the overlap and difference between document analysis results and interview transcription results. For the first research question regarding the extent of educational changes during the pandemic, there were four themes: health and safety, teaching and learning method, a few policy changes, and work-life balance of students, teacher, and families. For the second research question about the difference between educational plans and implementation, three themes were found: health and safety precaution, teaching-learning process, and communications (student-teacher and parent-teacher communication). This chapter also discussed the study's limitations and recommendations for future research.

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## Appendix

### Appendix A: IRB Approval Letter



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**To:** Margaretha Audrey Cahya  
**From:** Douglas J Adams, Chair  
IRB Expedited Review  
**Date:** 03/17/2021  
**Action:** **Expedited Approval**  
**Action Date:** 03/17/2021  
**Protocol #:** 2102319546  
**Study Title:** New Normal: How School Operation and Learning Changes in a Pandemic.  
**Expiration Date:** 03/04/2022  
**Last Approval Date:**

The above-referenced protocol has been approved following expedited review by the IRB Committee that oversees research with human subjects.

If the research involves collaboration with another institution then the research cannot commence until the Committee receives written notification of approval from the collaborating institution's IRB.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date.

Protocols are approved for a maximum period of one year. You may not continue any research activity beyond the expiration date without Committee approval. Please submit continuation requests early enough to allow sufficient time for review. Failure to receive approval for continuation before the expiration date will result in the automatic suspension of the approval of this protocol. Information collected following suspension is unapproved research and cannot be reported or published as research data. If you do not wish continued approval, please notify the Committee of the study closure.

Adverse Events: Any serious or unexpected adverse event must be reported to the IRB Committee within 48 hours. All other adverse events should be reported within 10 working days.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, study personnel, or number of participants, please submit an amendment to the IRB. All changes must be approved by the IRB Committee before they can be initiated.

You must maintain a research file for at least 3 years after completion of the study. This file should include all correspondence with the IRB Committee, original signed consent forms, and study data.

cc: Heather D Young, Investigator

## **Appendix B: Informed Consent Letter**

### **New Normal: How School Operation and Learning changes in a pandemic Consent to Participate in a Research Study**

Principal Researcher: Margaretha Audrey Cahya

Faculty Advisor: Heather D. Young

#### **INVITATION TO PARTICIPATE**

You are invited to participate in a research study about changes in school operation, teaching-learning process, curriculum, and policy in North West Arkansas public schools. You are being asked to participate in this study because you fit the selection criteria for this study.

#### **WHAT YOU SHOULD KNOW ABOUT THE RESEARCH STUDY**

*Who is the Principal Researcher?*

Margaretha Audrey Cahya at macahya@uark.edu.

*Who is the Faculty Advisor?*

Heather D. Young at hkindall@uark.edu.

*What is the purpose of this research study?*

The purpose of this study is to determine the extent of change in the teaching-learning process, curriculum, and policy of school operation of North West Arkansas public schools during the unprecedented time of the COVID-19 pandemic. The educational changes will be documented through all k-12 levels particularly in school operation, teaching and learning daily, technology integration, and policy that ties it together.

*Who will participate in this study?*

A total of 6-12 public school teachers at different levels of education (Elementary, Junior High, and Senior High).

*What am I being asked to do?*

Your participation will require the following:

This consent letter will be emailed together with the invitation of asking for permission to interview. These interviews will follow an interview protocol and will be audio-taped or video-taped based on the method of interview; telephone conversation or online (Zoom) conference.

*What are the possible risks or discomforts?*

There are no anticipated risks to participating.

*What are the possible benefits of this study?*

*There are no anticipated benefits to the participant.*

*How long will the study last?*

The Interview will last for 15 minutes and no longer than 30 minutes. A follow up interview may be requested if needed.

*Will I receive compensation for my time and inconvenience if I choose to participate in this study?*

There will be no compensation for time and inconvenience.

*Will I have to pay for anything?*

No, there will be no cost associated with your participation.

*What are the options if I do not want to be in the study?*

If you do not want to be in this study, you may refuse to participate. Also, you may refuse to participate at any time during the study. Your job, your grade, your relationship with the University, etc will not be affected in any way if you refuse to participate.

*How will my confidentiality be protected?*

All information will be kept confidential to the extent allowed by applicable State and Federal law. The interview audio and video files and transcriptions will be electronic, and the participants' responses will remain anonymous. We will not use any real names of the participants in the study. Data will be kept on a password-locked file in a password-locked computer, and any written notes will be kept in a locked cabinet by the principal researcher. After audio and video files have been transcribed and reviewed for accuracy, the video and audio files will be destroyed, and only the transcription will be kept.

*Will I know the results of the study?*

At the conclusion of the study you will have the right to request feedback about the results. You may contact the faculty advisor, Heather D. Young at [hkindall@uark.edu](mailto:hkindall@uark.edu) or Principal Researcher, Margaretha Audrey Cahya at [macahya@uark.edu](mailto:macahya@uark.edu). You will receive a copy of this form for your files.

*What do I do if I have questions about the research study?*

You have the right to contact the Principal Researcher or Faculty Advisor as listed below for any concerns that you may have.

Margaretha Audrey Cahya at [macahya@uark.edu](mailto:macahya@uark.edu).

Heather D. Young at [hkindall@uark.edu](mailto:hkindall@uark.edu).

You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research.

Ro Windwalker, CIP  
Institutional Review Board Coordinator  
Research Compliance  
University of Arkansas  
109 MLKG Building  
Fayetteville, AR 72701-1201

479-575-2208  
irb@uark.edu

I have read the above statement and have been able to ask questions and express concerns, which have been satisfactorily responded to by the investigator. I understand the purpose of the study as well as the potential benefits and risks that are involved. I understand that participation is voluntary. I understand that significant new findings developed during this research will be shared with the participant. I understand that no rights have been waived by signing the consent form. I have been given a copy of the consent form.

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## Appendix C: Semi-Structured Interview Questions

### Interview Protocol

1. Please tell me a little bit about yourself and your teaching career? (Prompts may include number of years teaching, grade levels taught, current grade level and responsibilities, etc...)
2. What does day-to-day learning look like in your school? (Prompts may include – what does a normal day’s schedule include? How many students do you interact with each day?) Do activities like sports, extracurricular, and school events still available? How are free periods such as lunch or recess managed?  
(other possible questions: Approximately how long did it take you and your class to adapt to the current learning process? Was there any set of timelines that both you and your students need to achieve? How do you construct your student learning experience? Do you primarily work from home or at school? How does this change affect your job routine, communication, and collaboration between you and your colleagues? Did your school plan an emergency learning for unexpected situation?)
3. What technology do you use this year? Are there any changes in the use and integration of technology in the learning process due to the pandemic? How does it compare to times before pandemic?
4. Did your school provide any support to help you transition to the current learning or to face any unpredictable challenges that you may face outside from school? (Prompts may include - What training did your school provide to help you transition to the current learning situations? Did you find the training better prepared you for daily teaching and learning in our current environment? Did your school provide any support for teachers and staff regarding COVID-19? How did these supports help or hinder what you do on a daily basis?)
5. Did your school implement physical alterations (ex: classroom arrangement, recess, etc.) to support the health and safety of students, teachers, and staff? What advantages have you found in this alteration? What challenges you found from the school's physical renovation(s)?
6. What challenges do you find in day-to-day learning in the current situation? How do you mitigate them?
7. Did your school provide any support for students academically while they are in school and/or outside of school? In your view, what is the most essential support that students need during this unprecedented circumstance?
8. How does learning look like for students identified as SPED? What about ELL learners? Is there support for either of these groups of students? Is this support different than in previous school years? If so, how?
9. What about the role of parents toward student education? What changes have you seen in the parent role in the teaching and learning process due to the current pandemic?
10. In your opinion, what is the most significant change in teaching and learning that you experienced due to the pandemic? (What are your thoughts about the current learning implemented in your school?)
11. Do you think that the changes in teaching and learning will have a long-term impact on future learning? If so, how?