(In)Equity in Online Schooling:

Technology and Bias in Elementary Education During the Pandemic

Amy Mueller

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The dissertation is approved by the following members of the Final Oral Committee:

Dr. Erica R. Halverson, Professor, Curriculum & Instruction
Dr. Peter Wardrip, Professor, Curriculum & Instruction
Dr. Nicole Louie, Professor, Curriculum & Instruction
Dr. Richard Halverson, Professor, Educational Leadership and Policy

This dissertation is dedicated to

Pamela Diane Wenger (Jasmin)

1960 - 2008

For everything I am and will be.

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Abstract

Online schooling was implemented as an emergency, and it may have forever tainted our understanding of what online schooling could be, yet despite this harried, often underfunded, under supported, underdeveloped implementation of online schooling improvement occurred and some, perhaps a very small minority, were better served than in traditional, in-person schooling. In this three-article dissertation I look at elementary educator and caregiver discourse around online schooling and learning, the positioning within educators' discourse, and ultimately offer a design suggestion as a conceptual framework for all those implementing a culturally relevant online schooling/learning program.

Keywords: online learning, elementary, education, coronavirus-19, pandemic teaching, educational technology, instructional design, online schooling, critical education, culturally responsive pedagogy, culturally relevant design, culturally relevant pedagogy

Preamble

I remember being 7 years old and sitting in the backseat of my moms' run down Mercury coming back from the grocery store as she told me about her dream for me. She hoped when I was older that I would get a job as a server at a fancy restaurant where I could meet a man who could take care of me.

It wasn't that she didn't want the best for me, rather her understanding of what women, especially women who identify as Native American, could achieve had been limited. My mother never finished high school and because of this she pushed me to achieve more, to not only graduate high school but to go to college. She was certain I would be a doctor one day.

She wasn't wrong.

I may not have gone into the medical field, but I have dedicated my life to ensure that education lives up to its potential as an equalizing force for historically marginalized and underrepresented groups. If nothing else in my life I can say that I have expanded the sum of human knowledge in an ethical and meaningful way.

My mother passed just as I turned 21, but I am confident that she and the rest of the women in my family who came before her are watching me now with pride. So, this dissertation is dedicated to her memory. For always inspiring me, pushing me, and sometimes even dragging me towards a brighter future.

Hey look Ma, I made it.

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(In)Equity in Online Schooling:

Technology and Bias in Elementary Education During the Pandemic

The Covid-19 pandemic turned education on its head and assumptions often echoed a deep concern for elementary students and families (Liao, et al., 2021; Powers, Brown, & Wyatt, 2020). Understanding how bias and technology collided in the shift to online schooling during the pandemic may allow us to reframe (in)equity discourses and illustrate how online schooling could use an assets-based approach to expand students' opportunities to engage with technology (and thus various 21st century skills and multiliteracies) and allow for self-determination while fostering a positive school identity. In this three-article grounded theory dissertation I attempt to conceptualize a small piece of the impact of the transition to online schooling on elementary educators and families: issues around technology and issues of equity. In turn, it is my hope that these frameworks may shape how we design learning experiences as well as educate future teachers.

Positionality Statement

It is hard to acknowledge the pandemics effect on education without acknowledging its effect on my own. While I have always worked at the intersection of educational technology and social justice, this dissertation was a result of a shift in response to the Covid-19 pandemic. I passed my prelims on my original dissertation on makerspaces in indigenous communities as sites of cultural revitalization at the end of January of 2020 with the intention of working with schools in the summer and 2020-2021 school year. I say this because this dissertation is not just a demonstration of my continued commitment to push the field forward while moving educational technology into a more equitable and just future but also a testament to my ability to pivot in the face of adversity.

I have always been a technology geek and a nerd in my heart. When I chose to leave my job in network management (internet routing and infrastructure) to return to school for a teacher education program I brought my love of technology with me. I originally expected to teach early childhood education with my degree, focusing on 4K and Kindergarten classrooms but when a position opened for a K-5 “technology” teacher I jumped at the opportunity. There was no curriculum to follow, no district standards, and no scope and sequence. I spent the next three years integrating new literacies and digital citizenship activities in my classroom. My classroom community explored an array of technological tools and skills in culturally and linguistically sustaining ways as best as I knew how. We explored computer science and engineering with curriculums through programs like Project Lead the Way (PLTW) and organizations like Code.org. We delved in international sustainable design using the video game Minecraft. We explored our world through Google Earth. We built connections with Skype. As my students learned I learned right alongside them. I began gaining certifications in a variety of programs through Google, CommonSense Media, PLTW, Code.org, the International Society for Technology in Education (ISTE), and Intel.

As someone then uniquely poised to look at issues of educational technology in elementary education, I let this research study be guided by one main research question: how has the shift to online schooling impacted caregivers and educators of elementary aged students? It is from this question and my desire to better understand the role of educational technologies in a more just future from which this dissertation emerges. To better understand the three separate categories, and thus three articles they evolved into, this chapter serves as an introduction to the grounded theory process, an overview of the theoretical landscape of online schooling at the elementary level, the data collection and analysis process which revealed the concepts and

categories which comprise the three separate articles, a brief overview of each chapter, and finally an overview of the possible contributions this dissertation holds.

Grounded Theory

At its core grounded theory invites researchers to develop theory by diving into their data in an iterative dance, generating substantive codes while stressing the importance continuous comparative analysis and theoretical sampling (Charmaz, 2000; Corbin & Strauss, 2008; Glaser & Strauss , 1967). Originally developed by Glaser and Strauss (1967) over the course of their studies on death and dying. Grounded theory has since fractured into three prominent strands all of which take issue with the other: (1) the traditional approach originally described and which continued to be strongly touted by Glaser (1992), (2) Strauss and Corbin's (2008) updated theory which focuses more on validation with a refined systematic analytic process designed to deduce rather than discover theory, and (3) a constructivist strand developed by Charmaz (2000) which creates space for external theory. In all three approaches grounded theory is an inductive process for generating theory as "theory based on data can usually not be completely refuted by more data or replaced by another theory...it is destined to last despite its inevitable modification and reformulation" (Glaser & Strauss , 1967, p. 4). Throughout this dissertation I borrow from each of the three strands, perhaps much to their dismay, though I ultimately stake my claim in a postmodernist, constructionist stance closer to that of Charmaz (2000; 2006).

While I had always worked within the realm of educational technology for social justice my focus was not specifically on online schooling this dissertation was a pivot in my doctoral journey. I, like many others, was thrown into this world at the start of the pandemic. I have been able to approach this study with an openness to data that Glaser himself may have been jealous of; gathering data with neither preconceived questions or frameworks upon it. Instead, I was able

to allow “categories [to] emerge upon comparison and properties emerge upon more comparison” (Glaser, 1992, p. 43). While I admit I was nervous going into this research study without a strong theoretical framework, as of writing this dissertation and exploring the literature available it has reinforced the validity of my own interpretations of this data with overlap in other theories and frameworks being advanced.

This back-and-forth comparative analysis has been central to both my dissertation and grounded theory as a whole and is from which the substantive and formal theories of my three articles emerge. It is also important to note that while this chapter contains separate sections for both data collection and an overview of my data analysis in the spirit of grounded theory these processes were not separate but rather and back and forth process allowing me to identify possible concepts and gaps to explore in my theoretical sampling. Similarly, my research questions evolved alongside my analysis into the three central sub questions guiding the three streams of research and thus articles in this dissertation (Table 1): (1) how do elementary educators and caregivers perceive online schooling during the Covid-19 pandemic, (2) how do elementary educators conceptualize equity during online schooling, and (3) in what ways has technology been (in)accessible to educators and caregivers in the transition to online schooling in the pandemic?

Table 1: Overarching Research Question and Central Sub Questions

Overarching Question: *How has the shift to online schooling impacted caregivers and educators of elementary aged students?*

R1	In what ways do elementary educators and caregivers invoke discourses “learning loss” with emergency online schooling during the coronavirus-19 pandemic? • To the extent that “learning loss” is perceived as a real phenomenon, what is it attributed to? • In what ways, if any, do these attributes reflect deficit thinking? • What are the implications of accepting “learning loss" as inevitable?

R2	How did elementary educators conceptualize responsibility for education during emergency online schooling during the coronavirus-19 pandemic? • What do these discursive understandings of responsibility reveal about social understandings of responsibility for an equitable society? • What are the implications of institutionalizing these discursive frameworks?
R3	In what ways has online schooling been (in)accessible to educators and caregivers in the transition to online learning in the pandemic?

Where the strands of grounded theory advanced by Glaser, Strauss, and Corbin advance a positivistic, objectivist view of grounded theory which views Truth as immutable and discoverable. Charmaz (2000) instead suggests grounded theory complements a constructivist approach where grounded theory can embrace an interpretive approach which fosters the narrative experience of participants and attempts to tell the story of the phenomenon rather than separate the datum from the humans involved. In fact, this difference between the cold, scientific writing of an objectivist grounded theory slant to the narrative style of constructivist grounded theory is a main separation which makes constructivist grounded theory well, constructivist. It is this postmodernist assumption of no single reality which I posit throughout this dissertation and further in my attempts to give voice to the stories and lived experiences of my participants. This dissertation, and the data collected within it, only represents a "slice-of-life" (Charmaz, 2000) where I further attempt to portray the experiences of my participants as a narrative.

Data Collection

Data for this dissertation was collected between May 2020 and September of 2020 in two distinct phases. In the first phase surveys were distributed between May and June of 2020. The survey varied depending on if you identified as an educator (Appendix A) or a caregiver of an elementary student (Appendix B). Survey participants were then able to volunteer for an interview. These interviews took place at the start of the following school year between

September and October of 2020. Throughout the data collection and simultaneous analysis process “I aim for curiosity without condescension, openness without voyeurism, and participation with domination” (Charmaz, 2000, p. 528).

Survey Distribution

In the first phase between May 15th, 2020, and June 15th, 2020 mixed-methods survey (Check & Schutt, 2012; Singleton & Straits, 2009) surveys were distributed via email through professional and caregiver networks. Simultaneously a limited run of paid advertising on social media websites Facebook and Instagram was targeted to users who have children in their homes and/or who work with children (Figure 1).

Figure 1: Two of the advertisements used in survey recruitment.

From the survey a total of 423 unique surveys were started, however, only 138 surveys were marked completed. In the interest of ensuring only those responses which were meant to be finalized were included in the final data set incomplete surveys were removed. Furthermore, each individual question was optional such that any participant could chose to skip any question and still complete the survey. This means that while there were 138 completed surveys not every question has 138 responses. Survey validity was reinforced by using responsive services and a

clearly defined population of interest (Blumenberg, et al., 2019) and controlled for sampling error (Dillman, Smyth, & Christian, 2014) and non-response error (Ponto, 2015) using industry standard software Qualtrics.

Participant Descriptions:

Participants self-identified a variety of demographic information in both direct questions and which was uncovered with in-vivo coding (Charmaz, 2006). In total 16 states were represented: Arizona, California, Florida, Ohio, Texas, Tennessee, Utah, Iowa, Idaho, Minnesota, North Carolina, Indiana, Massachusetts, and Kentucky. Further, two surveys were submitted from the great nation of Canada. Perhaps surprisingly the majority of users who described identified as a rural community. Of the 69 responses which described the community 50 indicated a rural community, 10 an urban community, and 9 a suburban community. Similarly, there was a relative balance of schools described as small (15) and large (11). Of the respondents who identified the grade level of their children the majority were in 4K – 3rd grade (58.5%) (Figure 2).

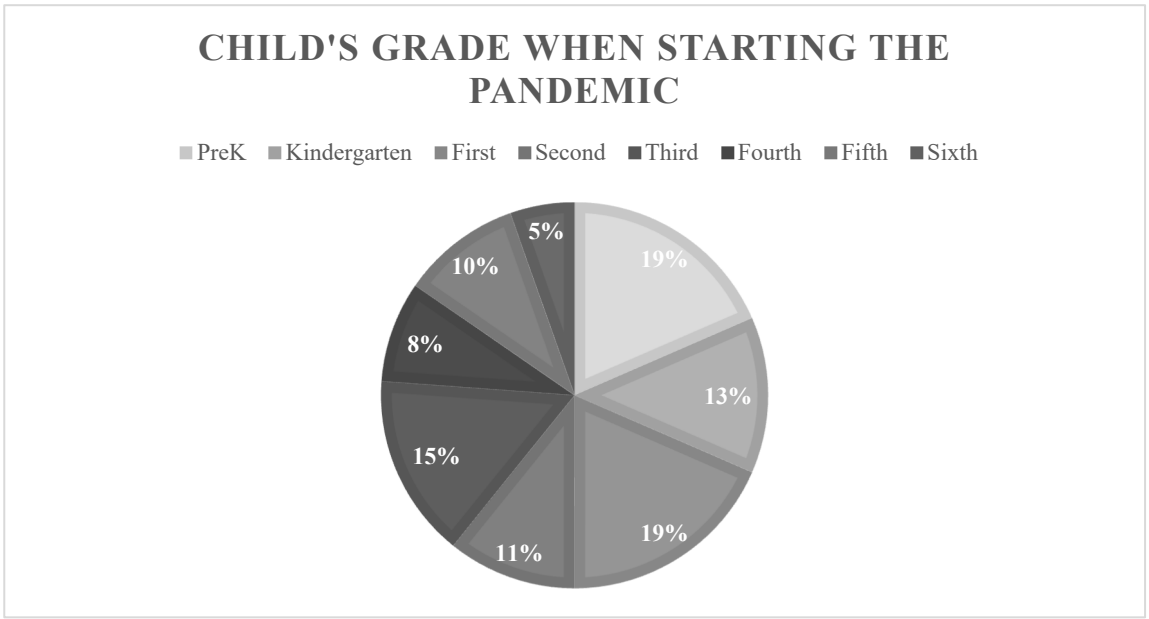

Figure 2: Caregiver survey respondents child's grade level at the start of the pandemic.

Similarly, educators who responded to the survey showed a similarly diverse spread of educators, yet again with slightly more than half representing those educators' teaching children in third grade and under (Figure 3).

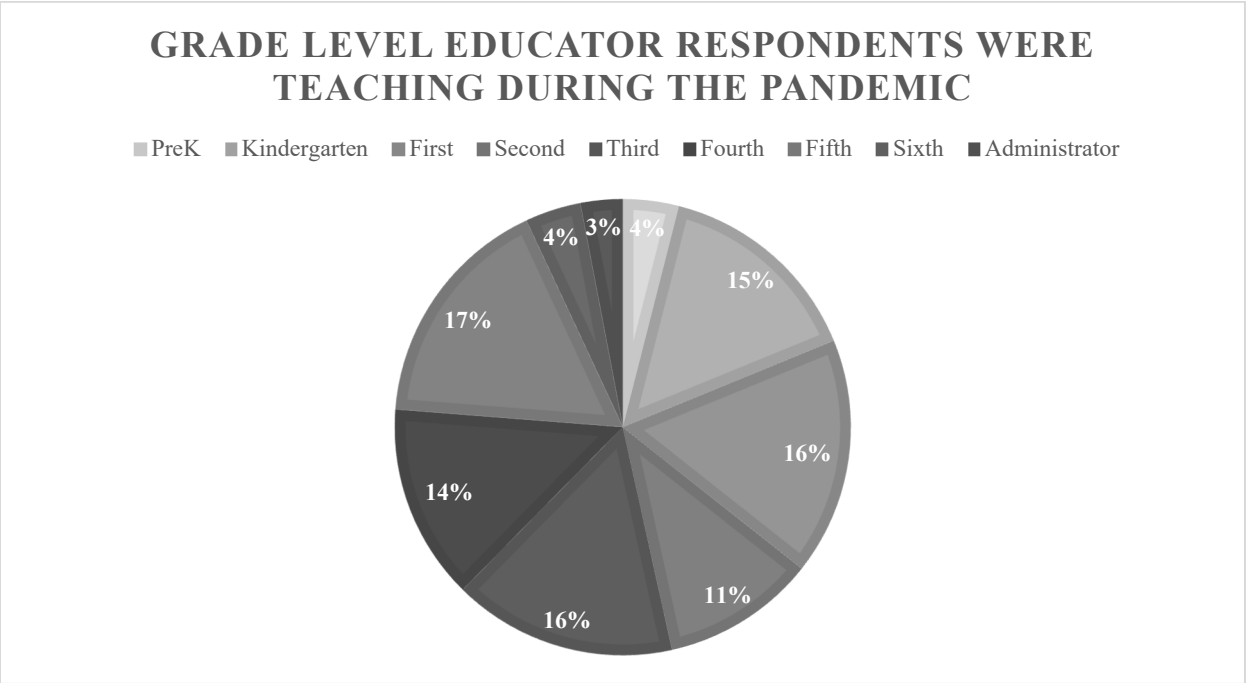

Figure 3: Data breakdown own of educator roles at the beginning of the Pandemic

Race and socioeconomic status in the schools was much more complex with more coded language. Forty-two respondents identified the racial makeup of their schools with the phrase "diverse" (13 times) being used most prominently. Other examples of illustrating a racially diverse school body included the phrases "minority" (2) and "multicultural" (2). Other participants named the exact races they perceived as attending their school (11), sometimes providing statistical breakdowns (8). White (8) was the least used named identity, and predominately white schools were marked in other ways such as one response which stated there were "few students of color".

Sixty-nine respondents also chose to describe the socioeconomic make up of their schools. This was most prominently done for low-income schools (40 responses total) using

educational jargon like “free and reduced lunch” (14) or “Title 1” (7) but also included euphemisms such as “working class” (2). Others used more frank language such as “low income” (10), “high poverty” (5), or “poor” (2). Twenty respondents described their school as being a melting pot between with students from neighborhoods representing multiple socioeconomic statuses. Seven respondents described their school as middle class and only two respondents said their school was populated largely by families from upper socioeconomic classes using the phrase “wealthy” (2) and in once case the coded language “high property values”.

Interviews

As part of the survey methods participants were able to add their email address if they would be interesting in doing the second-round interview (Singleton & Straits, 2009). In total 34 users signed up, however only 11 final interviews were completed. All participants who requested an interview and were able to schedule one were interviewed, the other 23 participants elected not to continue with an interview. Six of the completed interviews were with elementary educators and five interviews were conducted with parents. Interviews took place near the beginning of the 2020-21 school year between September to October of 2020.

In both categories saturation appeared by the last two interviews as no new concepts in each category began to arise. This is not to say that there are no other avenues which could have been explored which may not have had saturation, simply that my data analysis at that time appeared to reach saturation as I contend that no actual saturation for all possible interpretive paths could ever be reached. As Charmaz (2000) highlights sampling is done when we reach saturation, but saturation is elastic.

Where Corbin and Strauss (2008) argue for unstructured interviews to maintain a more natural, casual, conversational cadence to the interview I have chosen to pursue a semi-structured interview (Rubin & Rubin, 1995). As a part of the theoretical sampling process each set of semi-structured interview questions is different for each participant because each interview was shaped both by the participants responses to the survey as well as the constantly evolving data analysis process (Appendix C). As Merriam (1999) argues a good interview will include a variety of question types: interpretive, hypothetical, devil's advocate, and ideal situations generated by each interviewee and as such I attempted to work each category of question into the interview. Further, I have also attempted to allow for a focused life-story interview approach throughout the semi-structured nature of the interview. In a focused life-story interview people are encouraged to tell their story as it connects to the people and relationships they have made (Chilisa, 2012) and as such participants were often asked to expand on relationships and community connections which arose throughout the interview. This method of focused life-story interview echoes Charmaz (2000) in saying "part of interpretive work is gaining a sense of the whole – the whole interview, the whole story, the whole body of data" (p. 520). It is in this essence of sharing the whole story, and a history of rich description where I now attempt to encapsulate each interview into a brief narrative. It is important to note that these descriptions are meant to be overviews of the interviews and not in-depth analysis which is reserved for the later chapters built around specific concepts and categories. Furthermore, while I never add to quotations, and whereas the original transcription is verbatim and in the proceeding articles, in the interest of my participants and narrative summary, I edit out repeat phrases, filler words, and false starts. I do this because it is the way I would want to be presented in research.

Interviews with Teachers.

Martha.

Martha is a K-5 elementary music teacher in a low-income, urban school in the Midwest with a predominately Black and Latinx student body. She identified her school as a "community school" which prior to the pandemic provided a variety of additional services to families such as computer access, job support, a food pantry, dental care, and other support services. She struggled with the transition to online schooling not because of technology but rather a sense of deprofessionalization of her career and a lack of public support. As she shared in the interview when her class became optional, she no longer was grading students, "I'm not really big about grades, it's not part of why people do art and music, but it also felt somewhat devaluing" (Martha Interview, Pos. 12). In practice making music optional meant that she did not see students unless a general education classroom teacher invited her in. Ultimately, she found that her course only had a 30% attendance rate. Additionally, she discussed how initially she felt overwhelmed with parent and community support but as her school started the 2020-2021 school year online the attitude shifted.

> "I do think that people are lashing out at teachers about that. Even though in the spring, it was very much like, wow, I never realized all that you did. This is fantastic. Now it's like, I know what you usually do and you're not doing it… But yeah, the 'I want a tax refund thing' hurt knowing how much money that teachers spend all the time and how much the platforms and the hotspots and the, you know, all of the efforts are taking and all of the unpaid labor that's happening and then have people say, not even your regular salary is, you know, that's too much already… So, it can be upsetting, and I don't think that the support is there." (Martha Interview, Pos. 96-100)

Martha continued to express frustration that the public doesn't understand what goes on behind the scenes to make online schooling, any learning really, happen.

> "…you're not an educator, you've only experienced this from the student lens and you've kind of created your idea of what teachers do. But to really think about, okay, well, not only do you have to think of and present a lesson which is I think what people really say, "Okay, you're a teacher. You think of the lesson, you present the lesson, that's it." You also have to make sure you're following all these, you know, Maslow's Hierarchy of Needs and the theory of seven multiple intelligences and all these other components. And then you're assessing those and also hitting yardsticks for developmental appropriateness and the standards set by your state and also the national standards. And it's just like, there's so many other factors than just think of a lesson and present it. Especially because there are people edutaining where it's like, oh, you kept their attention, and you did something within the realm of education. But yeah, there is just a lot more to it and I think people don't necessarily appreciate that kind of behind-the-scenes work…" (Martha Interview, Pos. 146-149)

Throughout her survey and interview it was clear that Martha was a strong advocate for not only the arts but her students and school community. Though she felt she struggled the things that most negatively impacted her about the transition to online schooling was her ability to teach, to support, and to feel like a respected professional in her career and by her administration and her community.

Zelda.

Zelda is a first-grade teacher in a school along the east coast with "60% free and reduced lunch" and "35% minority students." At the time of the interview, she was grateful to be back in

her classroom for in-person learning. Being in person, however, was unlike anything Zelda had experienced in her impressive career. The safety precautions required deeply impacted her teaching style saying, "…that's what makes it more difficult for us as first grade teachers. we're not used to teaching like this. This isn't, this isn't normal for us to have them sit at a desk all day by themselves without interacting with other kids" (Zelda Interview, Pos. 34).

Despite all the necessary precautions and adaptations on classroom teaching Zelda believed it was beneficial for students to be in-person saying, "they desperately needed it" (Zelda Interview, Pos. 12). Zelda demonstrated deep concerns for such young students learning online during the pandemic emphasizing that first-graders were not independent enough to work online, that they were still learning basic digital literacies and skills, she didn't feel she was able to get accurate assessments and facilitate learning literacy, and that ultimately to learn online was not learning. Upon reflecting on the first graders she was encountering this year after the previous year of online schooling compared to the student bodies of previous years Zelda states, "there's a definite gap. There's a huge learning gap. You can really tell that they missed 12 weeks of kindergarten. It's quite obvious. It's unclear waters right now, we're taking it day-by-day" (Zelda Interview, Pos. 16). Despite this, Zelda moved forward with first grade curriculum because "you can't go back and redo it. You can't go back and say, okay, I'm going to redo kindergarten because then the gaps just going to get larger and larger" (Zelda Interview, Pos. 254).

As someone with nearly two decades of experience in the classroom, Zelda was the first to admit that the transition to online schooling was hard for her. Many of the core components of what she recognized as a positive learning environment seemed impossible to recreate authentically online such as collaborative work, hands-on project based learning, and socioemotional work. Beyond this, Zelda was overwhelmed by the new, near constant demands

being placed on her as emails and communications went from a regular school day to a 24 hour, seven-day-a-week expectation from families and administrators. Zelda was also a parent to a graduating senior and found what was previously expected to be family time with her own family became, what she felt, was “on-call” time.

Thelma.

Thelma was absolutely fascinating to me. I state this because I feel as though I cannot help be biased in sharing her story as it was so unique in relation to the others despite being an extraordinarily unique circumstance. While Thelma is an elementary educator her role as a special educator, with a specialization in behavior, at a school she described as the “most restrictive placement before they end up in a residential placement” for students with behavioral needs, became largely one of teacher and caregiver support (Thelma Interview, Pos. 56). Beyond just dealing the Covid-19 pandemic, Thelma lived in the West Coast surrounded by wildfires so catastrophic they would later have relatively famous documentaries made about them. Despite all these adversities, or perhaps in part because of them, Thelma was a steadfast advocate for her students’ sharing stories of their perseverance and strength in the face of unthinkable trauma. When describing their shift to online schooling she shared, “It’s a mixed bag sometimes just because of the work that I do with some specialized populations. Some of my kids are seeing such growth and such good stuff and some of my kids aren’t. It’s the whole gamut so it’s kind of hard to talk about it ‘cause it casts a large net” (Thelma Interview, Pos. 8). This concept that even students with high needs receiving special education services could excel online was something repeated throughout the interviews, despite acknowledgements against the related struggles.

Where Thelma struggled the most in the pandemic was a lack of concrete guidance on a state or even national level regarding issues around Individual Education Plans (IEPS). IEPs are

a legally binding contract between the school district and caregiver/student which is protected by federal law. When the state shut down, as her community burned around her, Thelma felt “we were still having the expectation that we were having to provide those IEP services as written…especially in the special ed world was difficult” (Thelma Interview, Pos. 148). It was clear that Thelma had the best intentions and highest expectations for her students as multiculturally competent and critical young citizens capable of achieving their goals academically. Yet, she was swimming in new waters and unsure of how documents designed specifically for in-person placements were going to best serve her students and community and felt little guidance on how to best address the issue.

Kim.

Kim is a second-grade teacher in a rural midwestern school who was also back to in-person learning as of the interview. Kim appeared to echo issues which arose in in Zelda’s interview stating,

> the virtual learning that we did back in March, April, May, I thought went really well, but now that we've met with students, there's a lot more loss than I had anticipated. I think that's the biggest difference…Academically and social emotional. When we look at our testing scores, students are coming in probably almost a year behind, our curriculum is being adjusted, you know, to try and fill those gaps, and they are catching, the majority seem to be catching back up fairly quickly. (Kim Interview, Pos. 4-9).

In contrast to Zelda, Kim and her teaching team decided to go backwards and review stating,

> we're doing first grade curriculum, and most of them are catching on pretty quickly, but we definitely are changing things. And even social emotional, the kids seem to have to

> learn how to play again, how to share, how to compromise when they're out at recess. (Kim Interview, Pos. 10).

Despite this, Kim feels that her students will be where they need to be by the end of the school year, confident in her abilities as an educator and the community of practice which she has established within her school and grade level team.

Part of what Kim uniquely struggled with during the pandemic was the way in which online schooling was implemented. At a district-level it was mandated that everything needed to be asynchronous video instruction. Kim shared,

> I think their consideration was privacy, doing stuff live and having families be able to of course see other students in the call, and not knowing how our families of course without Wi-Fi - we're in a rural area – so not sure what the Wi-Fi would look like. (Kim Interview, Pos. 20).

This requirement for asynchronous work forced Kim to reconsider what social emotional learning and earnest collaboration and social learning could occur. These were important aspects of her own personal philosophy of teaching and what made a classroom and positive learning environment. Being stripped of the ability to interact with students in real time felt stifling to Kim, even if she understood the logic behind the mandate.

Jamie.

Jamie is a first-grade teacher-leader from America's heartland working in a suburban school outside a major metropolis. Jamie was heavily involved in the committee for development and processes which would directly impact district level policy in response to the coronavirus-19 pandemic. In the summer after the emergency transition to online schooling Jamie served on a committee to help the district determine key "central standards" to guide online schooling the

upcoming year. She struggled with decisions being made by outside administrators which would disproportionately affect her classroom of young learners such as using tripod dividers with only a small window exclusively facing her on every desk to limit germ spread.

Where Jamie thrived was in championing the online learning management system (LMS) adopted by her school (Seesaw) which she felt was developmentally appropriate for her students and easy to understand. In addition, Jamie's school had been using the LMS and been a one-to-one school with devices for each student well before the transition to online schooling. Throughout the interview, as with every other interviewee, Jamie expressed a deep concern and responsibility for her students. She struggled with knowing some of her students' home conditions weren't conducive to learning. She struggled knowing that some parent had the ability to support their child throughout online schooling, while others did not. Where Jamie felt the pressures of an inequitable, capitalist society and saw the impact it directly had on her students she used this knowledge in her attempts to guide policy and advocate for her students and community to the best of her abilities. While Jamie could not control what went on outside of the school she made clear in no uncertain terms that she did the best she could to ensure to classroom was supportive, developmentally appropriate, and positive learning environment for all students there.

Edith.

Edith was a kindergarten teacher in a different low income 4K-5th grade community school with a predominately Black student population who served on her schools equity and diversity team. Edith described the transition to online schooling with kindergarteners as an almost surreal experience. She describes beginning the year online sharing,

> It has been challenging because one of the things is that, you know, kids have no experience with school yet and they don't see me as a human being I think. They're seeing this person in the screen. They don't understand I'm their teacher, if we go back in person, I will be their teacher, these are their classmates and their friends, and what we're working on now is school. I think it's more of [for them] this is a crazy YouTube show that keeps talking to me and I don't understand it. (Edith Interview, Pos. 26)

Similarly, she was challenged to reimagine what school could look like saying, “you kind of need to recreate your expectations for teaching and learning, you know, since it's not the same as being in person and we can't kind of expect it to be the same thing as being in person” (Edith Interview, Pos. 132).

From the beginning it was clear that Edith cared deeply about implementing anti-bias practices in her own classroom. During the interview she shared a story around her work in the race and equity team emphasizing that while she has been on the committee for 8 years and every year, they spend the summer making a grand plan to create more equitable school it inevitably gets pushed to the wayside because of state and district mandates and systemic administrative pressure. However, the pandemic and beginning the 2020-21 school year online seemed to create space for the radical change they had been striving for the past eight years saying,

> [as a school team we] kind of came to the consensus that this is an excellent year to try out project-based learning and utilizing all the adults that we're going to have present every day in kids' homes. Then of course we were watching this talk by Gholdy Muhammad, and I'm sure everybody has seen this talk that was online. So, we were like, ‘We need to do cultivating genius! How do we get the historically responsive framework

> into our school?' So, we made this incredible plan trying to figure out ways to kind of like incorporate like history and culture and language and everything into our work all day and it felt really promising because this is such a different way of doing school. Like, we broke the system, let's start over and then of course we're starting up and it feels like it's the same stuff all over again where it's like, well, hey, but here's your literacy block and what's your shared reading and here's your small group time and how are you breaking that into 15-minute chunks. I think that was a really great opportunity that we tried for and then the minutes came down and the schedule got real and instead of having more of the holistic approach to education, it got very much siloed again." (Edith Interview, Pos. 134-148).

As a former educator myself, this sense of overwhelming pressure to fit into a mold and do everything the exact same, exact "research-based" way was deeply familiar as more and more school systems industrialize their curriculums, standards, and policies. At the end of the day, being an educator is a job and you have bosses and metrics and guidelines and curriculums you are required to follow, regardless of your training, experience, or hopes if you would like to keep that job. I shine a light on Edith and this obligation to systemic duty because I empathize and too wonder how those who have the most contact with students can affect real change in a system which treats them as a cog? What might have happened if Edith, and educators like her, who put in the work to create something new were supported in their ambitions and given an attempt to try and rethink schooling around their own students?

Interviews with Caregivers.

Cassie.

Cassie is unique in that she was the only Canadian who volunteered for an interview and her innate sense of humor was apparent throughout the interview. She is a single parent to 3rd and 10th grader in an "extremely rural" community with "one internet line going in for the entire town". Cassie's' children both attended a French immersion school when Cassie herself does not speak French. In the interview she lamented,

> Both my kids went into French immersion and doing that from home is pretty much impossible because they're required to speak French all day with everything. When they're in gym or asking to go to the bathroom, it's all French and when they come home, trying to do some French work online is, is hard. I don't speak French…" (Cassie Interview, Pos. 48).

Cassie also struggled with the increased financial burdens placed on her by online schooling, mentioning she had to buy some of her own devices like a printer so she could print and work on materials rather than doing it all online. When discussing internet speed issues due to her remote location and limited-service providers Cassie shared, "…it's sort of juggling what's better, what's worse. I don't have a lot of money, so I don't want to be spending more than $100 a month on internet…" (Cassie Interview, Pos. 44). However, unlike the Americans interviewed in this study Cassie had access to Canadas social support program, the Canadian Emergency Benefit Fund, for parents affected by the Covid-19 pandemic which allowed her to stay home with her children at 80% of her previous salary during the pandemic.

Outside of internet access issues Cassie grappled with the sheer differences in quality between classes. She stated, "there was a vast difference between different classes. Some teachers were really good at getting their stuff online and I've heard that others basically did nothing" (Cassie Interview, Pos. 19-20). Furthermore, the isolation, particularly as a single

parent in a rural community, was particularly hard on Cassie. However, she offered some simple solutions which could have mitigated these feelings sharing,

> I think sometimes we need more help than what they're offering, and we need them to ask us if we need help because we don't want to be the one that's whining and complaining. I didn't wanna be asking for the portable wifi [hot]spot but it turns out I actually need it. And I think that I really needed someone to check in on us instead of me having to ask someone or to call someone up just to say hello. (Cassie Interview, Pos. 220)

These themes of access and isolation were common across interviews if not always as succinctly expressed. Further these themes of increased financial burden and unfamiliarity with classroom content, though not always because of a language barrier, were expressed by caregivers across the interviews and surveys. Despite these difficulties, Cassie illuminated how both structures and educators could support caregivers with not only technology but social support and compassion.

Claire.

Claire is a professor and librarian and an exceptionally busy mother with one child in 4K and another in 1st grade. Despite having such young learners in her home, she describes the events of online schooling for her as an ideal experience saying, "…because I do teach at the college level, and my class is entirely online, it has been for several years. I did not have much trouble navigating the remote learning environment. It was very intuitive for me." (Claire Interview, Pos. 20). Claire is active in her children's school PTA, and it wasn't until she talked to other parents that she even realized some families may be struggling with the academic expectations for the content more than technological or childcare issues she initially assumed. She illustrated this point saying,

> [My friend] said that she had a really hard time understanding the assignments, and that there wasn't a lot of support from the teacher. Which is a shame, but in my case I didn't need a lot of support. So, I didn't really even know. I thought, 'No, yeah, she's doing a great job.' And I really did think... I still think very highly of the teacher for everything that she did, but I hadn't realized that those frustrations were happening with other parents..." (Claire Interview, Pos. 44).

When Claire uncovered these gaps she immediately went to action in her role as a public librarian. In her role she began creating instructional videos for parents on how to use district resources and platforms that she previously took for granted, trying to create training programs and materials which could easily be given to other caregivers looking to better understand how their schools had implemented online schooling.

Claire describes trying to fit in working while supporting her two children online. She described staying up late to get work done after her children and partner had gone to sleep, trying to multitask and balance the children's schedule with her own work demands, sacrificing any sense of escape herself. While it may be off topic for the purposes of this dissertation, it is interesting to note that every interview was with a female presenting person. In fact, despite having 438 stated survey responses only one response was from someone who clearly indicated they were male identifying as a "stay at home dad". Similarly, every respondent discussed being the primary caregiver for their child, and it goes without saying, that those who identified or presented as women were disproportionately by childcare responsibilities during the Pandemic.

Katie.

Katies' daughter was in 4K as the pandemic hit and entered her Kindergarten school year in their northern, midwestern urban school district entirely online. Katie is single mother and a

public children's librarian who was already comfortable with the technology being used in online schooling. Katie went as far as to say, "I am very fortunate that I have some tech savvy. I think this whole experience would be 10 times more difficult if I did not have that kind of background knowledge…" (Katie Interview, Pos. 48). Where Katie was not a fan of the previous year's online schooling she found that the new school year had a more formal and scheduled approach which worked well for her family. She stated, "I think structuring the online schooling like a school day has also been helpful and important. It gets more of a school and classroom feel, even though we're at home." (Katie Interview, Pos. 64). Once again Katie highlights an issue seen across the interviews and survey data: that while many parents expressed struggles with online schooling, their perceptions of the quality of schooling and learning online increased exponentially as time went on. While not surprising in retrospect, online schooling, in the best cases as described in the data, improved over implementation as educators, caregivers, and students adapted to the new environment.

When comparing Cassie's interview to Katie's it is impossible not to notice how different their financial concerns were. For the most part, Cassie did not have to worry about working from home because she had a social safety net protecting her family supplied by the Canadian government, but as an American citizen Katie did not have any such access to government provided salary guarantees. Despite her daughters' father being very involved in her life, Katie instantly became the de facto childcare provider despite her working full time as well. She discussed the differences between supporting her daughter online last year in 4K versus today sharing,

> When she was doing her Zoom session for 4K I basically could not do anything. I had to stand there and supervise and make sure that she was using the mic and not using the mic

> and paying attention. She just felt like she could go and do whatever because it didn't feel like school. So that was kind of like that added stress of trying to get her to sit still and trying to get her to listen while trying to help her do Zoom and (laughs) take turns and (laughs)... [Now] I still have to help her with log in and everything, but it is not as time-consuming as it was in the spring. *It is a lot more structured so she's also a lot more independent*. She has specific buttons that she knows. Her teacher has pictures of when she's supposed to push the microphone button and when she needs to have her microphone off. That really seems to help. So basically, I just help her with log in and I help her with any transitions that happen. Now that it's structured more like a school day, she's able to be more independent and I am able to get some stuff done. (Katie Interview, Pos. 24-28).

Roxanne.

Roxanne is another single mother in a midwestern suburban community who started the interview by acknowledging that she has a lot of privilege as a psychotherapist who owns her own home and who could reduce her workload and could work from home during the pandemic. She shared, “I'm aware that I'm very privileged even though it's all been very stressful for me. We live in a house that I pay mortgage on it, but we're not having to worry about our landlord kicking us out or raising our rent…” (Roxanne Interview, Pos. 116). The Pandemic had been difficult on Roxanne, referring to shift to online as a crisis moment sharing,

> Yeah, I mean, I would say last year was really bad and difficult and hard. My brother is a superintendent in a Chicago suburb[an] district and he had said if they were told a pandemic would come at some point, like, how long would they need to prepare for online schooling, and he said five years…(laughs). So given that last year they had just

> weeks to prepare, I was trying to be really compassionate, but my kid didn't learn anything and it was just really hard. I would say this year it's still really hard but I definitely feel that the teachers seem more grounded. There definitely seems like they have done a lot to make it where real learning is happening now. So I would say it's a lot improved. (Roxanne Interview, Pos. 24-28).

Again, Roxanne narrates these themes of improvement as schools and educators learn how to do online schooling which are seen across the caretaker interviews. Roxanne credited these improvements to a variety of techniques employed by the district and her child's teacher including: a variety of participation options such as synchronous and asynchronous learning; whole group, small group, and individual meetings; smaller class sizes; and more one on one time with the teacher.

Despite her acknowledgement of privilege, like many caregivers during the pandemic she expressed concerns about financial security sharing, "I feel like we are one hair away from a disaster. Like if I were to get sick, I just don't even know how we would survive right now. You know? I feel like it's just so precariously held together, and it doesn't feel like there's any plan really for supporting if parents do get sick or something happens." (Roxanne Interview, Pos. 198-210). If nothing else the caregiver interviews demonstrated the precariousness that even seemingly fiscally solid middle-class American families felt during the Pandemic.

Susan.

Susan is the parent of a kindergarten student in a middle-class community in a deep red state down in the South. The year following the coronavirus lockdown, her school district announced the return to in-person learning Susan felt forced to withdraw her son from public education for his first-grade year for their safety due to concerns around the Pandemic. As a

public librarian and believer in public education she felt conflicted by the decision to homeschool sharing,

> …it was a really hard decision for us because we feel really strongly about public schools and especially strong, integrated public schools. But it's incredibly developmentally inappropriate. Frankly, I didn't think much of how developmentally appropriate they thought kindergarten was to start with. It was a lot of desk work for a six-year-old, I think. They weren't really allowed any free play. So, we could have done our own thing and had time to actually go outside, or we could have been sitting there for seven, eight hours, and we would still have to ride hard on him. And we're working from home, which means we're actually working. (Susan Interview, Pos. 12-28)

Much of Susan's concern was centered around the expectation that her child sit logged on for "7-8" hours a day with a firm schedule which would require her support throughout the day. At one point Susan laughed at the seeming absurdity of the schedule joking, "how dare the school tell me when I can eat lunch?" (Susan Interview, Pos. 68).

As with every other mother interviewed Susan worked outside of the home prior to the onset of the Pandemic. While Susan seemed to comfortably manage both working full time and serving as the de facto caregiver despite having a husband also at home, she felt stifled by the expectations for her child's schoolwork. She shared,

> I'm a librarian so I've been librarianating from home, which means I'm on the switchboard sometimes. And I can't supervise a worksheet, or I have these weird meetings and that kind of thing. So, it just did not seem workable or that it was appropriate for a child. And [the school was] taking strict attendance so we couldn't take

> this opportunity with us working from home to go on day trips or enjoy the weather. We would be in here all day. (Susan Interview, Pos. 68).

In switching to home schooling due to safety concerns, Susan found the flexibility she needed in scheduling and the freedom to engage in new more diverse curriculums.

Data Analysis

In this chapter so far, I have described how this work has been influenced by traditional approaches to grounded theory. This is perhaps because where constructivist grounded theory differs from traditional grounded theory, aside from its rejection of an immutable Truth, is in how it approaches the data analysis process and ultimately the goal of coding, writing memos, and developing categories. Traditional grounded theorists stick to "…close depictions of overt data…" whereas in a constructivist approach aims to understand the assumptions underlying the data and "aim to get to the meaning, not truth" (Charmaz, 2000, pp. 525-6). Further, I caution yet again we return to the iterative nature of a grounded theory approach, while data collection and data analysis are separated into neat headings in separate sections of this dissertation the reality is these processes are all woven together in the tapestry of the process.

Coding

Coding is the process of "taking raw data and raising it to a conceptual level" (Glaser & Strauss , 1967, p. 66). Coding in a constructivist grounded theory approach again repeats the iterative nature of analysis and data collection positing that ideally we avoid "attaching catchy phrases or concepts" to our data but rather use the coding process as a means to gain perspective in a way which allows us to shift into new and unanticipated directions as the data indicates (Charmaz, 2000). Survey data collection ended in June of 2020 and influenced each successive interview in the process of theoretical sampling toward some semblance of saturation. While I do

not believe a true saturation could ever be reached, as I am sure there are concepts and categories which could still emerge with a new round of analysis, the central concepts and categories which guide the three articles in this dissertation appeared to reach an acceptable level of saturation with similar concepts presenting in each interview across participants.

Charmaz (2000) however warns us that traditionally accepted grounded theory coding has the potential to lead to awkward scientific terms, unnecessary jargon, and clumsy categories if we are not careful. To combat this, I have spent the last school year reviewing the data "afresh" at various intervals and as I developed new ideas around the data as well as made a conscious effort throughout my three articles to use language and define concepts in ways that are accessible to practitioners as a former practitioner such as with analogy, metaphor, simple language, and more accessible. It is my hope that whole I believe each of the three articles begins to touch on new theory, that is reads more as a casual idea worth discussion and less like a theory designed to be locked away in an ivory tower. The extent to which I have accomplished this is yet to be seen.

Analytic Memoing

Memoing is a reflective practice which allows the researcher to think through and conceptualize concepts and categories as they emerge in the data which is fundamental to a grounded theory approach. According to Charmaz (2006) memo writing is a process that occurs throughout the research process allowing us to identify gaps and guide our theoretical sampling while simultaneously being "…the intermediate step between coding and the first draft of the completed analysis…" (p.517). They also serve as a written record of our analysis as it evolves in the analyses (Corbin & Strauss, 2008). Memos are places where a constructivist grounded theorist may look for more implicit assumptions and meanings and begin to draw out concepts

and ideas as they emerge (Charmaz, 2000). In this dissertation analytical Memoing was key to identifying the concepts and categories as they evolved in the process, particularly as part of process which was occurring in a global pandemic without access to reliable childcare. Memos allowed me to capture thoughts and ideas with the freedom to walk away as needed and not forget.

Graphical Representations

Graphical representations are used throughout this dissertation and the three articles contained within to quickly lay out data. Creating graphical representations has been regarded as natural and integral part of the theoretical sampling and data analysis process by many a famous grounded theorist (Charmaz, 2006; Clarke, Situational analyses: Grounded theory mappping after the postmodern turn, 2003; Corbin & Strauss, 2008). According to Corbin and Strauss (2008) diagrams are "visual devices that depict relationships between analytic concepts" (p.117). Graphical representations evolved throughout this process and allowed me to visualize connections and patterns in the data.

Positionality Statement

As a former elementary “technology” teacher, parent to two young children, and aspiring scholar it is hard for me not to identify with the participants in this study. I cannot help but be shaped by my own experiences as a classroom teacher and even my own youth, as someone who graduated from a computer-based high school. In this I empathize with all the participants and yet, I attempt for the sake of the research, to remove my own story from their own, ensuring not to project my own assumptions and experiences onto them.

Contextualizing Theory

I went into this research without a specific theoretical framework and leaned into the inductive nature of both grounded theory and this work. In fact, while my work has always broadly been in the field of educational technologies for equity and social justice, like much of the world I hadn't paid much attention to the literature specifically around online schooling. I hesitate to even call this a theoretical framework so much as a contextualizing framework. Even Glaser and Strauss (1967) who so vehemently defended going into a research study with a clear mind free of outside theory recognized that even the best researcher cannot forget what they have already learned. In this section it is my goal to address themes and background information which emerge throughout the dissertation and may help contextualize the articles: looking briefly at what we previously knew about online schooling and what we have since learned in the pandemic began.

Online Learning

First and foremost: online learning and even online schooling is not new. We did not invent it in the pandemic. Literature related specifically to online schooling goes back as far as the proliferation of the internet into homes in the 1990s and builds upon over a century of work in K-12 distance education. By 2003 Maeroff (2003) asserted that online schooling would be a "sea of change" in education (p.2). Others speculated that by 2019 half of all high school classes would be taught online (Christensen, Horn, & Johnson, 2008). By the fall of 2007, 42 states in the United stated offered either a full time or at least a supplemental online schooling option (Cavanaugh, Barbour, & Clark, 2009) and as of August 2021, 38 states offered permanent online school options for K-12 due to increased interest during the pandemic (Gile, 2021).

Looking at research as early as 1998, online education has been touted as a solution for a variety issues plaguing education including: (a) overcrowding, (b) individualization, (c) teacher shortages, and (d) serving students who benefit from nontraditional school environments (Cavanaugh, Barbour, & Clark, 2009). Others have suggested that online schooling may result in increased access to special education services (Hashey & Stahl, 2014). Even that online education has the potential to revolutionize high school reform and help to decrease drop-out rates while building connections to colleges and careers for students (Picciano, Seaman, Shea, & Swan, 2012). In addition, the benefits of online schooling have been found to include: (a) higher levels of motivation, (b) increased educational access to high-quality learning opportunities, (c) improved student outcomes and skills, (d) increased student choice, and (e) increased administrative efficiency (Cavanaugh, Barbour, & Clark, 2009).

Despite the longevity of research, the field of online schooling is still rapidly expanding with ample room for growth. Between 1994 and 2019 one study found only 365 articles published on K-12 online schooling specifically with a considerable amount of that dedicated to literature reviews (Arnesen, Hveem, Short, West, & Barbour, 2019). Where scarce research exists on high school students enrolled in online schooling that limited number plummets exponentially when narrowed to elementary students (Picciano, Seaman, Shea, & Swan, 2012; Rice K. L., 2006). In addition, where we have a fair amount of research attempting to define and describe online schooling and its potential, we have little describing the best practices therein (Linton, 2016). This is to say there is still an existing gap in the research concerning online schooling with elementary students' and the pandemic was in effect the largest social design experiment we have taken as not only as a country but as a global society.

Pandemic Learning

Despite the extensive history of distance learning and online schooling, and paralleling traditional in-person forms of learning, success in online schooling has never been guaranteed. There is no denying that the transition itself to online schooling in the midst of an ongoing pandemic has been stressful for educators and caregivers (Mheidly, Fares, & Fares, 2020). In an interview, K-12 online schooling expert Dr. Michael Barbour shared that while many parents had a rocky experience with online schooling in the pandemic, they most often experienced a version that was implemented with very little planning which "tainted it for them" (Giles, 2021, pp. 25). This understanding of online schooling in the pandemic as representative of all possibilities of online schooling has been echoed in this dissertation as well

Following research trends, a lot of what has emerged over the course of the pandemic thus far has been focused on higher education with limited research on K-12 environments. Still, research on K-12 online schooling in the pandemic is emerging. Cai and Wang (2020) created a six-step feedback framework for autonomous learning with guided instruction in online schooling for middle schoolers. Elementary educators who excelled in the pandemic credited their success with online instruction to three key principles: (a) organization (b) engagement, and (c) interactivity (Liao, et al., 2021). Others have suggested that gamification could make online schooling sustainable for elementary and middle school students by positively affecting students' motivation, self-efficacy, self-determination, career motivation, grade motivation, and understanding (Park & Kim, 2021). Still others have stressed the importance of training teachers on how to evaluate online instructional materials for classroom use (Rice & Ortiz, 2021). It should not be surprising to anyone who has worked in a classroom as an educator that the more interactive, engaging, and organized your day and materials are and the more you have been

trained to use them the better your instruction generally goes. However, these areas were often missed in immediacy of the emergency transition to online schooling.

Overview of Chapters

Each of the chapters here explores a different thread and line of questioning which emerged in my first round of pilot coding. These initial wonderings from my Analytic Memoing in this preliminary sensemaking formed my three research questions which were then explored as three separate articles as detailed in Table 2. Chapter Two dives into educator and caregiver.

Table 2: Summary of the Three Article Chapters

	Chapter 2: Finding the Lost Learning of Covid-19: A critical discourse analysis conceptualizing "learning loss" online during the pandemic	**Chapter 3**: A Bootstraps Theory of Equity (and Why We Need to Change It)	**Chapter 4**: Equity Focused Online chooling: A Conceptual Framework for Implementing Online Schooling in Culturally Relevant Ways
Research Questions	In what ways do elementary educators and caregivers invoke discourses of "learning loss" with emergency online schooling during the coronavirus-19 pandemic? • To the extent that "learning loss" is perceived as a real phenomenon, what is it attributed to? • In what ways, if any, do these attributes reflect deficit thinking? • What are the implications of accepting "learning loss" as inevitable?	How did elementary educators conceptualize responsibility for education during emergency online schooling during the coronavirus-19 pandemic? • What do these discursive understandings of responsibility reveal about social understandings of responsibility for an equitable society? • What are the implications of institutionalizing these discourses?	In what ways has online schooling been (in)accessible to educators and caregivers in the transition to online learning in the pandemic?
Theoretical Framework	• Learning Loss (Borman & Boulay, 2004; Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Sandberg Patton & Reschly, 2013) • Deficit Language (Ladson-Billings, 2006; 2007)	• Pygmalion Effects / Teacher Expectations (Ehlers & Schwager, 2020; Rosenthal & Jacobson, 1968a; Rosenthal & Jacobson, 1968b) • Language & Perception (Athanasopoulos,	• Online Schooling (Cavanaugh, Barbour, & Clark, 2009) • Critical Educational Technology (Apple, 1987; Cuban, 1986; Ladson-Billings, 2021a; Lai & Widmar, 2021) • Culturally & Linguistically Relevant, Responsive, and Sustaining Pedagogy (Castango

		Wiggett, Dering, Kuipers, & Thierry, 2009; Lupyan, Rahman, Boroditsky, & Clark, 2020) • Teacher Discourse (Boden, Zependa, & Nokes-Malach, 2020; Roy & Roxas, 2011; Shapiro & MacDonald, 2017)	& Brayboy, 2008; Gay, 2010; Gonzalez, Moll, & Amanti, 2005; Ladson-Billings, 2014; 1995a; 1995b; 2021b)
Methodological Approaches	**Grounded Theory** (Charmaz 2000; 2006) **Critical Discourse Analysis** (Wodak & Meyer, 2009; van Dijk, 1993)	**Grounded Theory** (Charmaz 2000; 2006) **Positioning Theory** (Davies & Harre, 1990; Harre & Moghaddam, 2003; Van Langenhove & Harre, 1999)	**Grounded Theory** (Charmaz 2000; 2006) **Situational Analysis** (Clarke, 2003; Clarke, Friese, & Washburn, 2018)
Data Sources	• Educator Surveys • Caregiver Surveys • Educator Interviews • Caregiver Interviews	• Educator Interviews • Educator Surveys	• Educator Surveys • Caregiver Surveys • Educator Interviews • Caregiver Interviews
Analysis Methods	• Two Round Coding Analytical Memoing (Charmaz, 2000) *Round One* o In-Vivo Coding (Glaser & Strauss , 1967) o Line by Line Coding (Charmaz, 2006) *Round Two* o Axial Coding (Corbin & Strauss, 2008) • Critical Discourse Analysis (Willig, 2014; Wodak & Meyer, 2009; van Dijk, 1993)	• Conversation Analysis (Sacks, Schegloff, & Jefferson, 1974). • Critical Discourse Analysis (Willig, 2014; Wodak & Meyer, 2009; van Dijk, 1993)	• Two Round, Simultaneous Coding Process (Miles, Huberman, & Saldana, 2014) *Round One* o In-Vivo Coding (Charmaz, 2006; Glaser & Strauss , 1967) o Line by Line Coding (Charmaz, 2006) *Round Two* o Axial Coding (Corbin & Strauss, 2008; Saladana, 2016) • Data Visualizations o Situational Maps (Clarke, Friese, & Washburn, 2018)
Major Findings or Implications	"Learning loss" is perceived as inevitable with online schooling with younger students explicitly because of their perceived inability to use educational technologies and a belief that technology is developmentally inappropriate for young learners.	Educators viewed responsibility for success in online schooling along three main storylines: Equity as • Technology • Parental Responsibility • Personal Responsibility	Framework for Equitable Online Schooling: Mechanical: • Infrastructure • Devices • Software (LMS, content specific, creative) • Training

	We must resist these narratives and shift towards an asset-based approach as quantum literacy becomes exponentially more important.	These narratives shift the responsibility for equity away from schools and educators and place the burden on already systemically marginalized groups regardless of whether it stems from a place of compassion or deficit. The overwhelming lack of support and pressure that educators were voicing in the pandemic paints a troubling future for the profession unless action is taken.	Conscious: • Relevance • Agency • Differentiation • Socioemotional

discourses of "learning loss" to resists this narrative as a form of deficit bias, oftentimes hidden in the best of intentions and understanding, as digital citizenship and technoliteracy become increasingly important in society. This article asks what would education look like in a developmentally appropriate, asset-based approach to teaching future digital citizens? Chapter Three demonstrates how elementary educators conceptualize responsibility for education during emergency online schooling in ways that often position themselves as powerless and shifts this responsibility to the technology itself, caregivers, and/or the students themselves. This article asks, what might empowered teacher leaders do with a 'hard reset' to education which allowed them to create and implement culturally and linguistically relevant, responsive, sustaining, and liberating pedagogies tailored to their own classrooms and schools? Chapter Four continues this imaging to wonder what might an equity-focused online schooling structure look like, using the data from the lived experiences of the adults on the frontlines, educators and caregivers, of the emergency transition to online learning? An equitable base, in this case, means an equal footing for all students to ensure they have the most basic tools to reach success in a school whose teachers value, implement, and embody culturally and linguistically relevant, responsive,

sustaining, and liberating. In this article I suggest that educators, caregivers, and students must be given a balance of the *Mechanical* (infrastructure, devices, software, training) and the *Conscious* (relevance, agency, differentiation, socioemotional). By using this framework as a basis for implementation of a culturally relevant online schooling system all stakeholders ideally would have an equitable foundation from which to develop academic achievement as described by Ladson-Billings (1995a; 1995b; 2006) in the form of student learning, cultural competence, and critical sociopolitical consciousness .

Contributions to the Field

Where prior to the coronavirus-19 pandemic research into online schooling spoke of brave new frontiers and new possibilities towards a more socially just and inclusive future, after an emergency lockdown and mass transition to online schooling research, much like our global spirits, took a negative turn. Where previous research spoke of hope, it offered little in the way of best practices or guidance for educators and families faced with its practical implementation. Throughout this dissertation I attempt to look at what happened and what could be looking at the discursive practices and lived realities of those on the frontlines of the emergency transition to online schooling to serve as a guide to what worked and what did not so that we may use our collective growth from the experience to guide future opportunities. While I in no ways argue that online schooling could, nor should, ever replace traditional schooling the fact that some students, caregivers, and educators thrived may serve as guide for those who may benefit and in fact be better served by online schooling. Educators and caregivers developed new approaches to schooling and engineered new identities and understandings for what schooling is and could be. While the emergency online schooling was far from perfect, it improved, and traditional schooling has also further contributed to systemic inequalities, often institutionalizing racism and

classism (Ladson-Billings, 2021a), but the pandemic offered an opportunity to rethink schooling entirely.

This dissertation attempts to build upon the work of Gloria Ladson-Billings (1994; 1995a; 1995b; 1998; 2006; 2007; 2014; 2021a; 2021b) and her concept of culturally relevant, responsive, and sustaining pedagogies. In her earliest book, Ladson-Billings (1994) defined culturally relevant pedagogy as one that "empowers students intellectually, socially, emotionally, and politically using cultural referents to impart knowledge, skills, and attitudes. (p. 16-17). As Ladson-Billings (1995a, 1995b) later clarified, a culturally relevant pedagogy encompasses three components: academic achievement, cultural competence, and critical sociopolitical consciousness. It is important to note that after academic achievement had been correlated to student outcomes on standardized tests, Ladson -Billings (2006) clarified academic achievement as "student learning" or the ability to demonstrate individual growth through interactions with a skilled educator, and not as coordinated to standardized tests (p.34). Further, Ladson-Billings (2014) "re-mix" of culturally relevant pedagogy highlights the necessity of focusing not only on racial and ethnic groups but global identities and evolving cultures. This is all to say that a culturally responsive classroom, as accepted by this dissertation, is a path towards a more equitable and socially just future for all. As Ladson-Billings (2021a) highlights the pandemic presented us with a possibility to hit a "hard reset" and completely rethink schooling, as she states, "if we consider what normal has been for Black children, it is easy to see why 'getting back to normal' does not seem like a good idea" (p. 69). It is my hope that this dissertation might serve as a first, incredibly small, step towards that goal and consider how online schooling might move forwarddiscourses of "learning loss" to resists this narrative as a form of deficit bias, oftentimes hidden in the best of intentions and understanding, as digital citizenship and

technoliteracy become increasingly important in society. This article asks what would education look like in a developmentally appropriate, asset-based approach to teaching future digital citizens? Chapter Three demonstrates how elementary educators conceptualize responsibility for education during emergency online schooling in ways that often position themselves as powerless and shifts this responsibility to the technology itself, caregivers, and/or the students themselves. This article asks, what might empowered teacher leaders do with a 'hard reset' to education which allowed them to create and implement culturally and linguistically relevant, responsive, sustaining, and liberating pedagogies tailored to their own classrooms and schools? Chapter Four continues this imaging to wonder what might an equity-focused online schooling structure look like, using the data from the lived experiences of the adults on the frontlines, educators and caregivers, of the emergency transition to online learning? An equitable base, in this case, means an equal footing for all students to ensure they have the most basic tools to reach success in a school whose teachers value, implement, and embody culturally and linguistically relevant, responsive, sustaining, and liberating. In this article I suggest that educators, caregivers, and students must be given a balance of the *Mechanical* (infrastructure, devices, software, training) and the *Conscious* (relevance, agency, differentiation, socioemotional). By using this framework as a basis for implementation of a culturally relevant online schooling system all stakeholders ideally would have an equitable foundation from which to develop academic achievement in the form of student learning, cultural competence, and critical sociopolitical consciousness yet another tool in implementing a culturally responsive schooling system to serve those students who may thrive in an online environment.

Chapter 2: Finding the Lost Learning of Covid-19:

A critical discourse analysis conceptualizing "learning loss" online during the pandemic

With the ongoing, unpredictable nature of the Covid-19 pandemic education systems around the world have been forced reconsider the very nature of their work and redefine learning outside of the buildings and mediums in which it traditionally occurs. Recently, "learning loss" has emerged as a prominent discourse surrounding the transition to online schooling, particularly in the early childhood and elementary levels. "Learning loss" has commonly been used in academic literature to describe declines in students' achievement as a quantitative measure of their knowledge and skills as determined most often by standardized tests, but which may include other school-based assessments (Pier, et al., 2021). As the idea of "learning loss" has moved into popular discourse, these interdiscursive understandings of "learning loss" have become an accepted part of our cultural hegemony. National think tanks such as McKinsey & Company warn of dire economic consequences for this lost learning, estimating $128 to $188 billion lost per year as these K-12 pandemic students enter the workforce (Dorn, Hancock, Sarakatsannis, & Viruleg, 2020). News outlets such as The Atlantic warned about how students "had fallen well behind pre-pandemic patterns would have predicted" (Kane, 2022, p. 5). The New York Times referred to remote learning during the pandemic as a "generational loss" disproportionately affecting traditionally marginalized and oppressed communities (Leonhart, 2022). International children's charity group, Save the Children, began an entire campaign around the effects of "learning loss" allowing individuals to donate and even sponsor an American child affected by the transition (Save the Children Federation, Inc., 2022). A quick search of the phase "learning loss" on the popular online forum Reddit returns thousands of heated debates from both sides as individuals across the global debate, express concern, and seek

to better understand online schooling during the pandemic through the discourse of learning loss (Reddit, 2022). Similarly, a search for “learning loss” on social media behemoth Facebook reveals similar thousands of results offering debate from caregivers, students, and educators, a variety of high and low quality news articles, and advertised solutions to be bought from corporations promising to help catch kids up (Meta, 2022).

However, discourses that base learning as being lost, missing, or regressive are framing our understandings of online learning, beyond simply the pandemic, in ways which may hinder our ability to provide high quality education and support all students in the future. Zhao (2021) goes as far as to call “learning loss” a trap for focusing solely on math and reading at the expense of every other subject and posits may even damage students’ curiosity. These notions limit our understandings of what learning is and what it can be and place responsibility for these losses on an already overburdened system. How are we defining learning when it could be lost? What other things did children, caregivers, and educators learn during the pandemic, and do we value these other literacies as a society? This article examines how educators and caregivers’ discursive understandings of online learning at the elementary level frame online schooling and its students though deficit language. While much of this article investigates deficit language (Ladson-Billings, 1995), it is equally important to note that sometimes framing things in terms of compassion or empathy for what was undoubtedly an impossible situation, ultimately led to the same limiting consequences as those with explicit deficit biases. As a former elementary educator, I recognize how it can feel hopeless in a system that sometimes seems to work entirely against you and your students’ best interests and the overwhelming social expectation to carry the burden of every other outside social ill. However, educational systems can not hope to move

forward without at least first recognizing the unintended consequences and how framing learning as lost in the pandemic limits our what learning is.

As Gee (2015) highlights language is the building block of society by where we engage in little d discourses as actions in service to a larger big D discourse, those more timeless social groupings that permeate beyond individuals. This article then dives into the little d discourses to better understand how these big Discourses and their implications for our social world. To investigate, I began with one main guiding question, as is the inductive nature of both grounded theory and critical discourse analysis, which snowballed into three subsequent questions which will be explored in this article:

1. In what ways do elementary educators and caregivers invoke discourses of "learning loss" with emergency online schooling during the coronavirus-19 pandemic?
    a. To the extent that "learning loss" is perceived as a real phenomenon, what is it attributed to?
    b. In what ways, if any, do these attributes reflect deficit thinking?
    c. What are the implications of accepting "learning loss" as inevitable?

Theoretical Framework

Throughout this article I utilize theoretical frameworks of learning loss (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Sandberg Patton & Reschly, 2013) and deficit language (Ladson-Billings, 2006; 2007) to make sense of how educators and caregivers invoked discourses of "learning loss" during emergency online schooling during the coronavirus-19 pandemic. Further, to better understand what these discourses attribute this "learning loss" to I advance the concept of quantum literacy, a merging and expansion of digital literacy (Gilster, 1997) and technoliteracy (Kimber, Pillay, & Richards, 2002) as well as developmentally

appropriate practice. In the next four subsections I will give a brief overview of these frameworks and how they connect to the larger work.

“Learning Loss”

While “learning loss” seemed to lose a specific definition or model in educator and caregiver discourses it overwhelmingly spoke to the idea that students were somehow behind in their grade level curricular content with particular focus paid to mathematics and literacy perhaps because they are so heavily stressed in elementary education. Educators most openly spoke about “learning loss” in terms of expected results on upcoming standardized assessments and students’ inability to meet grade level expectations when entering the in-person classroom again. Academically, “learning loss” is predicated on a model of standardized learning assessed in standardized ways (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Sandberg Patton & Reschly, 2013) which has been correlated with such things as the national economy (Hanushek & Woessmann, 2020) and the achievement debt (Dorn, Hancock, Sarakatsannis, & Viruleg, 2020). The term “learning loss” originated in studies around the effects of the American school system tradition of summer breaks, sometimes also referred to as the “summer slide” (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996). The concept has been used to advocate for alternative school schedules, usually year-round models such as those seen in European countries, since it argued that the longer children were away from formal learning settings the more measured content knowledge they would forget. This article then accepts this broader, popular definition of “learning loss” for discussion in this article as seen throughout the caregiver and educator data, popular media, and academic understandings of “learning loss” as a function of academically measured, expected grade level content, and standardized assessments.

“Learning Loss” in the Pandemic.

“Learning loss” has also emerged as a prominent discourse in the literature around online schooling during the coronavirus-19 pandemic. Donnelly and Patrinos (2021) highlight that “learning loss” is being experienced across a range of subjects, regions, and ages but assert that younger students are particularly vulnerable. Further, these losses have been shown to have a direct relationship to the achievement debt, noting that historically marginalized and underserved groups would be yet again disproportionately negatively impacted by the “learning loss” caused by the Covid-19 pandemic online and remote schooling models (Engzell, Frey, & Verhagen, 2021; Harwin & Yukiko, 2020). Others have estimated the economic impact of Covid-19 related “learning loss” to each individual child losing "$61,000 to $82,000 in lifetime earnings" and by 2040 "a GDP loss of $173 billion to $271 billion a year" (Dorn, Hancock, Sarakatsannis, & Viruleg, 2020, p. 7-8). This is to say there is no shortage of concern nor doom and gloom forewarnings about the negative impacts society is predicted to experience in response to the transition to online schooling during the pandemic.

Deficit Language

At its core, the issue with these discursive understandings of online learning as frameworks of loss is that it starts from a deficit bias as expressed in discourse as deficit language. Deficit language "...places the onus of underachievement on the students, their families, and in some cases individual teachers. It constructs students as defective and lacking…" (Ladson-Billings, 2007, p. 321). Deficit language in the data suggests that the inevitability of “learning loss” is logical and affirmed socially. Beyond simply reinforcing oppressive power dynamics, deficit language is often used not only to explain but to assign blame, whether internally or externally (Ladson-Billings, 2007).

Quantum Literacy

I advance the concept of quantum literacy rather than digital literacy (Gilster, 1997) or technoliteracy (Kimber, Pillay, & Richards, 2002) because the discourses presented in the data included both concerns around digital literacy and technoliteracy but also mechanical understandings and fine-motor manipulations and the connections intertwining these technology-based new literacies. In his work Gilster (1997) coined the phrase digital literacy to refer to as the ability to thrive in newly online, interactive environments as opposed to the passive media of the past. Whereas technoliteracy embodies the confluence of technology and literacy practices in practical classroom implementation which leverages the integration of technology skills, computer based cognitive tools, and design and literacy practices to deepen student learning (Kimber, Pillay, & Richards, 2002). The ideas presented in this article demonstrate that not only were children too digitally illiterate to appropriately navigate the technology they also did not understand basic hardware mechanics, nor did they have the fine-motor control, understanding, nor training to manipulate the hardware, concepts from digital literacy and technoliteracy separately into one understanding of what it means to be literate in a technological, online society.

Developmentally Appropriate Practice

The National Association for the Education of Young Children (NAEYC) is considered a leader in early childhood education, establishing standards, pedagogy, and curriculums being implemented in PreK and elementary classrooms across the United States. NAEYC (2020) defines ‘developmentally appropriate practice’ as methods that promote each child’s optimal development and learning through a strengths-based, play-based approach to joyful, engaged learning” (p. 5). These developmental milestones on which the practice is based stems from

sociocultural theories of learning. Developmentally appropriate practice is a pedagogical framework which draws from constructionist theory which advances that learning is constructed through a social forum (Berger & Luckman, 1966) with hand-on experiences rather than a transmission of knowledge from knowledge keeper to learner (Papert & Harel, 1991). One of the most notable concepts proliferated in developmentally appropriate practice is the idea of a zone of proximal development wherein adults guide children initially and later let them work independently to demonstrate the newly acquired skills (Vygotsky, 1978).

Methodology

At its core grounded theory invites researchers to develop theory by diving into their data in an iterative dance, generating substantive codes while stressing the importance continuous comparative analysis and theoretical sampling (Charmaz, 2000; Corbin & Strauss, 2008; Glaser & Strauss , 1967). In this, grounded theory is an inductive process for generating theory as "theory based on data can usually not be completely refuted by more data or replaced by another theory...it is destined to last despite its inevitable modification and reformulation" (Glaser & Strauss , 1967, p. 4). Traditional grounded theorists dream of being able to research a question unhindered by previous bias and I have been able to approach this study with an openness to data that Glaser himself may have been jealous of, gathering data with neither preconceived questions nor frameworks upon it. The coronavirus pandemic was an unprecedented event in an unprecedented time, and the implementation of online schooling as well as my own research into the matter were occurring simultaneously. No one had ever tried to implement online schooling as the de facto mode of education before, and I will be the first to point out that research and best practices were scant at best, in a sense we were all learning together. Due to this harried implementation and research transition, I was able to allow "categories [to] emerge upon

comparison and properties emerge upon more comparison" (Glaser, 1992, p. 43) and it was through this back-and-forth process in which "learning loss" emerged as a key discourse.

It is also important to note that throughout this dissertation I borrow from each of the three strands of grounded theory, perhaps much to their dismay, though I ultimately stake my claim in a postmodernist, constructionist stance closer to that of Charmaz (2000; 2006). Where the strands of grounded theory advanced by Glaser (1992) and Strauss and Corbin (2008) advance a positivistic, objectivist view of grounded theory which views Truth as immutable and discoverable, I have never held such an opinion as a researcher, but their methods towards analysis and validity were valuable tools throughout this process. In contrast, Charmaz (2000) suggests grounded theory complements a constructivist approach, closer to my own as a postmodernist, constructionist researcher. One where grounded theory can embrace an interpretive approach which fosters the narrative experience of participants and attempts to tell the story of the phenomenon rather than separate the datum from the humans involved. As such, I borrow most heavily from Charmaz (2000, 2006) in her approach to narrative, data analysis, and openness to outside theory informing the work.

Critical Discourse Analysis

In this dissertation, grounded theory was the base for the investigation of the overarching research question which generated further questions, however, once it was clear that "learning loss" was a key discourse, one which lived in the intersections of power and privilege, critical discourse analysis was used to better analyze the power systems at play. Critical discourse analysis is an interdisciplinary approach which complements the grounded theory origins of this paper rather than replaces it. Critical discourse analysis presents that language is a power resource (Willig, 2014) which mediates the relationship between society and cognition (Wodak

& Meyer, 2009). It is often characterized as problem-oriented, features an analysis of semiotic data, affirms that power relations are discursive and situated in their time and place, that language is never neutral, and has an interdisciplinary lens (Wodak & Meyer, 2009; van Dijk, 1993). In this article, critical discourse analysis is used as a complement to grounded theory to dive deeper into analysis around discourses around "learning loss" during emergency online schooling during the coronavirus-19 pandemic.

Methods of Data Collection and Analysis

While this next section might be read as a sequential process of collection and analysis the reality of the process was much grittier, going back and forth exploring concepts in analysis which were then expanded and evolved across the collection process. To complement the reality of this work the data collection and analysis sections are similarly interwoven.

Survey

To begin to answer my overarching research question "how is the transition to online learning impacting educators and families," I started my data collection process with an online survey at the end of the school year during the first quarantine between May to June of 2020. The survey varied for educators (Appendix A) and caregivers (Appendix B) though at the end each participant was given the opportunity to volunteer for a follow-up interview. Each survey contained mixed methods questions designed to collect information from individuals for both quantitative and qualitative analysis (Check & Schutt, 2012) and to explore more widely the human experience (Singleton & Straits, 2009) as it relates to caregivers and educators online during the Pandemic. Mixed-methods survey questions include both quantitative questions such as question 47 on the educator survey (APPENDIX A) "approximately how many hours a week are you working?" which offered a multiple-choice numerical range response as well as

qualitative questions such as question forty from the caregiver survey “has the transition to online learning impacted your productivity (in work, other responsibilities, or personal commitments)? If so, how?” (APPENDIX B).

A variety of means were implemented to ensure the validity of the survey. In order to reduce sampling error in the survey, a clearly identified population of interest (caregivers and educators) was targeted through diverse recruitment strategies including: social media advertising (Figure 1); professional and caregiver network email; approved social media group

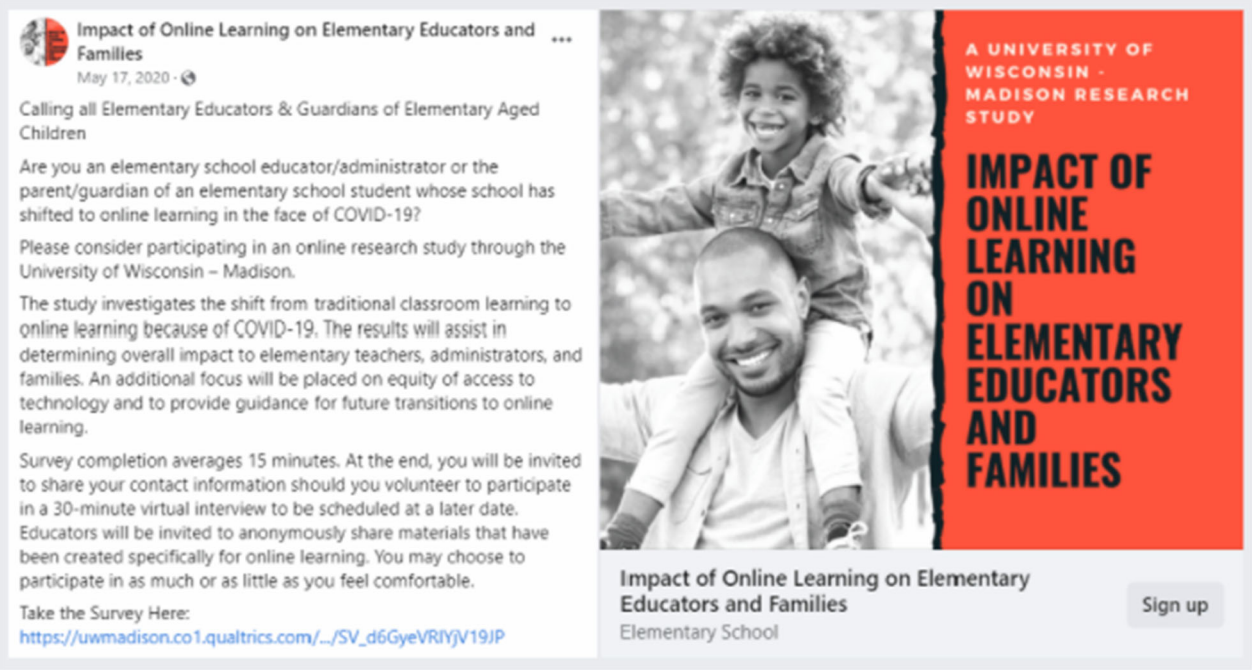

Figure 1: Sample Facebook advertisement which ran during the survey recruitment distribution: where in a large random sample was generated (Check & Schutt, 2012; Singleton & Straits, 2009). Further, measurement error was accounted for using tested, industry professional survey software Qualtrics which alerted for issues around reliability and fraud as well as a series of pretest questions with user-friendly text and visual characteristics (Dillman, Smyth, & Christian, 2014) all of which was also intended to prevent nonresponse error (Ponto, 2015).

In total, 423 unique responses were recorded, with 138 of those marked to completion. Of these, 48% of the respondents identified as educators and 52% as caregivers however, it may be interesting to note that many of the educators held congruent identities of being caregivers to their own children during the pandemic. As demonstrated by Table 1, respondents from each

	Demographics	**Survey Respondents**
School Type	Public School	120
	Private School Secular	4
	Private School Religious	6
Geographic Region	Midwest USA	31
	East Coast USA	2
	Southern USA	7
	West Coast USA	4
	International	2
School Size	Large	11
	Medium / “Average”	6
	Small	15
Race & Ethnicity	“Diverse” / “Multiracial” / Multicultural	37
	Black / African American	5
	Latinx	6
	Predominantly White / “few students of color” / “lacks diversity”	10
Socioeconomic Status	Lower socioeconomic status	40
	Middle-class socioeconomic status	7
	Upper-class socioeconomic status	3

Table 1: Survey respondent offered demographic information.

category represented a diverse spectrum of private, public, and secular schools of all sizes in urban, suburban, and rural communities across all geographic regions of the continental United States. Where many respondents were willing to share the nature of their school’s philosophy whether public or private was much more widely shared than other identifying demographic information. In the future I would elect for more quantitative, specific questions about demographic information rather than leave it up for discussion in qualitative, open-ended

questions as these numbers may give us a general view of the variety of survey respondents, unfortunately, they do not capture the entire picture as many respondents focused on metrics outside of demographics such as level of support or community they felt at the school.

Interviews

To further explore concepts and categories that were emerging semi-structured interviews (Rubin & Rubin, 1995) were conducted with six educators and five caregivers between September and October of 2020. These interviews were individualized to each participant (Appendix C) and reflective of both their individual survey responses as well as the categories and content evolving in the data analysis process. This approach further complements survey research design viewing interviews as the next stage of survey research (Singleton & Straits, 2009). Further, as part of my personal interviewing style I incorporate a life-story approach (Chilisa, 2012) which encourages the deviation of questions during to interview to focus on the importance of relationships and narratives which arise during the interview, particularly those which have impacted them the most during online learning. Table 1 summarizes each interview

Interview Summaries		
Educators		
Name	**Role**	**Summary**
Martha	K-5 Music Teacher	Midwestern, urban community school with large Latinx and Black communities. Concerns about deprofessionalization. Feels less and less supported socially as pandemic drags on.
Zelda	1st Grade Teacher	East Coast, urban school with 60% free and reduced lunch and 35% "minority students". Found her students "desperately" needed to be back in person despite how evolving distancing and cleaning protocols are deeply impacting her practice.
Thelma	Special Educator	West Coast, rural school with "most restrictive placement" before a residential facility. Strong, caring community with a lot of trauma and need. Concurrently dealing with devastating wildfires.
Kim	2nd Grade Teacher	Rural midwestern school. Back in person and feeling a lot of pressure to "catch up" despite wanting to review. Was only allowed to do asynchronous video instruction by district while remote.

Jamie	1st Grade Teacher	Suburban heartland outside of a major metropolis. Jamie is a strong teacher leader and activist who is deeply grateful for previous planning and technology use which made the transition to online learning easier.
Edith	Kindergarten Teacher	Low-income 4K-5th grade community school with a predominantly Black student population. Felt inspired to use the pandemic as a time to reimagine schooling as culturally meaningful and project based but quickly felt forced into a canned curriculum in order to meet top down requirements.
Caregivers		
Name	**Role**	**Summary**
Cassie	Single Parent to a 3rd and 10th grader	"Extremely rural" in Canada with "one internet line for the whole community." Both children attended a French immersion school while Cassie spoke no French. Struggled with the increased financial burdens due to the pandemic, especially the high cost for limited internet service and accompanying hardware.
Claire	Parent of two with a child in 4K and 1st grade.	Due to her experience as a professor who teaches online and a librarian Claire felt exceedingly well prepared to handle the transition to online learning. As with other women interviewed, she struggled to balance her own work and supporting her children's learning with little time left over.
Katie	Single mother to a child in 4K.	Public children's librarian in the northern Midwest and former elementary school educator who already felt comfortable with the technology and content her daughter was engaging with over the pandemic. Katie also struggled to balance her own requirements for work with her need to help support her daughters learning online.
Roxanne	Single mother to a 4th grader	Psychotherapist in a midwestern suburban community. Roxanne recognized her privileges in being able to support her daughter and continue her work and provide her family over the pandemic but nevertheless was concerned about the added fiscal stress of having them both home and her working less. She also was concerned about the quality of education online.
Susan	Parent to a kindergartener	Librarian and parent of a kindergarten student in a middle-class community in the deep south. She struggled with community decisions which she felt were unsafe and inappropriate which ultimately led to her homeschooling her child.

Table 2: Interview summaries

(pseudonyms are used).

Analytic Memoing

Analytic Memoing is a process used throughout both data collection and data analysis as a place where a constructivist grounded theorist may look for more implicit assumptions and meanings (Charmaz, 2000). These memos included emerging concepts and properties,

connections to literature, developing theories, questions, connections, and other general notes. Many of these analytic memos led to concepts and later categories that were identified and expanded upon. As illustrated in Figure 2, early memos included areas for emergent themes as needed, my own analytic questions and connections and a summary of the concept or evolving category.

Figure 2: Example early analytic memos containing emergent themes/concepts/categories

The Coding Process

After a pilot round coding was completed in a traditional grounded theory style in two rounds. In the first round of coding, sometimes referred to as open coding, I used Charmaz's (2000) technique of "line by line" coding to pull "sensitizing concepts" and "action codes" from the data (p.515). In addition, I explored the data using in-vivo coding looking for emotional language or specific jargon or phrases that were being repeated by participants (Glaser & Strauss , 1967). The repetition of these first code rounds informed my continued questioning and analysis.

In the second round of coding axial coding was used to help reorganize the concepts into dominant themes and conceptual categories (Saladana, 2016). Similarly, Corbin and Strauss

(2000) regard axial coding as "the act of relating concepts/categories to each other" (p.198). It is important to note that Charmaz (2000) warns us that axial coding has the potential to lead to awkward scientific terms, unnecessary jargon, and clumsy categories if we are not careful. To combat this, I have spent the last school year reviewing the data at various intervals as I developed new ideas around the data. Further, I made a conscious effort throughout to use language and define concepts in ways that are accessible to practitioners. Table 2 highlights the

Initial Coding Categories (Round 2)	**Initial Concept Codes (Round 1)**
Perceptions of Online Learning	"learning loss" • ""learning loss"" • Learning as lost • Missed education • Backward Movement / Regression Achievement Gap Developmental Appropriateness • Screentime • Kinesthetic • Technoliteracy Alternative Suggestions Technology Access
Perceptions of Students	Technoliteracy Motivation Engagement Achievement Gap Autonomy / Agency • Adult Assistance Developmental Appropriateness • Readiness • Kinesthetic Needs • Screentime
Perceptions of Technology	Access Technology as Equity Developmental Appropriateness • Screentime • Kinesthetic Needs • Technoliteracy ○ Digital Literacy • Independence / Autonomy

Table 2: Initial codes organized into conceptual categories

results relevant to this paper for both the relevant initial coding categories as well as their initial descriptive code (pseudonyms are used).

Critical Discourse Analysis

Van Dijk (1993) mused that power is institutionalized with a predetermined hierarchy and schools, by their very nature in America, are nothing less than hierarchical institutions wherein power trickles down through adults to children. When it became apparent that these same systems were present in the dominant and intertwining code schemes, critical discourse analysis was introduced to better understand how these dynamics may impact online learning. Critical discourse analysis is an approach to understanding discursive means of reproduction or resistance to underlying ideologies of dominance or inequity by uncovering implicit or concealed power relations and bringing about change through critical understanding (van Dijk, 1993). Further, it is a transdisciplinary (Lazar, 2007), inductive process which seeks meaning making through hermeneutic or interpretive procedures (Wodak & Meyer, 2009) which makes it a perfect complement to grounded theory research.

In this article, I take a socio-cultural approach to critical discourse analysis which emphasizes the role of language as a power resource (Willig, 2014) which seeks to understand the context and the triad of relationships between discourse, society, and cognition (Wodak & Meyer, 2009). Power dynamics are intentionally designed in traditional American school structures. The idea of teacher as the bearer or power is encoded into our classroom arrangements, curricular designs, and even “crystalized in teachers talk” (Maftoon & Shakouri, 2012, p. 1210). Walsh (2002) went as far as to argue that a truly democratic classroom without a decided power imbalance in favor of the educator is often viewed as dangerously radical.

If language is power, then the language used by educators in a classroom and by parents in a home can, as Fairclough (2001) suggests, create change as well as be used to change behavior. It may be used to subvert power imbalances for in any place where there is a power imbalance resistance evolves. It is by drawing from the poststructuralist, critical linguistics of critical discourse analysis that we may begin to uncover these hidden, encoded power structures and ideological processes that often unconsciously enumerate power and legitimize inequity in classrooms and, in turn, society at large.

Findings

To illustrate the discursive practices underpinning conversations of online schooling during the pandemic and address the first two research questions this section is divided into two subsections. To address the first question, To the extent that "learning loss" is perceived as a real phenomenon, what is it attributed to, I detail the discourse in both the completed survey responses and the subsequent interviews. To answer the second question, in what ways, if any, do these attributes reflect deficit thinking, I dive into educator and caregiver discourse (Gee, Discourse, small-d, Big D, 2015) around the causes of "learning loss", namely that children, particularly young children, are viewed as having less quantum literacy, a merging and expansion of technoliteracy (Kimber, Pillay, & Richards, 2002) and digital literacy (Gilster, 1997), and as such online schooling is perceived to be developmentally inappropriate for young learners.

"Learning Loss"

The sense that learning was "lost" during the pandemic was echoed by educators and caregivers alike. Take for example, one experienced elementary educator who lamented,

> "I am retiring this year and am devastated that this is the way I am finishing my teaching career. I feel so bad for the teachers in the fall as they try to get kids caught up on 2 1/2

> months of curriculum that they have missed. I know the teachers at my school will be stressed, micromanaged, and pressured to get the kids caught up quickly while in reality the loss of about 10 weeks of learning will not be made up in one year. Also, the state testing will not accommodate this loss of schooling and school report cards will reflect that and add even more stress and pressure. In a district that cares more about data than the kids, this will be very negative for all involved" (Educator Survey, June 2020).

As this educator survey respondent illustrates the pressures placed upon elementary educators to meet metrics that limited learning to definitions which could be measured quantitatively in standardized assessments. The educator speaks to the issue of learning loss specifically stating at multiple points that they felt the pressure to "get kids caught up" twice in the first three sentences of the statement. They further express concerns that "the state…", a representation of those with power to easily change the system unlike the educator themselves,"…will not accommodate this *loss* of schooling". While I am the first to empathize with the educator who feels powerless in a system, again framing online schooling as lost based on the metrics they are mandated to measure student achievement by serves only to reinforce the status quo and accept that the standards of assessment are the only assessments with value. While this was only one survey respondent, it serves as an example of the broad, and admittedly overwhelming, systemic expectations which limit learning to assessments place undue burdens on educators and students alike.

This discourse framing "learning loss" as inevitable was not unique to educators. One caregiver survey respondent went as far as to say, ""In my opinion, I think children should repeat their grade next year because academically speaking they will always lag at least for one term" (Caregiver Survey, June 2020). In this statement I am left to wonder what they specifically mean

when they say “academically speaking” because who gets to define what academics count? Do we accept the systems and structures in place which have continuously marginalized and underserved people based on their racial, ethnic, linguistic, socio-economic, and ability groupings? When it is stated that children will “always lag at least for one term” I wonder in what? If we measured their quantum literacies, student growth, multicultural competencies, and sociopolitical consciousness for growth over the coronavirus-19 pandemic would we paint a different picture?

This theme of the inevitability of “learning loss” manifested itself again, perhaps even more directly, during the interviews which took place at the beginning of the next school year. Every single educator interviewed expressed some degree of concern about either the hypothetical loss that might be demonstrated upon return to in-person learning or expressed concern about addressing the “learning loss” they were seeing as they returned to their physical classrooms. What had been predicted was now a major concern for educators who were teaching in-person. Kim a 2nd grade teacher said in her interview,

> The virtual learning we did back in March, April, May, I thought went really well. But now that we've met with students, there's a lot more loss than I had anticipated... academically and social emotional. When we look at our testing scores, students are coming in probably almost a year behind. (Kim Interview, Pos. 4-12).

Regardless of how the respondent felt about online schooling it was expressed in the discourse clearly that “learning loss” was occurring and disproportionately affecting younger learners. This example speaks to the broader theme that was recurrent throughout the data collected from those educators who had returned to their classroom with specific concerns about students not being able to meet expectations on measurable academic achievement based on grade level

standards and standardized testing. While educators could speak to other things students and themselves had become much more capable in, specifically in realms of technology and online schooling, this concern over looming demonstrated "learning loss" in standardized testing and assessments was palpable.

Sources of "Learning Loss"

When respondents to the survey and interviewees discussed issues of "learning loss" there were two discourses that followed: (1) online schooling was perceived to be disproportionally developmentally inappropriate for young children and (2) the younger the child was the less quantum literate they were perceived to be and thus less capable of succeeding in online schooling. It is important to note that when "learning loss" was specifically mentioned in the educator or caregiver discourse in each instance it was followed by one of either of these two concepts of both in every instance "learning loss" was brought up, as if the first big D discourse triggered the little d discourses (Gee, Discourse, small-d, Big D, 2015) as a means of sensemaking by those involved. As Figure 3 illustrates, educators and caregivers alike perceived "learning loss" as inevitable in

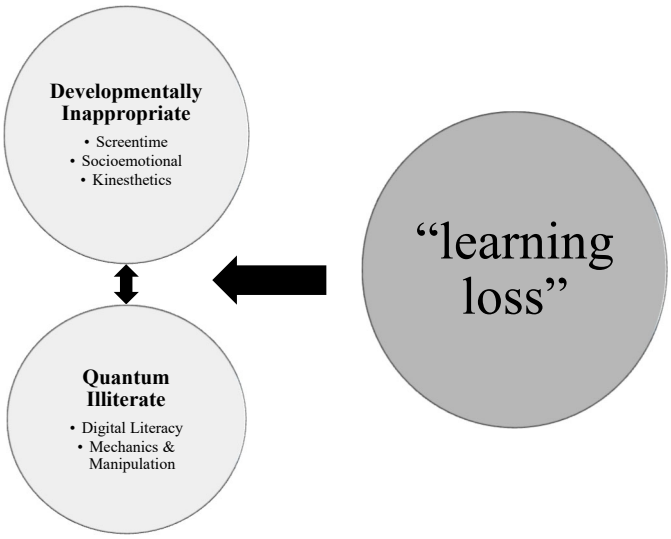

Figure 3: Why "learning loss" was perceived to occur in the pandemic

Emergency online schooling during the pandemic with elementary students explicitly because of their perceived inability to use educational technologies and a belief that technology is developmentally inappropriate for young learners. In the following two subsections I describe how each of these codes presented in the data.

Developmentally Inappropriate Practices

One of the driving discourses attributed to the inevitability of "learning loss" in emergency online schooling for elementary learners was the perception that online schooling, by its very nature, is inappropriate for young children's developmental stage of learning. In the discourse, there was a strong sense that online learning was not "appropriate" for children's learning needs with concerns about screentime and the widespread belief that children's socioemotional and kinesthetic needs could not be met in a virtual space. As Zelda, a first-grade teacher surmised,

> I just don't think online is appropriate for kids. They watch enough TV, they play enough video games. They need to learn how to read. They need the interaction with the teacher. Yes, you can do a Zoom meeting, but the interaction is not there. (Interview pos. 178-180)"

This discourse did not just emerge in the educator surveys and interviews but pervaded caregiver discourse of online learning in the pandemic as well. Mirroring Zelda, Susan, a parent of a first-grade student shared,

> [Choosing to homeschool due to safety concerns] was a really hard decision for us, because we feel really strongly about public schools - especially strong, integrated schools, but it's incredibly developmentally inappropriate. Frankly, I didn't think much of how developmentally appropriate they thought kindergarten was to start with, but they

> weren't really allowed any free play. We could have done our own thing, and actually had time to go outside, or we could have been sitting there for seven, eight hours and we would still have to ride hard on him. (Interview pos. 12 - 28)

These themes continued across the surveys and interviews with parents of younger children feeling the deepest impact and parents of older children expressing empathy for those with children even younger than their own. While these selections from the interviews serve as examples the ideology and discourse behind them were repeated by caregivers and teachers alike. The second-grade teachers were concerned from the first-grade teachers who in turn were concerned for the kindergarten teachers who were by all accounts creating best practices as they went. Similarly, caregivers to older children echoed similar concerns about caregivers with younger children struggling to support online learning with less independent children.

Quantum Literacy

In parallel, discursive understandings of emergency online schooling during the coronavirus-19 pandemic often turned to perceptions of students' ability to engage with technology in efficient let alone meaningful ways. Once again, the younger the child was the more impacted and less quantum literate they were assumed to be. Interestingly, these were different but parallel concerns for caregivers and educators. Caregivers were concerned about not being able to work themselves because of the need to assist their child. As one caregiver survey respondent (June, 2020) shared,

> It has been difficult while trying to work from home. I have to remember to dial in on the Zoom meeting, but I have difficulty connecting sometimes. Since my child is 4, she is not able to log into the Zoom meeting on her own.

Educators' discursive understandings of students' technological illiteracy included a concern that they couldn't get an authentic assessment of children's learning or that learners who could not use the technology independently simply wouldn't attend. Edith, a Kindergarten teacher shared, ""[Seesaw is] a cool app. It's just that for five-year-old's' to navigate it by themselves is like so unrealistic. So, it ends up just being parents sitting next to kids, which then you're like, well, who's learning? How will I use this to evaluate progress?" (Pos. 304, October 2020). This is particularly interesting considering the discourse around children and technology shifted so abruptly in the pandemic as this discourse stands in direct opposition to discourses around digital natives where children born into the internet age are assumed to be technologically savvy from birth (Prensky, 2001). This is not to say that I accept the notion that children today emerge from the womb ready to wield a smartphone, but rather that quantum literacy like any other form of literacy is a skill which needs to be learned and developed over time, taught to children as any other curricular content and classroom expectations are.

Deficit Language

To address the final question, what are the implications of accepting "learning loss" as inevitable in the next I plunge into deficit language and how it presented in educator and caregiver discourses around online learning in the pandemic. When we frame learning as lost, we imply it simply needs to be found and we expect someone to find it. In Ladson-Billings (2007) understanding of deficit language we go beyond explaining our hardships and rather seek to assign blame either externally or internally. When looking at how this deficit language assigns responsibility many caregivers assigned shortcomings in online learning to their children's stage of development such as "a kindergartener can't work independently like an older child" (Caregiver Survey, Q37) or their educators' shortcomings in online education such as "Teachers

have no idea of how cumbersome the technology is… school is trying to promote some mental activities, but they are pretty fake and trite." (Caregiver Survey, Q41). While this is no means to undermine the challenges faced by educators of young learners in online schooling, even though these statements come from places of understanding and compassion the result is that we still frame students at a disadvantage and limit our opportunities by dwelling on what we can't do.

Some caregivers also internalized a sense of responsibility for their child's learning during the pandemic and a sense of inadequacy in their overburdened state. As one caregiver shared when asked about how the transition to online learning has impacted them personally, "I was a special education teacher…I've been a SAHM for 6 years and I can't effectively do school, play with a three-year-old and an infant, keep the kids away from my working husband, maintain a house and feed everyone three meals plus snacks." (Caregiver Survey, Q37). Yet another caregiver described the experience of online learning as

> tears, crying, frustration, and stress. I already felt like a bad parent for letting my son play video games a lot. Now, video games are the only way I have time to myself. I was allowed by my work to work from home, but I had to stop that because it was just so awful trying to work and do home schooling and take care of myself and my older daughter. I screamed and cried about how I couldn't zoom in on a google document to even read what the assignment was… (Caregiver Survey, Q37).

Educators, in turn, were more likely to point to a student's home or family life or children's individual abilities such as or motivation or some combination thereof than a systemic shortcoming. As one educator shared, "… I had students that participated in zero classes/activities the entire duration all while inviting me to Google Hangouts chat to say "hello" 10-15 times daily and typing random strings of text. I tried to explain online etiquette and invited

them repeatedly to join our classes to no avail. In my opinion, @ my grade level, A/B students did well, C students struggled and D/F no way to reach/help them. It was super stressful and discouraging" (Educator Survey, Q9). Other educators respondents used deficit language in describing responsibility of failure to students' families. As one educator stated, "Equity would mean that all parents had the time and training and patience and child-parent ratios to ensure their student continues learning. Our situation was less than ideal in most families, yes." (Educator Survey, Q12). Yet another educator viewed student success in online learning as a measure of a parent love writing, "The biggest obstacle is the difficulty in equity with home/parenting environments. You can supply the devices, etc. but if a parent can't or won't ensure the kids access and perform the posted lessons, how do you address or remedy that? Ideal situation...every parent loving, responsible, invested and participating." (Educator Survey, Q12).

Some educators also pointed to systemic issues preventing them from incorporating what they believed to be best practices into online learning. As the following selection from [Edith] a Kindergarten Educator shared in her interview demonstrates,

[Edith] …and we have, you know, and it's like, it falls by the wayside and this year. And at the end of last year, we had kind of like a big conversation as a staff in smaller groups but talking about what will this year look like. And we kind of came to the consensus that this is an excellent year to try out project-based learning and utilizing all the adults that we're gonna have present every day, like in kids' homes.

[Edith] And so we made this whole, uh, well, and then of course we were watching this talk by Gholdy Muhammad and, you know, I'm sure everybody has seen this talk that was online. And so we were like, "We need to do cultivating genius. Like how do we get he historically responsive framework into our school?" And so we made this incredible plan trying to figure out ways to kind of like incorporate like history and culture and language and everything into our, our work all day.

[Edith] And it felt really promising because this is such a different way of doing school. Like, like we broke the system, let's start over and then of course we're starting up and it feels like it's the same stuff all over again where it's like, well, hey, but here's your literacy block and what's your shared reading and here's your small group time and how are you breaking that into 15 minute chunks.

> [Edith] And so I think that was a really great opportunity that we tried for. And then it was like the minutes came down and the schedule got real. And instead of having more of the holistic approach to education, it got very much siloed again. So I'm hopeful that our team has taken enough of the steps to continue to implement features throughout everything, but it's certainly not the vision that we had. (Edith Interview, Pos. 138-142)

Looking at this selection, as one representation of similar discourses in the data, from a critical discourse perspective allows a better understanding of how ideologies of dominance and their reproduction and resistance is reproduced in educator and caregiver discourse. Edith's discourse demonstrates a clear conflict with the hierarchical nature of her social position as an educator in the school system, with limited power in comparison to someone like a superintendent. Though her and her coworkers had intended to push against oppressive power structures from within the system it is clear in her use of phrases such as "it falls by the wayside" or refers to their attempt as a more "holistic approach" as being "very much siloed again" shows how language can recreate and reinforce deficit thinking. Similarly, while not every other educator and caregiver in the survey and interview data expressed similar phrases of hopelessness in the oppressiveness the vast, bureaucratic, neoliberal education system the sentiment was similarly expressed by enough participants, particularly educators, that the accepted power imbalance which positions schools as immutable can itself be a tool which reproduces oppression and limits innovation.

Interestingly, when discussing online learning the discourse extended beyond the people involved and technology becomes a category of itself which could be held responsible for the shortcomings of online learning as implemented in the coronavirus-19 pandemic. Throughout the surveys and interviews technology, in its broadest sense was viewed as developmentally inappropriate for a variety of underlying causes: that screentime negatively impacts young children, that it hinders kinesthetic learning and movement, that it prevents socio-emotional

development, and those children lack the autonomy and quantum literacy to meaningfully engage online. Yet despite this belief that technology is developmentally inappropriate the National Association for the Education of Young Children (NAEYC), the same organization which brought us developmentally appropriate practice, has resources on incorporating technology in meaningful and appropriate ways (National Association for the Education of Young Children, 2022). Rather than focusing on what children, families, and educators are perceived as unable to do, it is important we shift discursive understandings towards that which we can teach and how we might include quantum literacy in culturally sustaining pedagogies (Paris & Alim, 2014).

Conclusion

Online schooling was implemented as an emergency, and it may have forever tainted our understanding of what online schooling could be, yet despite this harried, often underfunded, under supported, underdeveloped implementation of online schooling improvement occurred and some, perhaps a very small minority, were better served than in traditional, in-person schooling. As educators, academics, caregivers, and community members we must resist deficit narratives which reinforce oppressive systems as too large and powerful to change and deficit narratives around what learning is and can be that ultimately limit potential. I worry about the consequences of labelling an entire generation of students as deficit. Reframing thought processes and discourses around online schooling to those that are asset-based (Apple, Ideology and curriculum, 2004; Ladson-Billings, 1995), support multiple funds of knowledge (Gonzalez, Moll, & Amanti, 2005), and ways of knowing (Tanaka, 2016) becomes exponentially more important quantum literacy, the union of digital literacy (Gilster, 1997) and technoliteracy (Kimber, Pillay, & Richards, 2002) in our increasingly technological society. Instead of focusing

on narratives of what cannot be done because of a students perceived quantum illiteracy and the inevitability of "learning loss" we need to rethink what we consider and measure as learning beyond that which can be quantified on a standardized assessment. I am left wondering as a researcher what would happen if we tested students on their gains in quantum literacies if we would see a different story of learning told over the course of the emergency transition to online schooling. What if we measured students' growth in family and community relationships? When we define learning by only that which is easily mass tested for, we limit our understandings of the potential of each student and in turn our actions limit their opportunities.

For all that Ladson-Billings (1994; 1995; 1998; 2007; 2021a; 2021b) has dedicated her life to culturally relevant pedagogies its measures of success are not those which can easily be assessed by standardized testing. If we had measured for academic achievement in the form of individual student growth, multicultural competencies, and critical sociopolitical consciousness (Ladson-Billings, 2007) amid multiple pandemics (Ladson-Billings, 2021) would we have found the lost learning of the coronavirus-19 pandemic?

Chapter 3: A Bootstraps Theory of Equity (And Why We Need to Change It)

When the coronavirus swept across the globe in 2020 educators were asked to rethink and fundamentally change how they viewed and implemented education, best practice, and pedagogy in entirely new formats online. Teachers around the world were asked to take charge of their own professional development and recreate curriculums with new technology that challenged preconceived concepts of what school should look like, usually with days to prepare. Yet in this process teachers have learned a variety of new skills and techniques (Cooker, Cotton, & Toft, 2021). Those working with our youngest learning in the early childhood and elementary years were especially burdened with trying to adapt to online learning with a population which was perceived as developmentally incapable of succeeding in online schooling

In this article, and throughout this dissertation, equity is defined as the disruption of oppression based on race or ethnicity, socioeconomic-status, and/or ability for a more socially just future. Under this definition equity is the desired outcome of culturally relevant pedagogy (Ladson-Billings, 1994; 2021a; 2021b) wherein we could test whether things were more equitable using asset-based pedagogies. When looking at elementary educator discourse around issues of equity and online learning it became clear in this data, as in prior research (Kazemi & Franke, 2004; Sherin & Van Es, 2009; Uzun, Butun Kar, & Ozdemir, 2021), that educators discourse commonly began from a deficit perspective. Teacher discourse can be powerful tools for equity depending on the various storylines and positioning inscribed within them. Moreover, the storylines and positioning of educators' selves illustrates what may be the heart of the crisis in education which began well before the pandemic: their disempowerment and deprofessionalization.

To further understand educator discourses about equity specifically in emergency online schooling during the coronavirus-19 pandemic I began with one initial research question which then followed into two distinct but interconnected sub questions:

2. How did elementary educators conceptualize responsibility for education during emergency online schooling during the coronavirus-19 pandemic?
    a. What do these discourses of responsibility reveal about social understandings of responsibility for an equitable society?
    b. What are the implications of institutionalizing these discourses?

Contextualizing Theory

In this section I detail the history of research around the impact of teacher expectations and perceptions of students on student outcomes and advance that language and perception is a bi-directional process wherein teacher talk in and out of classrooms can be a powerful tool for learning or an obstacle for students to overcome.

Teacher Expectations & Perceptions of Students

The concept that teacher expectations shape student outcomes is not new. Rosenthal & Jacobson (1968a, 1968b) began writing in the late 1960s about the effects that teacher expectations could have on student achievement, particularly historically marginalized students, using what they referred to as the "Pygmalion Effect". This Pygmalion Effect created a self-fulfilling prophecy in classrooms wherein students who were expected to achieve less were underserved and under-supported by often well-meaning educators. Throughout the 1980's we consistently reaffirmed this theory that teacher expectations in the form of things like ability tracking in schools can subtly (and overtly) negatively affect student outcomes such as student engagement (Carbonaro, 2005; Kelly & Prince, 2009) and student achievement (Ehlers &

Schwager, 2020; Gamoran & Mare, 1989). When educators are presented with students who are labelled as either high achieving or low achieving, they adopt reward, instructional, and assessment structures which fit in line with their expectations of students (Stevens, 2007).

In fact, these perceptions of students by their educators often matter more than the students own initial ability level. Researchers have long since established that teachers with higher expectations of their students set higher standards for those students and that these expectations can be swayed by institutional labels and groupings (Natriello & McDill, 1986). Not long after we learned that by changing teacher expectations, namely by placing students in a higher ability track or ability grouping translated into higher achievement gains (Gamoran & Berends, 1987; Andersen, Pygmalion in instruction? Tracking, teacher reward structures, and educational inequality, 2018), research further clarified that these teacher perceptions carry far more influence than a students' performance can impact a teachers' perceptions (Miller & Turnbull, 1986).

Yet, many of the ways in which teachers make these judgements go beyond traditional quantitative methods such as grades and tracking groups. Research has reaffirmed that teachers often adapt their teaching based on a variety of non-cognitive factors such as perceived effort (McMillian, Myran, & Workman, 2002) and positive attitudes (Kelly, 2008). When teachers reflect upon and evaluate their students, they draw not only on their own lived experiences but also their figurative worlds of their youth (Kim J. I., 2017; Lortie, 1975), socially constructed narratives of about gender, race, ability, and socioeconomic status. Often in America issues of racism are tied to issues of classism, as if poverty, and in turn our economic disparity from generations of white supremacy (Gould & Wilson, 2020), can be used to explain away achievement gaps. The way in which teachers perceived obstacles around race and

socioeconomic status, particularly those they considered outside of their control, to their students learning is one of the strongest predictors of student achievement (Dell'Angelo, 2016).

Turner, Rubie-Davies, and Webber (2015) found that teachers expectations differed greatly depending on the ethnicity of the student, even when controlling for individual student achievement. Other researchers have linked teacher expectations to stereotypes about gender (Muntoni & Retelsdorf, 2018), race (Gollub & Sloan, 1978; Santiago-Rosario, Whitcomb, Pearlman, & McIntosh, 2021; Tenenbaum & Ruck, 2007; Turner, Rubie-Davies, & Webber, 2015), ability (Hancock, Morgan, & Holly, 2021; Rolison & Medway, 1985), and socioeconomic status (Auwarter & Aruguete, 2008; Pinchak, 2017) along with various intersections therein. Further, research has shown that teacher racial biases specifically affect student achievement (Bottiani, Bradshaw, & Mendelson, 2016; Decker, Dona, & Christenson, 2007) which has been further supported by research which demonstrates that students of color preform higher when with teachers from similar genders and racial and ethnic backgrounds (Dee, 2005; Redding, 2019). This article accepts that teacher expectations and perceptions of students is a powerful force in any individual students' achievement in school.

Language and Perception

How we perceive things and how we speak about them live in a reciprocal relationship. Researchers have used things such as color and emotion (Plebe & De La Cruz, 2015) and electrophysiological evidence (Athanasopoulos, Wiggett, Dering, Kuipers, & Thierry, 2009) to demonstrate the link between language and perception. Lupyan, Rahman, Boroditsky, and Clark (2020) found people who speak different languages perfom differently on some perceptual tasks. Parrallel work in embodied cognition (Eerland, Guadalupe, & Zwaan, 2011) and cognitive linguistics (Evans, 2012) has further contibuted to establishing the link between language

processing and perceptual representation. This article accepts that language is a bi-directional performance of perception and examines how language is used to better understand educator perceptions around emergency online schooling during the coronavirus -19 pandemic in the elementary years.

Teacher Talk.

In education circles then, teacher talk is an important means of shaping educators' perception and how teachers discourse impacts students. Research has shown teachers' language can impact student motivation, learning, and performance outcomes (Boden, Zependa, & Nokes-Malach, 2020). Early childhood researchers have long since known the importance of teacher talk in classrooms for language acquisition (Jin & Webb, 2020) and early science instruction (Studhalter, et al., 2021).Yet despite what we know about teacher talk in formal settings, learning how educators speak, particularly in informal settings and with other educators in an important piece in understanding how educators perceive students.

Unfortunately, many teachers' discourse with other educators tend towards deficit biases. When teachers gather for professional discussions around students, they often focus on what students cannot do (Kazemi & Franke, 2004; Sherin & Van Es, 2009). Suh, Theakston-Musselman, Herbel-Eisenman, and Steele (2013) researched teacher professional development spaces and found teachers peer discussions related to 'low students' often followed a tracking storyline, placing perceived lower status or lower maturity students in less advanced courses regardless of an institutionalized tracking system. Similarly, these deficit-based educator storylines have been shown to have negative impacts on students (Roy & Roxas, 2011; Shapiro & MacDonald, 2017). In this article, educator discourse is recognized as an important piece to understanding both how teachers perceive teaching and the educational opportunities they

provide. To better understand the storylines and positioning elementary educators have built around equity in online schooling this article examines teacher discourse .

Methodology

This constructivist grounded theory (Charmaz, Constructing grounded theory: A practical guide through qualitative analysis, 2006; Glaser & Strauss , 1967) study was driven by the initial research question “how did elementary educators conceptualize responsibility for education during emergency online schooling during the coronavirus-19 pandemic?” To better understand the storylines shared by elementary educators around equity in online learning during the coronavirus-19 pandemic positioning theory (Davies & Harre, 1990; Harre & Moghaddam, 2003; Van Langenhove & Harre, 1999) was implemented to complement the grounded theory origins and further tease out dominate storylines and uncover the positioning within them .

Positioning Theory

Positioning theory advances that people arrange themselves in relation to others in conversation as a form of meaning making (Van Langenhove & Harre, 1999) where social identity is constructed though social interactions (Davies & Harre, 1990). Under this framework, conversations are the “most basic substance” of social discourses (Van Langenhove & Harre, 1999, p. 15). As Figure 1 illustrates, in positioning theory conversations have three defining

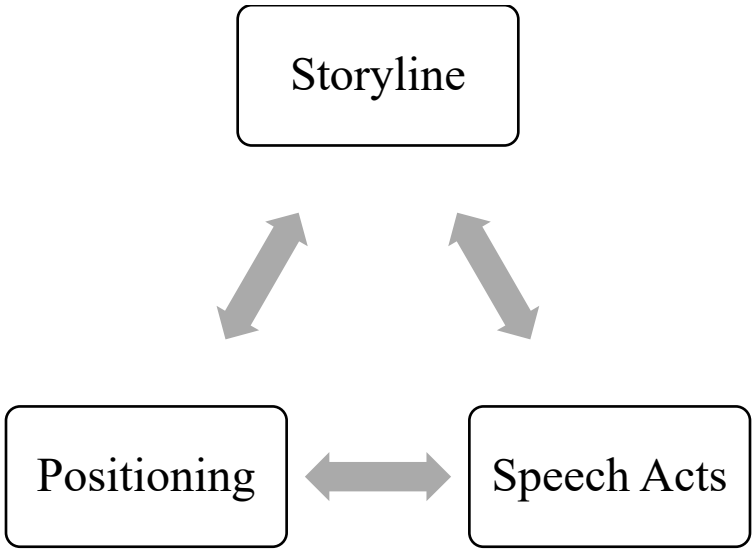

Figure 1: Three dimensions of positioning theory

hallmarks: the speech acts, storyline, and positioning. Speech acts are the words used and the meaning behind the act in the social context (Davies & Harre, 1999). Storylines are a form of cultural conversational patterns which express narrative conventions (Harre & Moghaddam, 2003). Positioning refers to the how the language positions the speaker in reference to the others in the social hierarchy (Davies & Harre, 1999). In this, positioning theory asserts that to fully understand discursive practices social identities need to be understood at intersecting power structures.

Positioning theory has been used by researchers in a variety of educational settings to better understand meaning making in conversations (Campbell & Lott, 2010), micro-identities and microaggressions in classrooms (Anderson, 2009), the relationship between teacher positionality and practice (Vanassche & Kelchtermans, 2014), and equity in classroom groupings (Campbell & Hodges, 2020; Esmonde, 2002). Most important for the purposes of this paper has been its use in understanding the impact of positioning in teacher discourse. McVee, Baldassare, and Bailey (2004) for example found that shifting teacher positioning in educator discourse demonstrated changes in culturally appropriate teaching practices. Researchers have used

positioning theory to showcase effective urban educators' practices of using positive positioning of students (Sosa & Gomez, 2012) and the impact of teacher positioning on English Language Learners (Yoon, 2008). Yet others have used positioning theory to demonstrate how ableism and racism operate against teachers of color who in turn use discourse as a liberatory practice to combat deficit thinking (Baustien Siuty & Atwood, 2022). For the purposes of this research project, positioning theory is used to better understand the storylines and positioning prevalent in elementary educator discourse during online schooling in the coronavirus-19 pandemic at the elementary level.

Methods of Data Collection

To better understand storylines generated among elementary educators, I conducted a constructivist grounded theory (Charmaz, Constructing grounded theory: A practical guide through qualitative analysis, 2006; Glaser & Strauss , 1967) study which included sixty-seven (67) educator surveys and six (6) semi-structured interviews (Rubin & Rubin, 1995) which incorporated a life-story approach (Chilisa, 2012). In this next section I give an overview of the data from the educator survey and the educator interviews.

Educator Survey

Mixed methods (Check & Schutt, 2012) educator surveys (Appendix A) were distributed using professional networks, social media groups, and targeted social media advertising between May and June of 2020. To bolster the validity and reduce sampling error of the survey a large random sample of a clearly defined population (educators) was recruited using diverse recruitment strategies (Check & Schutt, 2012; Singleton & Straits, 2009). Industry standard software Qualtrics was used to further ensure validity through its reliability and fraud metrics and user-friendly text and visual characteristics (Dillman, Smyth, & Christian, 2014; Ponto,

2015). In total 67 unique educator responses were recorded to completion. While respondents represented a diverse array of educators from the United States representing public, private, and secular schools in communities of all sizes across all geographic regions, the majority of survey respondents indicated they worked at low-income (40), racially, ethnically, and linguistically "diverse" schools (42).

To better understand what storylines educators had built around online learning in the pandemic survey respondents were directly and indirectly asked questions about their perception of equity in their schools during emergency online schooling in the coronavirus-19 pandemic.

1. Q11 Has equity been considered/discussed in your school in the transition to online learning? If so, how?
2. Q12 What does equity during this transition look like to you in an ideal situation? How does your ideal situation compare to your current situation?
3. Q22 Do you feel that all your students have the tools and support to succeed at online learning?

Equity was not defined in the survey intentionally so as to allow participants to form their own definitions of what equity was and what would make things more equitable in their schools, classrooms and communities. While these three questions did form many responses around equity issues in online learning, as equity is specifically named in the first two questions and 'all students' was meant to elicit further responses without specifically naming equity in the event they had stories to share which felt relevant but did not meet their own definitions of equity. It is also important to note that responses that intersected with equity issues (racial, socioeconomic, or ability) were present in every qualitative question from at least a few different respondents demonstrating that equity was a broader storyline in the discourse.

Educator Interviews

From the educator surveys six educators volunteered and attended an interview using Zoom or BBCollaborate teleconferencing software as well as by phone the following school year between September and October of 2020 as an extension of the survey (Singleton & Straits, 2009). As Table 1 illustrates, given the semi-struc(Rubin & Rubin, 1995)tured (Rubin & Rubin, 1995), life-story

	Descriptors	Equity Oriented Questions
Edith	• Kindergarten • Title 1 School • Community School • African American Community	1. You talked about equity being a priority in your district but noticing that the people checking in and access materials tended to be higher SES families and those students already doing well. Can you expand on this? 2. Your ideal in the survey was to have students across all groups to be accessing and learning at the same rate but that wasn't what you school had. How did it look in practice? 3. You said you didn't feel like your students had all the support they needed to be successful. Can you say more about that?
Jamie	• 1st Grade • Suburban Heartland • Diverse Community	1. You mentioned you worked in a large rural district, has being rural affected online learning? 2. You said the shift to online would impact your school for years, particularly with budget cuts. Can you say more about this? 3. You talked about how there was variability in not knowing what parents would do with children at home for school. Can you say more about this?
Kim	• 2nd Grade • Rural Midwest	1. You mentioned your school shifted from academic, teacher lead instruction with assessment to video lead instruction with many video check ins and more focus on student and family well-being. Can you say more about this? 2. You said equity was a big topic of discussion at your school. Can you say more about this? Has this changed?

		3. You said you didn't feel that your students had everything they needed for success because of parent choices. Can you say more?
Martha	• K-5 Music • Urban • Midwest • Latinx and Black community	1. You mentioned the struggle to provide for students' needs and ensure that things are equitable and yet much of this seems out of your control. Has this changed? 2. It sounds like you did a lot of adaptation to online learning in the Spring, and I commend you for that. How do you think it compares to being in the classroom?
Thelma	• Special Educator • West Coast • Rural • Concurrent wildfires	1. You mentioned access to the internet being a barrier. Can you expand on this? Were you able to offer supports? 2. You said some powerful things about equity and how trauma and how that can affect students learning at home and needing more family support as well. Can you talk more about this? 3. You said you don't feel your students have all the things they need to succeed at online learning. Can you expand? 4. You talk about the struggle of not being able to go to students and family, can you say more?
Zelda	• 1st Grade • East Coast • Urban • 60% Free and Reduced Lunch • 35% "minority students"	1. You mentioned that it was hard to find assessments that were both fair and equitable, can you say more about this? 2. You mentioned struggles with access to the internet and how students may not have devices or need to share with siblings. How did you handle these issues? What kind of support were you offered?

Table 1: Participants and their primary equity-oriented interview questions

approach (Chilisa, 2012) used in the interviews and considering the previous survey data, the interview questions were individualized to each participant with tailored questions for each. Throughout the interview participants were asked questions specifically about their perceptions of equity in their schools, often referencing their survey responses (APPENDIX D). Again, while

there were specific equity-oriented questions, equity-focused conversations appeared organically throughout the interviews.

Analytic Memoing

Analytic Memoing (Charmaz, Constructing grounded theory: A practical guide through qualitative analysis, 2006) was used throughout the data collection and analysis concurrent phases of this study. Memos involved evolving storylines and interesting speech acts, implicit assumptions, and meanings (Charmaz, Constructing grounded theory: A practical guide through qualitative analysis, 2006), developing hypothesis, questions, connections, and general notes. As demonstrated in Table 2, two prominent storylines identified

Memo 54	Memo 38
Emerging Theme: Equity as parental responsibility How can we foster student independence and agency? Training? Professional Development? We must start from the assumption that children will not have parents around to help. This is complicated by the fact that some parents can stay home and have the cultural capital and technological skills to help their children one to one in a way that is simply impossible in traditional in person school. How might we address this? Can universal design make things more equitable if some children will always have that advantage whether the work is designed for it or not?	**Emerging theme: Technology as Equity** Technology regularly overlaps with equity. If we have the devices, then we are equitable. If we are properly trained and have adequate software than we are equitable. What does access look like then? Is it just devices? What works when it works?

Table 2: Analytic memos

in this research project evolved from early analytic memos. These memos also provided initial lines of questioning for further research.

Data Analysis

To answer my research question, “how did elementary educators conceptualize responsibility for education during emergency online schooling during the coronavirus-19 pandemic” I used conversation analysis (Gee, An Introduction to Discourse Analysis Theory and Method, 2014; Raclaw, 2018; Raclaw, Barchas-Lichtenstein, & Bajuniemi, 2020) and critical discourse analysis (Fairclough, 2001; Wodak & Meyer, 2009). The findings highlight the similarities between the two approaches in uncovering the institutional discourse present in educator speech: formalistic features of both conversation analysis and critical discourse analysis. Where conversation analysis was initially implemented due to the prevalence of institutional language and the power systems and structures inherent in education, critical discourse analysis was also implemented to focus on the broader sociological issues and power structures at play.

Conversation Analysis

To better understand how educators discursively understood equity in their schools and communities I analyzed educator surveys and interviews using conversation analysis (Sacks, Schegloff, & Jefferson, 1974). Where conversation analysis has long been used with traditional telephone surveys (O'Sullivan, 2010) increasingly well-respected national survey organizations such as the Pew Research Center are shifting to online formats (Kennedy & Deane, 2019). When well designed, incorporating thoughtful open-ended questions and considering context effects (Smyth, Dillman, & Christian, 2009), survey methodologists agree that a survey can analogous to a conversation (Hutchby, 2001). Further analysis increasingly reaffirms human-computer interaction research by demonstrating that computers function as social actors in modern society and humans will generally activate human to human interaction strategies when engaging with

technology (Raclaw, Barchas-Lichtenstein, & Bajuniemi, 2020). By framing and examining the online survey data as an interaction wherein each question-answer pairing construct a basic sequence of interaction (Schegloff, 2007) the text of the survey can be analyzed using positioning theory (Davies & Harre, 1999; Van Langenhove & Harre, 1999). Table 1 shows the coding of each

	Educator Response
Q11 - Has equity been considered/discussed in your school in the transition to online learning? If so, how?	**Total Responses: 43** **Total Codes: 68** Assessment (2) ***Equity as Technology (21)*** Positive Examples (8) Equity Overcorrection (1) Perceptions of Online Learning (3) ***Equity as Personal Responsibility (4)*** ***Equity as Parental Responsibility (11)*** Teacher Practices (15) Educator Identity (2) Food Insecurity (1)
Q12 - What does equity during this transition look like to you in an ideal situation? How does your ideal situation compare to your current situation?	**Total Responses: 43** **Total Codes: 96** ***Equity as Technology (26)*** Positive Examples (3) Expectations (3) Perceptions of Online Learning (8) ***Equity as Personal Responsibility (13)*** ***Equity as Parental Responsibility (19)*** Perceptions of the Transition (4) Educator Identity (5) Teacher Practices (7) Social Inequities (2) Developmental Inappropriateness (1) Emotional Language (4) Privilege (1)
Q22 - Do you feel that all your students have the tools and support to succeed at online learning?	**Total Responses: 44** **Total Codes: 70** Negative Response (24) ***Equity as Technology (7)*** Emotional Language (3) Expectations (2) Positive Examples (1) Perceptions of Online Learning (3)

	Equity as Personal Responsibility (16) ***Equity as Parental Responsibility (10)*** Teacher Practices (2) Perceptions of the Transition (2)

Table 1: Idea unit coding in educator survey responses

equity-oriented survey question and the relevant concept codes which were generated from the conversation analysis. The number of codes represents each instance they presented across all the completed educator surveys. The three dominate codes which presented across the data represented a storyline of equity in online learning: equity as technology, equity as personal responsibility, and equity as parental responsibility. These codes were selected not only because of their frequency across the survey and eventual interviews but also because they spoke to a collective constructed storyline of what equity was, was not, and could be in education in an interconnected way. Table 2 shows examples of stanzas which demonstrate this cultural model of

Code (Storyline)	Examples (Speech Acts)
Equity as Technology	***If we have equitable technology access, we are equitable…*** • "Yes, our county gave out laptops and iPads to families who needed them and had WiFi buses which went into neighborhoods that needed them." (Q11, Educator Survey) ***Equity is impossible because technology is inequitable…*** • "It has impacted tremendously, especially with a student whose first language is not English and need to do everything on the computer. Most of these families have never had a computer. Language support has been challenging." (Q9, Educator Survey)
Equity as Personal Responsibility	"Yes I do [think students have everything needed to succeed in online learning] but again some just didn't want to" (Q22, Educator Survey) "Totally a waste of time to try to reach and teach students. Had only 8 out of approximately 85 students in my ELA classes pass at a 2.5 (out of 4) proficiency level. Called or tried to contact every student at least 4 times during the two month shutdown. Every student's family was contacted multiple times by e-mail, and Chromebooks

	were available for each student or work packets, but they had to come to the school to pick them up." (Q9, Educator Survey)
Equity as Parental Responsibility	"The biggest obstacle is the difficulty in equity with home/parenting environments. You can supply the devices, etc but if a parent can't or won't ensure the kids access and perform the posted lessons, how do you address or remedy that? Ideal situation.. every parent loving, responsible, invested and participating." (Q12, Educator Survey) "Equity does not seem possible in any circumstance. Students all come from such a variety of home lives that at home learning will not be equitable, no matter how hard schools try.... same as a normal school year." (Q12, Educator Survey) "Yes, every child has an iPad and some were given hot spots. Some parents just don't care about education enough to take the initiative for their child" (Q19, Educator Survey) "But in many instances, the family support is not there and that makes success next to impossible." (Q22, Educator Survey)

Table 2: Transcripts from educator surveys

equity.

Similarly, in the interviews I was able to implement a more traditional form of conversation analysis. The duration of the interviews was covered such that for each segment was differentiated from the first round of in-vivo coding (Charmaz, Constructing grounded theory: A practical guide through qualitative analysis, 2006; Glaser & Strauss , 1967) was given a new unit code for analysis. Segments of content around discussions of equity were then further analyzed for how educators used discourse to build knowledge by further breaking down each stanza to determine its storylines and positionality (Davies & Harre, 1999). In turn, this allowed me to further examine what these contexts might afford educators (Raclaw, 2018) and how discourses around equity can frame responsibility for said equity in ways that unburden educators, schools, and systems while simultaneously reinforcing social hierarchy and oppression (Laury & Suzuki, 2011).

Critical Discourse Analysis

Critical discourse analysis is a transdisciplinary, inductive approach (Lazar, 2007) to find meaning through hermeneutic or interpretive processes (Wodak & Meyer, 2009) which seeks to understand discursive power structures through the reproduction or resistance to inequality in implicit power relations so that we might bring about real change through critical understanding (van Dijk, 1993). As power is inherently institutionalized (van Dijk, 1993), schools as cultural institutions have a hierarchy were power trickles from adults to children. The idea of the teacher as expert, and the holder of power in a classroom is encoded into our curriculums, classroom design, and even "crystalized in teacher talk" (Maftoon & Shakouri, 2012, p. 1210). As complement to the conversational analysis which underpins this study, critical discourse analysis was introduced to help better the power dynamics within the positioning of students and the relationships between storylines, positioning, society, and cognition (Wodak & Meyer, 2009).

In this article I accept a socio-cultural approach to critical discourse which emphasizes the role of language as a power resource (Willig, 2014). If we accept that language is power, then we may use language to create change as well as change behavior (Fairclough, 2001). Language may then be used to subvert power imbalances or reinforce them. Drawing from these poststructuralist, critical linguistics in this analysis we may aspire to unearth the hidden, encoded power structures and processes that very often unconsciously enumerate power and legitimize inequity.

Findings

To illuminate educators' understandings of equity and the implications of institutionalizing these storylines in our collective consciousness this section is dived into two themes. To answer the first question, what do these discursive understandings of responsibility

reveal about social understandings of responsibility for an equitable society, I dive into the first theme *Equity Storylines* using the educator survey and interview data. To answer the second research question, what are the implications of institutionalizing these discursive frameworks for equity, I explore the second theme *A Bootstraps Theory of Equity* which looks at how these storylines and positionalities ultimately hinder educators and students alike.

Equity Storylines

Despite the diversity of the schools represented by participants, common storylines (Davies & Harre, 1999) repeated throughout the data across the data sources. These storylines occurred concurrently throughout the data and illustrate a shared cultural understanding by educators across the United States which framed equity as a function of technology, parental responsibility, and/or personal responsibility. These shared narratives shape how educators understand emergency online schooling in the coronavirus-19 pandemic, reinforced in their positioning and edified in their speech acts. When educators discussed equity, in their own definitions, these storylines were broadly accepted as impossible barriers to equity in online schooling. While not every respondent cited every storyline at least one storyline was present in 83.7% of counted text selections surrounding equity discussions.

A selection of quotes has been selected to best highlight the scope of responses seen in the data. As one survey respondent shared, “Ideally, every student would have their own device, access to internet, and (most importantly) an adult who is invested in their education at home. I would estimate that roughly 75% of my students had that. However, for the other 25% they were missing at least one of those key features” (Educator Survey, May 2020). In this instance the respondent speaks both to technology as equity storylines as well as equity as parental responsibility. In this discourse, the tools required for equity include technology and an invested

adult at home and if both of those conditions are met then equity is sure to follow. However, while technology may be a straightforward response, I always wonder about who people envision as these invested adults. I say this because my own mother never graduated high school but was the largest proponent of my own education despite numerous storylines I have encountered which seem amazed by this fact. This is also to say that having an adult who can afford to be home is an economic privilege and speaks to larger social issues beyond a classroom. Similarly feeling overburdened by increasing social inequities other respondents felt defeated by forces outside of their control. As one respondent shared, "equity does not seem possible in any circumstance. Students all come from such a variety of home lives that at home learning will not be equitable, no matter how hard schools try.... same as a normal school year." This sense of defeat and powerlessness shown in this selection was representative of many of the educators surveyed and interviewed with 61.3% of educator survey respondents indicating equity was impossible or other similar negative language (hopeless, devastating, crushing, etc.).

It is also important to highlight that while these storylines may originate from very different places along a spectrum of empathy to patronizing if the result is lowered expectations, which as previously discussed, only serves to reinforce oppressive systems and structures. In the next three sections I dive deeper into each of these three storylines, equity as technology, equity as parental responsibility, and equity as personal responsibilities, to better understand how educator discourses around responsibility for equity create a narrative which reinforces systemic oppression and places undue burden on already systemically marginalized groups while simultaneously disempowering educators and demonstrating how precarious the career has become.

Equity as Technology.

When discussing equity in online schooling during the coronavirus-19 pandemic educators turned to technology as equity storylines 71.2% out of the total number of instances equity storylines. These storylines indicated that if a school could provide internet access and adequate devices then online learning was inherently equitable. As one survey respondent responded to Q11, has equity been considered/discussed in your school in the transition to online learning and if so how, with simply "our school delivered 200 Chromebooks out to families without access to a device". (Educator Survey, p. 2). This response was indicative of many similar results that reduced equity in education to the ability to provide goods and services equally. In another example in her interview Kim shared,

> Right. So we have, we do have one to one devices, so students are equal that way. That's all the way through our kindergarten to our high school, there are one-to-one devices. Um, we did for those who did not, or were not able to get the wifi, we did print out packets and our administrators did deliver some of those, but that too, um, there was a few families that we weren't able to get a hold of, or weren't, um, I guess buying into the reason for doing this. Uh, we had some that felt, they thought the kids could go without anything until fall. (Kim Interview)

Kim's statement also exemplifies something else common among this storyline, while it was frequently the only storyline present, when it did present with other storylines it was the first mentioned. I must wonder if this is because of the three storylines it is the only one which is based around things and not people and thus may seem the most achievable. However, reducing equity to technology ignores all the other multifaced components that make up an equitable education, something that has not existed yet in America.

Alternatively, this storyline of equity as technology was framed as though it was the missing piece in equity for online schooling; that if students could not have equal access to technology, then online schooling would never be equitable. As one educator shared in the survey, "Yes, to a degree. Many bilingual low-income students use paper as opposed to technology vduecto unaffordability and issues with housing" (Q19 Internet Access Provided by School, p. 1). I will be the first to agree with educators to assert that online learning requires multiple reliable modes of access to be implemented well but yet again, an equitable educational system requires far more than things, its requires committed, culturally and linguistically aware, socio-politically critically conscious people, systems, and structures actively working towards a more socially just future.

Equity as Parental Responsibility.

Another common storyline among educators was equity as parental responsibility, implying that a student's success with online schooling in the coronavirus-19 pandemic was directly relational to parental involvement. It should be noted that many of these speech acts were framed in empathy with caregivers who were struggling in the Pandemic, such as one survey respondent who shared,

> It has cast the inequities in the US social system and the educational system in stark contrast. Many families in our school neighborhood are struggling to make ends meet. We have meal pick up five days a week for families, our social worker and psychologist are working to connect families in need with services, and our first goal as teachers of our students is to remain connected with students and families and check in to make sure everyone is safe. Learning is on top of that (Caregiver Survey, May 2020).

While there is no denying the sentiment behind the educators' survey response and in many ways they are very right, inequity is a real concern and schools in many neighborhoods were some of the only places where any social services could be offered to families. However, this still speaks to a limited definition of what learning is and could be in online schooling placing academic learning as the only form of learning occurring does everyone a disservice. While this statement comes from a place of empathy and compassion for an impossible situation the result is still to limit "learning" and lower expectations of what could be achieved. If we acknowledge the power of language as a power resource and know that high expectations lead to better outcomes lower our expectations only lowers our outcomes. During her interview, Jamie described a similar narrative

1	Researcher	Speaking about kind of parent engagement, you talked about in the survey that there was variability because you didn't really know what parents would do with, for their children at home, with online learning and so there's people who are going to like want them to do everything, everything every single day and then there's the other parents you talked about who like just didn't wanna engage or didn't see the value in online learning would just kind of wait for things to start back up. Um, do you feel like you had like mostly students were present or there was a lot of disengagement from online learning? Um, in part because, you said, first graders can't do it alone.
2	Jamie	Right. Exactly. I was probably three quarters were engaged. Right. And I kind of, I made it fun. Right? Like every morning meeting we had, right? We started out with, like something they didn't wanna miss. Do you know

what I mean? Like I would do hangman, right? Where we were doing hangman, I would do scavenger hunts. I would do joke of the day, like, uh, stuff like that, and then telling them what was coming next. "Hey, we're going to do this, you know, tomorrow," or whatever. And then those kids who weren't there, I would try and send an email to those parents, "Hey, it's nine o'clock on a Thursday is our next meeting. I would really like to see you, blah, blah, blah." But and then I actually went to their houses, the end of May, beginning of June, kind of like an end of year awards or whatever, just basically like knocked on the door and they came to the door and I just like laid their, um, certificate on their doorstep, right? And just kind of like waved from afar. And I remember seeing those ones who I didn't hear anything from. Right? I got to see everybody that day. It like took me five hours-

3 Researcher Yeah.

4 Jamie …to go see, I think I had 19 kids last year, to 19 of their houses and just talk with them and it just broke my heart. Right? Of just the ones no wonder, like I see your house, I see who's inside of it. What's inside of it. No wonder I didn't get to you, you know. And it just, oh, broke my heart. But yeah, I would say three quarters were engaged. And then, I mean, I had one who lived in a trailer, in a campground. I had one who lived or lived, her parents worked like swing shift and double shifts and her grandpa who with Parkinson's stayed with her during the day. So of

> course I didn't get to see them, you know, it's like, they were just surviving. Yeah.

Jamie's response is especially interesting as an example of equity as parental responsibility because it is clear in the beginning, she had high expectations for all of her students and it wasn't until being directly confronted with the discrepancies of their home lives in person did she begin to adjust and lower her expectations. Again, this is a case of compassion leading to lower expectations and justifications for lower achievement.

Other responses, however, echoed overtly deficit discourses such as those described by Gloria Ladson-Billings (1994, 2007) nearly thirty-years ago. One educator, when asked if they believed that all their students had the tool to succeed (Appendix A, Q22), stated,

> No. Many of my students lacked the executive functioning skills to prioritize their work or to complete it by deadlines. Many also lacked an involved adult at home. I know several of my older students were responsible for their siblings' work instead of completing their own. We may have gotten most of the materials to students, but not having that adult there believing in them, is what caused a lot of students to struggle.

Similarly, I must again ask the question what an adult who believes in them looks like? As educators and humans, we have to start with the assumption that all parents believe in and what the best for their children. How parents and caregivers express that may vary for a variety of personal, cultural, linguistic, ethnic, religious, or a million other assorted reasons but for an asset-based, equitable approach we must assume they care.

Other survey respondents shared simply, "many parents didn't reinforce the importance of connecting every day. They often made excuses for their child" and "they have the technology; we are providing instruction they can be independently successful. Reading is at

their level teachers are assessable and screencastify to trouble shoot errors on assignments etc. Parent support not equitable" (Educator Survey, 2020). Again demonstrating how technology can make things equitable but if parents or caregivers can't support students in the same ways with the same means it will never be equitable. Most depressingly one survey respondent shared, "The biggest obstacle is the difficulty in equity with home/parenting environments. You can supply the devices, etc but if a parent can't or won't ensure the kids access and perform the posted lessons, how do you address or remedy that? Ideal situation... every parent loving, responsible, invested and participating" (Educator Survey, June 2020). In some part I take these comments personally and wonder how many of my educators in my youth assumed my parents didn't love me because of poverty and cultural differences.

When we assume that children are not successful because of their parents' schedules, finances, or sadly, love for their children, we place the responsibility for equity disproportionately on traditionally marginalized and underserved groups who have been systemically oppressed such that have less access and ability to have a caregiver stay home. These deficit-based storylines influence our perceptions of students which, in turn, affects their opportunities and ability to thrive in schools. Instead of building online schooling systems which rely on constant to periodic caregiver support what if we designed systems universally with intention to teach even young students to be able to participate independently?

Equity as Personal Responsibility.

One of the lesser but still widespread equity-oriented storylines was that of equity as personal responsibility, in that any success or failure in emergency online schooling during the coronavirus-19 pandemic was directly correlated to a students' own individual characteristics. This storyline contained key codes around intertwined assumptions about students' motivation

and/or abilities framed with undoubtedly the best intentions of most educators. When asked about their schools' ability to support students' technological access to online schooling (Appendix, Q19) one survey respondent shared,

> I have gotten to know my quieter students better. My students who were higher achieving in the classroom only seemed inspired when there were whole group activities-seem to like the competition and did not thrive when they had only themselves as a challenger or reason to try. My students who struggled to stay focused often had assignments completed before lunch and were playing the rest of the day. A few of my students did not have parents around and lacked self-motivation and others had parents who took their child's word as truth and the child played more than studied on the computer. I saw a lack of accuracy overall and a decline in accuracy in my capable students. Students often "forgot" how to do things like log into their computer. There were students whose internet worked suspiciously well for certain activities and not others. Overall parents were supportive, and students wanted to try tasks. (Q19, Educator Survey)

This selection was particularly interesting because of how it highlights some of the many ways responsibility was shifted not only to technology or caregivers but the students themselves. In this statement the respondent shared that "higher achieving" didn't "want to try" when it wasn't a style of activity they enjoyed; that if a student couldn't participate without parent support it was because they "lacked self-motivation" or implied that they were lying about not being able to logon. I was especially interested in those student who struggled to pay attention somehow managed to have their work completed by noon and that was a problem for some reason I don't understand. While in many of these instances the educator may have been right, or the parents may have been multiply privileged and spoiling their children or the kids really were lying to

avoid work, by focusing exclusively on shortcomings in individuals rather than opportunities to create change a deficit storyline was still constructed, building a wall in the way of change.

When considering if they believed all students had everything they needed to succeed at emergency only schooling during the coronavirus pandemic (Appendix A, Q22) one respondent reflected on, among other things, student motivation, engagement, and ability sharing,

> Yes and no. Some are thriving, others are struggling. It really depends on the family's situation, a student's learning style, and the student's underlying academic skill level. Some kids who are quieter in class are feeling more engaged with school because they can comment as they wish without fear of being talked over by more vibrant peers. Some students have barely logged in at all, and it's because of an internet access issues, few routines or boundaries within their family, interpersonal turmoil within their family, etc. Many students' sleep schedules are very inconsistent, and parents are not supporting the maintenance of a routine for school and sleep. Some students have some significant language barriers and low academic skill, which means that they struggle to independently complete tasks and they may not have a family member who can read well in English to support their learning (Q22, Educator Survey).

Again, while these are very real issues they speak to larger social problems beyond the classroom and at a point educators can only do so much with the limited resources they have. More interestingly, there is no official language in America and in the 2018 US Census it was found that 21.9% of residents speak a primary language other than English at home (Zeigler & Camarota, 2019). Treating other languages as a deficit of what we can do when we discuss equity and reduce it down to something that can not be solved because of our perceptions of other humans we lose sight of everything we can do, could do, and might do to reframe students'

linguistic abilities as an asset to build on. When we build these narratives that place responsibility for learning on children by attributing their failure or successes to individual characteristics, we limit our thinking and ultimately, student support.

A Bootstrap's Theory of Equity

In the 1800s, the expression "pull oneself up by your bootstraps" meant the opposite of what it does today, a joke to describe an impossible task (Kristof, 2020). Today, to pull yourself up by your bootstraps is a neoliberal, capitalistic call to better oneself socially and economically without any outside help. A harken to the American ideal where every person could be a self-made billionaire if they simply demonstrate enough hard-work and determination. When we create these equity storylines which shift responsibility for equity in online schooling away from school systems and structures we place this burden for success in online schooling on individuals, we are turning again to this bootstraps narrative of neoliberal self-reliance. To better understand the implications of institutionalizing these storylines for equity into our cultural narrative this section inspects the positionality (Davies & Harre, 1999; Harre & Moghaddam, 2003) within the educator survey and interview data. While positionality is relational it is also fundamentally based on power dynamics for as Harre and Moghaddam (2003) highlight, "positioning someone, even if it is oneself, affects the repertoire of acts one has access to" (p. 5). Further, as in the case of education, the power inherent in how educators position themselves and students can impact how students view themselves. When we position educators as the brokers of knowledge, speech and action in teacher centered classrooms they are also the brokers power more capable of positioning others than the other way around and thus "teachers being part of the 'culture of power' add further legitimacy to the students' belief that they are not capable of certain kinds of learning" (Calabrese Barton & Yang, 2000, p. 879).

Beyond classrooms this impacts communities and can either be used as an equalizing force or can further inequity. As Calabrese, Barton, and Tan (2010) assert, "how and why communities enact and sustain various networks of power is important for understanding learning because it shapes how communities develop a history of privileging particular discourses, identities, and forms of participation over others" (p. 190). Thus, as this section describes, when analyzing the positionality in the context of the previously discussed equity storylines a bootstraps theory of equity surfaced which disempowered educators and students alike. Much like the American colloquialism, under this bootstrap's theory of equity (Figure 2) educators are positioned as

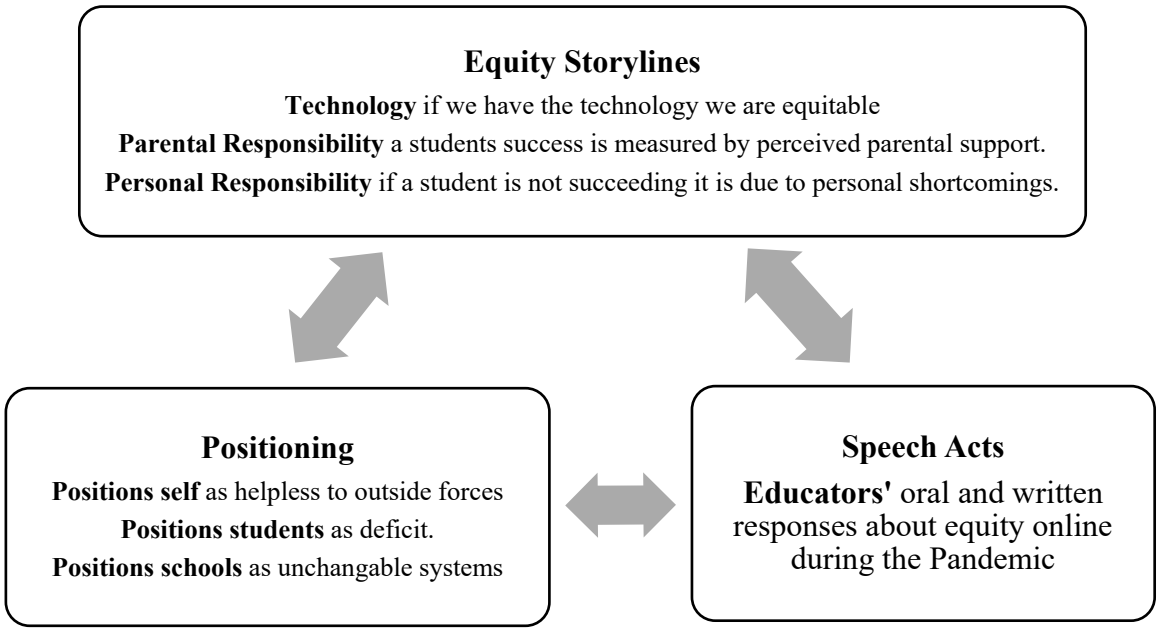

Figure 2: Positionality triad: A bootstraps theory of equity

helpless to outside forces, students are positioned as deficit, either victims as well or responsible for their own shortcomings, and schools are positioned as unchangeable systems. To further reinforce this sense of the overwhelming external nature of inequity that dominate equity storylines, as previously illustrated, are similarly positioned outside of educators' control. This

sense of a loss of control and inability to properly serve, regardless of any individual educator's desires to do so or experience in the field, permeated the data.

As a former elementary educator and preservice teacher educator, I feel it is important to pause and recognize the complexity of this matter. There is no doubt that the pressure from teaching in the inherently complicated and messy social environment we all live in can be overwhelming at times. However, when we begin to focus on what we cannot do we lose sight of what we can. In the next three subsections I will dive deeper into the positionality of educators' discursive understandings of teaching and learning in the Pandemic and how these positions frame educators, students, and families within institutionalized systems of learning.

How do you teach in a Perfect Storm?

When we talk about learned helplessness in education we often speak of students who are repeatedly exposed to situations beyond their control (Kwon, Walker, & Kristjansson, 2018; McCarter, 2013) however this phenomenon has also been linked to teacher burnout (Greer & Wethered, 1984). As Gloria Ladson-Billings (2021a) highlights the impact of multiple pandemics on teaching from coronavirus, to the civil rights movement and response to George Floyd and numerous other innocent black lives taken by the police, the plight of murdered and missing indigenous women and the war on indigenous lands, looming economic uncertainty and environmental catastrophes has opened the door to a form of 'climate change' in education. When students were set to return in Fall of 2021 schools across the nation found themselves amid a teacher shortage unlike any felt before (Dabrowski, 2021). Despite overwhelming support for educators in the beginning of the pandemic these feelings abruptly shifted in many spaces with the further demonization of educators manifest in the legislative banning the teaching of "critical race theory" in PreK-12 settings and beyond by no less than eight states and under

consideration in fifteen more (Ladson-Billings, 2021b). Combined with all these ongoing pandemics many classroom teachers found themselves right in the path of a perfect storm and it is perhaps unsurprising considering the context that many educators in the survey and interviews expressed a loss of control and a sense of overwhelming responsibility with a lack of any real support.

Throughout the survey, and perhaps due to the additional protections of anonymity teachers spoke openly about this sense of powerlessness, positioning themselves as helpless in the face of so many outside pandemic level forces. As one survey respondent when asked about whether their school considers and discusses equity during the transition to online learning (Appendix A, Q11) shared, “Absolutely. [Equity] has been paramount in our discussions (after physical safety, health, and food security), and it is devastating staff. We don't know how to overcome the inequities” (Educator Survey, May 2020). In response to the same question another respondent shared, “Equity does not seem possible in any circumstance. Students all come from such a variety of home lives that at home learning will not be equitable, no matter how hard schools try.... same as a normal school year.” Beyond the numerous external forces putting pressure on educators, ever increasing internal political, legal, and administrative pressures caused confusion and added stress as educators were uncertain how to approach services online, as Thelma, a special educator shared in her interview:

1	Thelma	Um, I think that the, the SEL component and, and not just SEL for the kids. Um, I'm blessed that I get to work on a campus where we get and get to do SEL that's like our thing. And so our kids, we got it but my staff, the people that I work with, um, the, the traumas of, so we don't know whether or not we have to keep the IEP, this, that or the other thing. Um, some, some lifting of provisions, waivers, those kinds of things. I, um, while I understand the like compensatory services and the, the backlash that is happening elsewhere in other places. There have been legal, uh, situations occurring because of whether or not the IEP was administered or X, Y and Z.

2	Thelma	I think if there could have been more, and I honestly think that it's probably a federal level at the federal level guidance on lifting provisions then - there would have been an ability for people to tackle what was happening in, in the forefront and then what was happening and then go figure out how to, now that we're in the spring, you know, maybe even it's just for the spring, like we've all been ordered a shelter in place. That means our IEPs are sheltered in place too except for, you know, this very specific group or, you know, there wasn't that and there was still all of the expectation, at least what we were understanding. Because there wasn't the, nope, you don't have to do it. So, we were still having the expectation that we were having to provide those IEP services as written. And then we had the, the prior written notice and the IEP meetings, we were able to say, okay, the modalities different. But it was, uh, like, especially in the, just the special Ed world. It was-
3	Researcher	Mm-hmm (affirmative).
4	Thelma	... insult to injury trying to have educators wrap their brains around so many things with such big guidance. So I think just having more transparency or very clear guidance. But then I don't know, they're humans at the upper levels too, you know (laughs) they were all going through the same thing and so I have a level of grace that I, I understand. Um, and I very much hear and see and don't even know I have a neuro-typical three-year-old and that was hard enough for me. I can really empathize and understand what our parents and families were going through. So, um, there is no right way to do this but I do think that a level of some waiver or some sort of understanding of how IEPs would be legal but understood in COVID times probably would have behooved more people.

In fact, these issues began well before the pandemic. The combination of these internal and external pandemics has been driving an escalating teacher shortage and while ideally educators are all prepared to handle these stresses both pre-service and experienced teachers alike feel they have insufficient knowledge or skills to work proactively around sensitive issues, emotional concerns, and trauma (Cahill, 2005; Ciarrochi, Deane, Wilson, & Rickwood, 2002; Graham, Phelps, Maddison, & Fitzgerald, 2011; Mazzar & Rickwood, 2013). If we want more equitable classrooms, teachers need to be empowered to make change, and as this data illustrates this seems infeasible for many current educators. This positioning of teachers' selves as expected to

carry the burden of increasing social inequity and yet helpless in a system which they view as unchanging and unsupportive should serve as a warning to the unsustainable nature of the profession if we continue operating with the status quo.

Learning in Crisis.

How educators position students shapes their opportunities and experiences in schools in a variety of ways. How an educator positions a students in either asset-based or deficit-based way can encourage or hinder students' ability to develop linguistic and cultural autonomy (Turner, Warzon, & Christensen, 2011), collective systemic agency (York & Kirshner, 2015), personal identity development (Hazari, Cass, & Beattie, 2014), and reinforce or break down white supremacy (Freeman & Staley, 2018; Minjung, 2015). While only 47% of Americas' K-12 aged school children are White, nearly eight in ten public school teachers in America identified as White in the 2017-18 school year with a mere 9% Hispanic, 7% Black, 2% Asian American, and less than 2% Indigenous or multi-racial peoples in the teaching force (Schaeffer, 2021). As many humans do, educators seem to partly draw from their own experiences of their youth as the norm. Unfortunately, with a significant portion of the teaching force, particularly in elementary education, represented by white women who grew up predominantly in English-speaking, middle-class families, this cultural storyline then becomes the standard to which teachers compare their students (Kim J. I., 2017; Lortie, 1975). When teachers then turn to these figurative worlds of their own youth they tend to describe to their own dominant cultural narratives: that race is not a narrative, English is the lingua franca, and ultimately that difference from these cis-gendered, White, English speaking, heterosexual, middle-class, American narratives is deficit (Mitchell, 2013). This limits students' ability to develop fundamental psychological needs such as competence, autonomy, and relatedness which all support a

students' adaptive motivation in class (Deci & Ryan, 2002). This is all to say, that when educators compare students from backgrounds different from their own, they are often viewed, even by the most well-intentioned educators, as disadvantaged or deficit and this positioning of students as such ultimately furthers this narrative by negatively impacting their ability to succeed in school.

Unfortunately, as Table 3 illustrates, these deficit-based narratives permeated through the

	Positioning Students as Deficit
Intrinsic	I prefer to be physically at school, **my students are very young to have the attention for on line learning**. I also struggle with providing special education services via zoom. Pk students need social interaction.
	A few of my students did not have parents around and lacked self motivation and others had parents who took their child's word as truth and **the child played more than studied on the computer**. I saw a lack of accuracy overall and a decline in accuracy in my capable students**. Students often "forgot" how to do things like log into their computer. There were students whose internet worked suspiciously well for certain activities and not others.**
	I primarily teach science and the switch to online learning impacted many of the projects, labs, and experiments that I had planned for the end of the school year. I frequently use hands-on activities to introduce phenomena or as a way to reinforce what we have learned previously, and it was much more difficult to do that. I also frequently use group projects or jig-saws and that impossible in our current situation. Some of our students did not have access to the internet for some/all of the time we were out of school and communicating with them was difficult and unreliable. **I also had two students who chose not to complete work despite having the needed materials. It felt unfair to other students to assign group work when not everyone was able/willing to participate.**
Extrinsic	I think it's important to recognize that not providing instruction because not everybody will be able to access it is more inequitable than offering instruction is in this situation. **Beyond the measures that our district has already taken, there is no real way to ensure equitable access to instruction right now**. **Families are still working - they're not all able to sit with their children and assist them with school each day. Older siblings are taking care of their younger siblings and trying to manage school at the same time. Multiple people are using the internet in very demanding ways at the same time. We are aware of all of these situations - and many more - and we can't fix them. We cannot control what goes on in someone else's home**. We can provide access within our limits, we can provide quality instruction and content, and we can try to reach out and provide support, but at

	the end of the day, there will be inequities and lack of access. That doesn't mean that we shouldn't try though - it's not an excuse to just do nothing. I don't have an ideal situation for this. Nothing about this situation is ideal, and I have no way to contemplate an ideal situation in its place.
	It has made our staff more bonded in some ways. People are gentler with each other, check in about each others' well-being, and are ready to help if a teacher needs help using a new technology or problem solving around student engagement. **The economic impact on families has been very sad. Many of our families were already struggling to make ends meet, and now they are unable to work because their employer has closed down. Students feel that stress at home and are less engaged with virtual learning**
	No. **Not all of my students have internet, a quiet space, or an adult to help them. Kindergarteners can not do much independently. Many of our families have non set work schedules and the students often complete school work on their parents' phones when they get home from work late at night.**

Table 3: Selection of Educator Survey Transcripts by Student Positioning

data as the positioning of students as deficit due to intrinsic or extrinsic forces. For example, when asked what an ideal, equitable situation would look like for their schools one educator stated, "all students have access to devices, internet AND also have parents/families who can provide other enrichment activities. Our students of color, our immigrant families don't have that privilege." In this statement, students are positioned as deficit due to the assumed privilege of a family's ability to provide "enrichment," yet the concept of what counts as enrichment is based around the educators own cultural storylines of what can and should count as enriching, educational experiences. Further, it specifically positions students of color and students who are part of families who have immigrated to America (regardless of Americas actual First Peoples and every White family's legacy of immigration) as deficit to White, established families rather than viewing being multicultural and multilinguistic an asset. When educators positioned students at fault it was because of a "lack of executive function", they lacked the "attention" required for online learning, that students were not "motivated," they did not have the English language proficiency needed to be successful, or they were not able to "self-regulate" well

enough. As one educator simple stated, “I prefer to be physically at school, my students are very young to have the attention for online learning” (Caregiver Survey, May 2020) while an entirely valid preference to have it again ends in framing students an incapable of success. There are many arguments to be had for when children are old enough to be able to do something that vary based on various cultural expectations. Children in America are expected to read by the end of Kindergarten whereas children in Sweden and the Gambia don’t even begin primary education until age seven. Children in Japan are expected to help with household errands by the ages of 2 to 3 years old whereas most American parents would tremble at the thought of everything that could go wrong. The issue isn’t the preference of modes, but rather that it stems from in a place which places students at a deficit.

While acknowledging privilege through self-reflection is no doubt an important step for pre-service and experienced educators alike (Friere, 1970; Ladson-Billings, 1994), when we stop at that step however, it is easy to use those narratives of underprivileged families and students to, unconsciously even, further ingratiate systemic inequity by limiting their opportunities and abilities to succeed in school. In contrast, Thelma, a long-time special educator in the rural west coast was watching communities around her burn to the ground in some of the most devastating wildfires the United States has seen. Thelma also worked with students with histories of deeply disturbing trauma whom no human would ever wish on a child, and yet, while Thelma openly spoke about all the challenges her students and families faced, she still positioned them as capable of growth and focused on their successes, no matter how small they may be. As she shared in her interview (edited to ensure anonymity of children):

> … you know, you're, we're working with a population where 80% of our students and I would even argue probably more, um, have like diagnosed mental health issues. Um, and

> we work with a large population of, you know, foster students... I'm just thinking of one kid we had his IEP yesterday, uh, he's matured and grown so much. And (laughs) then the foster parent was a huge and ferocious advocate for like, he needs to get to a less restrictive environment. We have another family where our student walked into find his father deceased… and then mom lost her living situation after that... And they were the ones that, they didn't have internet in the house that they were in already. And then they didn't, super didn't have internet in the place that they were at. So, we worked really hard to get him a hotspot and to get him reconnected with us. Not that he's super loved school or anything but we did have, we felt like good relationships with him and he has been engaging a lot more and that's been nice to see...” (Thelma Interview, October 2020)

Unlike some of the previous examples, while Thelma acknowledges the clear challenges many of her students need to overcome, she does not stop there, and by doing so positions her students as capable of growth despite the challenges.

The Unchangeable Nature of Schools.

While changing organizational structures is relatively easy, cultural change is not (Schein, 2010) and schools, created as institutions of cultural assimilation (Gram, 2016; Lash, 2018; Webb, 2006) led by educators, administrators, and policymakers who by and large subscribe to their own white, middle-class, cis-gendered, heterosexual, patriarchal, Protestant figurative worlds of their own youth (Kim J. I., 2017; Lortie, 1975) are, by their very design and nature, cultural institutions. As a nation of colonization by immigrants, assimilation to an American identity was crucial in the forming of public education (Webb, 2006) and we can see yet today in schools the impact of the intentional industrial-area design whose slogan was assimilate or fail, such as that seen in Native American Boarding Schools (Green, 2017). Yet, we also know that

indicators of assimilation by traditionally marginalized and underrepresented groups has little to no correlation to negative school experiences and behaviors such as: victimization and fear of victimization, self-reported misbehavior, perceptions of fairness, and the pervasiveness of minor student misconduct and classroom disruption (Watkins & Melde, 2009). While these educational systems and institutions have long served those whose cultural identities match with the cultural institutions, it has become strikingly apparent that to achieve a more equitable future for an increasingly diverse nation these cultural institutions must also shift away from an assimilation model towards a culturally and linguistically relevant, sustaining, and responsive model (Ladson-Billings, 2021a; Ladson-Billings, 2021b).

In the long-standing, top-down, industrialized cultural institutions that are schools today then, it is unsurprising that educators feel incapable of making any systemic change. The positioning of schools in the data was most prominent in its absence; while educators discussed the equity storylines previously mentioned, those which focus on students, families, and technology the role of the school as a source of equity beyond the provision of technology was largely absent. When discussed, issues presented were those of defeat or acceptance at an unchangeable system outside of educators' realm of impact. As the following transcript selection from an October 2020 interview with [Edith], an urban Kindergarten teacher at a Title 1 school illustrates:

1	Researcher	... you kind of need to recreate your expectations for teaching and learning, you know, since it's not the same as being in person and we can't kind of expect it to be the same thing as being in person. Do you feel like maybe you've achieved that a little bit or is it still kind of a push and pull and learning process?

2 Edith I think that it's really tricky with our school in particular. Um, so I've been, I've been a member of the race and equity team for like the eight out of the last 10 years that I've been at Mendota. And every year we've had this grand vision over the summer we spent so many hours like planning what is our curriculum gonna look like, how are we going to infuse the anti-racist practices. And we do all of this work and we come out really strong in August. And then by October, it's like, well, we have assessments to do, and we have this to do.

3 And we have, you know, and it's like, it falls by the wayside and this year. And at the end of last year, we had kind of like a big conversation as a staff in smaller groups but talking about what will this year look like. And we kind of came to the consensus that this is an excellent year to try out project based learning and utilizing all the adults that we're gonna have present every day, like in kids' homes.

4 And it felt really promising because this is such a different way of doing school. Like, like we broke the system, let's start over and then of course we're starting up and it feels like it's the same stuff all over again where it's like, well, hey, but here's your literacy block and what's your shared reading and here's your small group time and how are you breaking that into 15-minute chunks. And so I think that was a really great opportunity that we tried for.

5 And then it was like the minutes came down and the schedule got real. And instead of having more of the holistic approach to education, it got very

> much siloed again. So, I'm hopeful that our team has taken enough of the steps to continue to implement features throughout everything, but it's certainly not the vision that we had. (Edith Interview, Pos. 131-142)

As Edith's transcript illustrates even when educators are willing and put in the time and effort to really at least attempt to create real change they can find themselves lost in the demands of a system where power trickles down and teachers jobs depend on their ability to standardize their dreams into preconceived schedules, curriculums, and standards that place disproportionate value into white, middle-class, heteronormative, patriarchal American culture, regardless of the students in the classroom. This level of deprofessionalization and lack of support bodes ominously for the future of education.

Discussion

Throughout this article I have sought to understand the collective storylines educators built through their discourse emergency online schooling in the coronavirus-19 pandemic. Unfortunately, these narratives disempower educators and shift the responsibility for equity away from schools, often through unconscious intersecting cultural biases, end up placing the burden unduly on already systemically marginalized groups.

Critical education scholars have long since understood that one of the most important practices a teacher can engage in is critical self-reflection (Friere, 1970; Gay & Kirkland, Developing cultural critical conciousness and self-reflection in preservice teacher education, 2003; Ladson-Billings, 1994) however, it is critical that acknowledging privilege and difference does become institutionalizing deficit. The informal way in which educators speak about their students, particularly historically marginalized and underserved students, both in this study and in other research (Calabrese Barton & Yang, 2000; Dee, 2005; Freeman & Staley, 2018; Gollub

& Sloan, 1978; Hancock, Morgan, & Holly, 2021; Hazari, Cass, & Beattie, 2014; Ladson-Billings, 2007; Rolison & Medway, 1985) demonstrates the need to shift informal educator discourse and thus storylines. When educators view students racial, cultural, and linguistic backgrounds as an asset rather than deficit students are positioned as capable and storylines of possibilities in their education manifest.

These storylines and positioning also speak to the futileness and lack of trust and respect that many educators felt in the transition to emergency online schooling during the pandemic. Despite the equity storylines and the positioning within them research has consistently demonstrated that school and teacher leaders can be forces of systemic change towards equity within their classrooms, schools, and in shaping policy (Jacobs, Beck, & Crowell, 2014; Jacobs, et al., 2020; Scanlan & Lopez, 2012; Van & Diamond, 2019; Wenner & Campbell, 2017). I am left to wonder what the opposite of a bootstraps theory of equity may look like in discourse and our collective cultural storylines. What if we had placed the burden on providing technology and ensuring equitable access to the internet on the federal government and made it a collective problem rather than relying on already overburdened, property tax funded schools? If educators had been supported by administrators and legislators, would they have felt so hopeless? What if we had trusted them as the professionals, we demanded them to be and given them a chance to try something new and different in their classrooms which they earnestly believed would make things better for their students?

Conclusion

The discourses educators use have power as they position students and themselves and build storylines in their speech acts and by ascribing to a bootstrap's theory of equity in education, we only serve to further ingratiate inequities in education. While the transition to

online learning in the coronavirus-19 pandemic was a tremendous undertaking in many areas online learning is here to stay, and in the unfortunate event another pandemic emerges or other global event by learning from this transition we might better prepare future educators. By understanding the storylines and positioning within the speech acts of elementary educators we can shed light to the cultural narratives we have ascribed to online learning in early childhood and can use this knowledge to make shifts and design professional development and preservice teacher opportunities to support asset-based informal educator discourse. Perhaps most concerning, and most importantly, in this data was the pervasiveness of educators self-positioning as helpless. These were not outliers in the data and speak to the heart of the crisis in education today. Unless we empower educators and begin to treat them as the professionals, we require them to be then the teacher shortage will become a national pandemic of its own.

Chapter 4: Equity Focused Online Learning:

A Conceptual Framework for Implementing Culturally Relevant Online Education

Prior to the coronavirus-19 pandemic, online learning was gaining traction as a uniquely equitizing, democratizing opportunity in K-12 education (Cavanaugh, Barbour, & Clark, 2009; Maeroff, 2003; Picciano, Seaman, Shea, & Swan, 2012; Hashey & Stahl, 2014). Yet much of this research was devoted to literature reviews (Arnesen, Hveem, Short, West, & Barbour, 2019) and a focus on best practices and at the elementary level in particular was critically lacking (Linton, 2016). Throughout this research and data collection process I have had the unique opportunity to meet with educators and caregivers who were doing their best to adapt their identities and develop practices to benefit their students and children in online learning.

This article critically examines educator and caregiver discourse around emergency online schooling during the coronavirus-19 pandemic to identify pillars of a successful, equity-focused online learning program in elementary education. Equity, in this article, is defined as the disruption of oppression based on race or ethnicity, socioeconomic-status, and/or ability and can be envisioned and assessed as the desired outcomes of culturally relevant pedagogy: student achievement in the form of student success, multicultural competency, and critical sociopolitical consciousness (Ladson-Billings, 1995a; 2007). This research builds upon earlier research into online schooling (Arnesen, Hveem, Short, West, & Barbour, 2019; Cavanaugh, Barbour, & Clark, 2009; Maeroff, 2003; Picciano, Seaman, Shea, & Swan, 2012) and educational technology implementation (Ely, 1999; Hew & Brush, 2007; Jung, 2005; Laferriere, Hamel, & Searson, 2013; Mishra & Koehler, 2006) to update the earlier research based on the lived experiences of educators and caregivers in one of the largest, unintentional social experiments on online learning to exist.

To investigate what worked, and conversely what did not work, in online learning during the coronavirus-19 pandemic and to build this equity-focused framework which may be used as a launching pad from which online schooling in culturally relevant ways may be implemented I asked the dual question:

1. In what ways has online schooling been (in)accessible to educators and caregivers in the transition to online learning in the pandemic?

Contextualizing Theory

There is no doubt that the transition to online learning amid multiple pandemics (Ladson-Billings, 2021a) has been stressful for educators and caregivers alike (Mheidly, Fares, & Fares, 2020). In an interview, K-12 online learning expert Dr. Michael Barbour shared that the hastily implemented online learning that many caregivers struggled with during the pandemic ultimately "tainted it for them" (Gile, 2021, pp. 25). Caregivers understanding of online learning in the pandemic as representative of all possibilities for online learning has echoed throughout this data collection and analysis process. In the next two sections I briefly describe the history of online learning and its theoretical underpinnings for implementation.

Online Learning

The proliferation of online learning has been synonymous with the proliferation of the internet and builds on a foundation of over a century of research into K-12 distance education. In less than ten years since the rise of home computers and personal internet, Maeroff (2003) asserted that online learning represented a "sea of change" in K-12 education (p.2). Researchers even speculated that by 2019, half of all high school classes would be taught online (Christensen, Horn, & Johnson, 2008). Yet others advanced that online learning could solve systemic inequalities in education such as increased access to special education (Hashey & Stahl, 2014),

and even revolutionize high-school reform to decrease drop-out rates and increase career and college readiness (Picciano, Seaman, Shea, & Swan, 2012). Looking at research as early as 1998, online education has been touted as a solution for a variety of systemic issues including: (a) overcrowding, (b) individualization, (c) teacher shortages, and (d) better serving students who benefit from nontraditional school environments (Cavanaugh, Barbour, & Clark, 2009).

In these exciting years prior to the coronavirus-19 pandemic online learning resulted in: (a) higher levels of motivation, (b) increased educational access to high-quality learning opportunities, (c) improved student outcomes and skills, (d) increased student choice, and (e) increased administrative efficiency (Cavanaugh, Barbour, & Clark, 2009) By the beginning of the 2007-2008 school year, 42 American States offered either a full-time or supplemental online schooling option. In 2002-2004, I attended a non-traditional high school which offered an accelerated online learning program where I excelled in a way I had not previously attained.

Yet despite this rich and hopeful history between 1994 and 2019 only 365 articles were published about K-12 online learning, with a considerable amount of that dedicated to establishing literature reviews (Arnesen, Hveem, Short, West, & Barbour, 2019). And while the literature on online learning at the high school level is already scarce, that number plummets exponentially when narrowed to the elementary level (Picciano, Seaman, Shea, & Swan, 2012; Rice K. L., 2006). Further, while a substantial amount of the literature describes online learning and highlights its potential, there is little work describing any sort of best practices (Linton, 2016).

Much of the literature highlights an existing gap in the research concerning online learning in general, and particularly at the elementary level. Therefore, when the coronavirus-19 pandemic shut down in-person schools there was a vacuum of support for the sudden transition

to online schooling we witnessed one of the largest social design experiments we have taken not only as a country but as a global society. Through this collective struggle, educators and caregivers, systems and communities, were challenged to design their own best practices and it is that innovation which this article focuses on.

Critical Educational Technology Implementation

While online schooling and practical classroom implementation of technology are two distinct concepts the two approaches are so related, they may be cousins and considering the lack of research specific to online schooling at the elementary level it becomes pertinent to look for overlaps for guidance. From the invention of the schoolhouse, technology and its implementation in classrooms in America has always been fraught with controversy. The advent of film, radio, computers, new medias, and technologies, and the affordances they offer, have consistently been touted as a means to revolutionize and democratize education (Cuban, 1986). By the late 1980's Apple (1987) warned of a dystopian future of technological haves and have nots in a society of increasingly limited and deskilled jobs for the majority if technological inequities in classrooms persisted. Yet the coronavirus made stark the disparities in access in America, with sufficient internet access being unobtainable to many households due to base level issues such as availability and expense (Lai & Widmar, 2021). Yet in this crisis schools were asked to mitigate these societal issues and ensure, as legally obligated, free and accessible public education. Traditional educators, particularly in early childhood and elementary levels, were asked to rethink their core values and even their identities as teachers (Kim & Ashbury, 2020). Educators changed outreach models to teach in new ways (Padma, 2021) and built upon project-based learning initiatives (Powers, Brown, & Wyatt, 2020), fostered new communities of practice

(McQuirter, 2020), and uncovered opportunities to dramatically change inequitable systems and structures in their own schools and classrooms (Ladson-Billings, 2021a).

Given the controversy and potential surrounding educational technologies, particularly considering the impact of the covid-19 pandemic, having a strong theoretical framework for any implementation is important. Early work in instructional technology implementation was built on a diffusion model where technology permeated cultures which could then be adopted into schools (Rogers, 1962; Rogers & Shoemaker, 1995). Later practical theorists pushed past a diffusion and adoption model towards implementation of new media technologies as tools of change (Fullan & Stiegelbauer, 1991; Hall & Loucks, 1977). Successful implementations of educational technologies have long included: a critical dissatisfaction of the status quo, knowledge and skills of the technology being implemented, available resources, time to implement, a reward or incentive system, participant buy-in, commitment to the continued implementation, and a strong leadership team (Ely, 1999). Further, multiple barriers to implementation have been identified by numerous studies including resources, skills and knowledge, institutional structures, attitude and beliefs, and overall content and assessment cultures (Hew & Brush, 2007). Still other researchers have acknowledged that the successful implementation of technology integration into classroom practice "has been a process of overcoming obvious as well as culturally entrenched barriers" (Laferriere, Hamel, & Searson, 2013, p. 471). In drawing from research on technology implementation in classrooms this framework acknowledges the struggles educators often face when implementing new technologies.

Methodology

In this study I use constructivist grounded theory (Charmaz, 2000; 2006) as a method to generate a conceptual framework for equity focused online schooling for educators, policy makers, and administrators to consider as a foundation from which culturally and linguistically relevant, responsive and sustaining pedagogies (Castango & Brayboy, 2008; Gay, Culturally responsive teaching, 2010; Gonzalez, Moll, & Amanti, 2005; Ladson-Billiings, 2014; Ladson-Billings, 1995a; Ladson-Billings, 2021b; Ladson-Billings, 1995b) may be implemented in an online environment. Grounded theory generates theory through substantive codes while stressing the importance of continuous comparative analysis and theoretical sampling (Charmaz, 2000; Corbin & Strauss, 2008; Glaser & Strauss , 1967) and this conceptual framework evolved through nearly two years of data collection, analysis, analytical memoing, visualizations, and reflection. As a constructivist (Charmaz, 2000; 2006) study this article embraces an interpretive approach to grounded theory which values the narrative experiences of the participants involved.

Situational Analysis

Due to the unique, complex social, cultural, and political nature of the transition to online learning during the coronavirus-19 pandemic, situational analysis (Clarke, 2003; Clarke, Friese, & Washburn, 2018) was implemented in complement of the grounded theory origins of this paper. Situational analysis applies a postmodernist understanding through positionality, fragmentation, complexity, contradiction, and situatedness (Clarke, 2003). The beauty of situational analysis is that as a visual analytic approach it can be a valuable resource in socially responsive and community engaged research (Aldrich & Laliberte, 2016). Yet the maps themselves are "are not necessarily intended as forming final analytic products… the major use for them is 'opening up' the data and interrogating it in fresh ways within a grounded theory

framework" (Clarke, Friese, & Washburn, 2018, p. 83). As such these visual representations throughout the early stages of the analysis and data collection process provoked a deeper analysis into the complex positionalities, connections, experiences, and contradictions in the educator and caregiver data. Using situational analysis allowed me to create an easily editable, movable visual image from which I was able to consider the varied relationships, concepts, and categories and their connections from the perspective of both educators and caregivers simultaneously.

Methods of Data Collection

Data for this study was collected in two separate instances between May 2020 and September 2020 at the end of the first year of the initial coronavirus-19 lockdown and then again at the beginning of the following 2020-2021 school year. To answer my dual research question, "In what ways has online schooling been (in)accessible to educators and caregivers in the transition to online learning in the pandemic," I used a mixed-methods survey (Check & Schutt, 2012; Singleton & Straits, 2009) and semi-structured interviews (Rubin & Rubin, 1995) which were framed with a focused life-story approach (Chilisa, 2012) to draw out relationships and connections. An elastic form of saturation (Charmaz, 2006) appeared to be achieved by the last two interviews as no new concepts nor categories arose. In the next section, I detail my data collection through the surveys, interviews, and analytic memoing.

Survey

Mixed-methods surveys (Rubin & Rubin, 1995) were distributed between May and June of 2020 via recruitment to professional and caregiver networks, a targeted paid advertising campaign on social media networks Facebook and Instagram. Facebook was specifically selected as a more responsive service for survey recruitment than email or phone apps such as WhatsApp (Blumenberg, et al., 2019). Survey validity was ensured by controlling for sampling error

(Dillman, Smyth, & Christian, 2014) and non-response error (Ponto, 2015) using industry standard software Qualtrics with a clearly defined population of interest (educators and caregivers) recruited using diverse recruitment strategies wherein a large random sample was generated.

One hundred and thirty-eight (138) mixed-methods surveys (Check & Schutt, 2012) from across the United States and one participant from Canada with sixty-seven (67) educator surveys (APPENDIX A) and seventy-one (71) caregiver surveys were marked as completed (APPENDIX B). While cases were separated by the participants self-identification as a caregiver or an educator many of the participants held congruent identities. Participants represented a diverse array of educators, caregivers, schools, and communities including public, private, and parochial schools of all sizes across all geographic regions within the United States. Further, sixty-69 respondents described the socioeconomic makeup of their schools, most prominently using coded-language for low-income schools (40) including jargon such as “Title 1” or describing ratios for free and reduced lunch or using euphemisms such as “working class”. Twenty (20) respondents described their school as a blend of socio-economic statuses. Only two (2) of the respondents indicated they worked or lived in upper socioeconomic communities using the phrase “wealthy” and the coded language “high property values.”

Interviews

As an extension of the survey methods (Singleton & Straits, 2009) eleven (11) semi-structured interviews (Rubin & Rubin, 1995) (APPENDIX C) which adopted a life-story approach (Chilisa, 2012) were completed in the second phase between September and October of 2020. In incorporating a life-story approach (Chilisa, 2012) participants were encouraged to share their story as it connects to the people and relationships they have made echoing Charmaz

(2000), “part of interpretive work is gaining a sense of the whole – the whole interview, the whole story, the whole body of data” (p. 520). In this these two interview methodologies support a grounded theory approach and build upon the tradition of rich description and finding the ‘big news’ (Park R. E., 1952). To enhance reliability a variety of question types were implemented in each interview: hypothetical, interpretive, ideal situations, and devil’s advocate. (Merrriam, 1999) using whatever technology was most accessible to participants including virtual conferencing software and phone. Interviews were recorded and then transcribed verbatim for data analysis.

As illustrated in Table 1, of the participants six (6) identified primarily as educators

Interview Summaries		
Educators		
Name	**Self-Identifiers**	**Summary**
[Martha]	• K-5 Music Teacher • Urban • Midwest • Latinx and Black Community	Midwestern, urban community school with large Latinx and Black communities. Concerns about deprofessionalization. Feels less and less supported socially as pandemic drags on.
[Zelda]	• 1st Grade Teacher • East Coast • Urban • 60% Free & Reduced Lunch • 35% “minority students”	East Coast, urban school with 60% free and reduced lunch and 35% “minority students”. Found her students “desperately” needed to be back in person despite how evolving distancing and cleaning protocols are deeply impacting her practice.
[Thelma]	• Special Educator • West Coast • Rural • Mountains	West Coast, rural school with “most restrictive placement” before a residential facility. Strong, caring community with a lot of traumas and need. Concurrently dealing with devastating wildfires.
[Kim]	• 2nd Grade Teacher • Rural • Midwest	Rural midwestern school. Back in person and feeling a lot of pressure to “catch up” despite wanting to review. Was only allowed to do asynchronous video instruction by district while remote.
[Jamie]	• 1st Grade Teacher • Suburban • Heartland	Suburban heartland outside of a major metropolis. Jamie is a strong teacher leader and activist who is deeply grateful for previous planning and technology

	• Diverse Community	use which made the transition to online learning easier.
[Edith]	• Kindergarten • Urban • Title 1 School • Community School • African American Community	Low-income 4K-5th grade community school with a predominately Black student population. Felt inspired to use the pandemic as a time to reimagine schooling as culturally meaningful and project based but quickly felt forced into a canned curriculum in order to meet top down requirements.
Caregivers		
Name	**Role**	**Summary**
[Cassie]	• Single Parent to a 3rd and 10th grader • Rural • Canadian • French Immersion School	"Extremely rural" in Canada with "one internet line for the whole community." Both children attended a French immersion school while Cassie spoke no French. Struggled with the increased financial burdens due to the pandemic, especially the high cost for limited internet service and accompanying hardware.
[Claire]	• 4K and 1st grade • Small Community • PTA • Great School	Due to her experience as a professor who teaches online, and a librarian, Claire felt exceedingly well prepared to handle the transition to online learning. As with other women interviewed, she struggled to balance her own work and supporting her children's learning with little time left over.
[Katie]	• Single mother • Suburban • Midwest • 4K • Loves the School	Public children's librarian in the northern Midwest and former elementary school educator who already felt comfortable with the technology and content her daughter was engaging with over the pandemic. Katie also struggled to balance her own requirements for work with her need to help support her daughters learning online.
[Roxanne]	• Single mother • Urban • Upper Midwest • 4th grader	Psychotherapist in a midwestern suburban community. Roxanne recognized her privileges in being able to support her daughter and continue her work and provide her family over the pandemic but nevertheless was concerned about the added fiscal stress of having them both home and her working less. She also was concerned about the quality of education online.
[Susan]	• K student • Deep South • Pulled to Homeschool due to Covid-19	Librarian and parent of a kindergarten student in a middle-class community in the deep south. She struggled with community decisions which she felt were unsafe and inappropriate which ultimately led to her homeschooling her child.

Table 1: Interview Summaries

And (5) primarily self-identified as caregivers. Beyond their role in supporting online learning, participants gave themselves a variety of labels and descriptors to their unique circumstances. As a function of the theoretical sampling process (Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss , 1967) , and as previously mentioned, each interview had its own questions to reflect their previous survey responses and constantly evolving data analysis process (APPENDIX C).

Analytic Memoing

Analytic Memoing was used throughout the research project as a means to uncover implicit assumptions and meanings, identify gaps, and guide the theoretical sampling through reflective practice (Charmaz, 2000; 2006). Analytic memos, such as the mid-project analytic memo displayed in Figure 1, revolved around developing concepts, categories, connections to

Memo 82
EMERGENT THEME: Socioemotional learning does not occur online Is this true? Look at how children engage with others online, referring to youtubers as "friends", on social media, and in video games. Is it that schools are not prioritizing this time? Is it that parents do not recognize online socialization as socialization? How can schools safely foster socioemotional learning online? We live in a society where online relationships are common and accepted more and more by youth. From gaming to social media, we are establishing relationship networks in new and exciting ways. What can online education learn from these youth-accepted community building norms?

Figure 1: Analytic Memo 82

literature, generating questions, general notes and guided the development of theory and the conceptual framework. Analytic Memoing also enhanced reliability by calling attention to my

own biases while providing direction in the theoretical sampling (Corbin & Strauss, 2008). As Charmaz (2000) reflects, “memo writing aids us in linking analytic interpretation with empirical reality” (p. 517) and in the case of this article allowed me a space to confront the messy and develop questions and ideas alongside the data.

Data Analysis

To answer the dual initial question, In what ways has online schooling been (in)accessible to educators and caregivers in the transition to online learning in the pandemic, the data was coded in two rounds using constructivist grounded theory methods (Charmaz, 2000; 2006) and then compared using a two-variable case-ordered matrix (Miles, Huberman, & Saldana, 2014). As a grounded theory study, it is important to note that data analysis and data collection were completed synchronously until saturation appeared to be met (Charmaz, 2000; Corbin & Strauss, 2008; Glaser & Strauss , 1967). Further data visualizations such as a two-variable case-ordered matrix (Miles, Huberman, & Saldana, 2014) and situational maps (Clarke, Friese, & Washburn, 2018) were used throughout the process as a means of further analysis, questioning, and developing theory.

Two Round, Simultaneous Coding Process

As Corbin and Straus (2008) and Charmaz (2000) indicate, coding in grounded theory is a two-part process. In the first round of coding, sometimes referred to as open coding, I used Charmaz’s (2000) technique of “line by line” coding to pull “sensitizing concepts” and “action codes” from the data (p.515). In addition, I used simultaneous coding (Miles, Huberman, & Saldana, 2014) with in-vivo coding (Charmaz, 2006) looking for emotional language or specific jargon or phrases that were being repeated by participants (Glaser & Strauss , 1967). In the second round of coding axial coding was used to help reorganize the concepts which emerged in

the first round into recognizable dominate themes and conceptual categories (Saladana, 2016). Corbin and Strauss (2000) regard axial coding as "the act of relating concepts/categories to each other" (p.198) and part of the iterative process of grounded theory where open coding and axial coding may go hand in hand.

Data Visualizations

The findings from the initial dual research question were then compared using a two-variable case-ordered matrix to explore possible interrelationships (Miles, Huberman, & Saldana, 2014). While this research project was initially focused specifically around the technological components which either assisted or hindered online learning after comparing the data from what did not work, to what did work for elementary educators and caregivers when I asked specific questions about equity on the survey and in the interviews I was able to see the overlaps in what educators and caregivers perceived as all students needing for success in online schooling. Additionally, evolving situational maps such as that seen in Figure 1 were used as a strategy

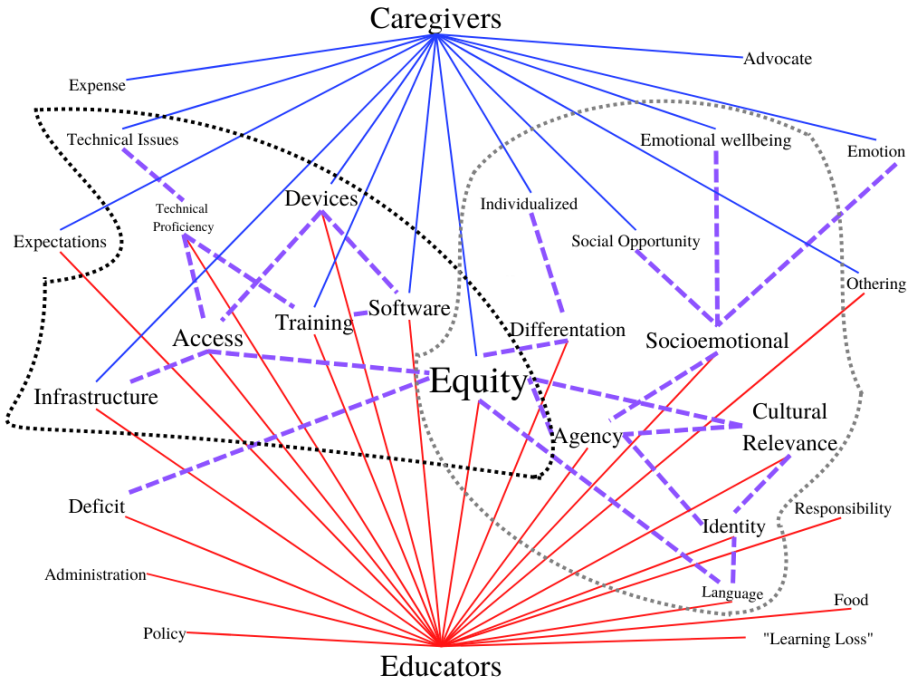

Figure 1: Evolving “messy” situational map of equity in online learning

"for articulating the elements in the situation and examining the relations among them" throughout the research project (Clarke, Friese, & Washburn, 2018, p. 86) where other aspects were saved to be explored in another project. In part these maps have served to identity any assumptions from my own positionality (Clarke, Friese, & Washburn, 2018) as a parent and former elementary educator as well as display what traditional sociologists would call 'the big picture' of the data (Park R. E., 1952). The findings from these data visualizations reaffirmed the dominate themes and conceptual categories from my previous axial coding while allowing me to consider and reconsider connections and relationships.

Findings

After analyzing 136 completed surveys and 11 interviews looking specifically at questions around equity and various ways in which equity was brought into the discourse and more than a year of constant comparison (Glaser & Strauss , 1967), simultaneous coding with open coding and in-vivo coding, axial coding, analytic memoing, and modeling the data a conceptual framework for implementing culturally relevant online schooling developed. Unlike a theoretical framework, a conceptual framework is an evolutionary and inductive model which "grounds itself in the local elements of a particular, unique study" (Miles, Huberman, & Saldana, 2014, p. 15). As Figure 1 illustrates, this model is dived into two distinct conceptual

Conceptual Framework for Equity Focused Online Learning

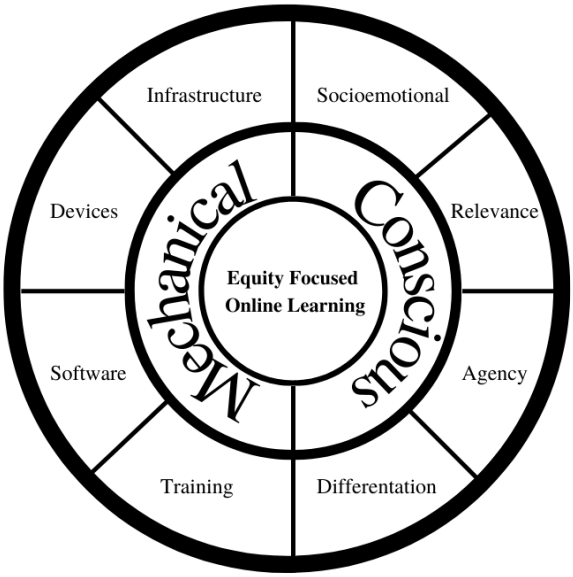

Figure 1: Conceptual Framework for Equity Focused Online Learning

categories each with four (4) distinct themes and it is through these themes we see what elementary educators and caregivers have voiced as base level needs for all students to thrive in online education. In the next section I go into detail of each piece of the conceptual framework as supported by examples from the data.

Implementing Equitable Online Learning

As Ladson-Billings (1995) originally wrote, for something to be culturally relevant pedagogically it must include: student achievement, cultural competence, and a critical socio-political consciousness on behalf of the educator implementing the pedagogy. As such the framework I propose must be implemented in conjunction with an educators own critical development. A framework for equity and technology in online schooling may be considered as a tool for implementation with educators and students alike. Further, it is important to note the equity-focused online schooling framework I propose includes a balance of two equally important halves, a mechanical aspect which includes the tools and technology to be

implemented and a conscious aspect which includes the human aspect of a sociocultural educational system. In these next two subsections I investigate each of these aspects of the framework and their specific implications in implementation.

Mechanical

Infrastructure.

There is no doubt that the coronavirus laid bare the disparity in internet access across the United States with many rural and lower-socioeconomic families facing disproportionate burdens in internet access (Lai & Widmar, 2021). Throughout the survey and internet data educators and caregivers alike were concerned with necessary internet infrastructure, if not for their own children, for others. Even more economically stable, suburban families who could afford and had access to high-speed internet struggled. As Katie, a single mother in a suburban, “well-respected” district shared,

> I think that probably the most important, um, is the access to internet. I know that there are some kids who don't have regular access to, um, internet. There are times even sitting here, that our internet will just flake out for really no reason whatsoever. Um, so that gets kind of frustrating sometimes that we have to try to figure out, "What's going on? Is it the internet? Is it the school? Is it..." Like there's just so many kind of unknown things that happen. Um, it's... Yeah. And not... Uh, yeah, so we pay for high-speed internet, but it's not always high-speed. Like sometimes it just gets throttled. Thanks, [Internet Provider]. Um, and I... Yeah, so think that just having that stable internet connection is important. (Caregiver Interview, October 2020).

Similarly, every caregiver and educator survey and interview response made some comment acknowledging either their concern about internet infrastructure, struggle with it, or feelings of

privilege with consistent access. Others expressed how even supports offered by their district, such as portable Wi-Fi devices, had connectivity issues as well. As one educator survey respondent shared, “All students who needed it were provided a device and a portable MiFi to access internet and schoolwork. Some students had to drive to a Walmart parking lot to get service. School social worker went to houses to help families log on for video chats with teacher and assessments or to support families who were struggling with the transition” (Educator Survey, June 2020). To develop and implement equitable online learning attention to internet infrastructure must be considered to include as many possible points as possible of access for all families.

Devices.

Similar to and interwoven with the discourse around internet access was the discussion around devices by which to access it. Using personal computing in the classroom was also not an invention of the pandemic. One-to-one device implementations, bring-your-own-device, and bring-your-own-connectivity, two-to-one and even three-to-one computing had been gaining traction in education well before the start of the pandemic (Selwyn, Nemorin, Bulfin, & Johnson, 2017). Uruguay went as far as implementing a one laptop per child policy and in doing so uncovered the unique demands of one-to-one computing with children and developed device management and maintenance protocols (Osimani, Stecanella, Capdehourat, Etcheverry, & Grampin, 2019). In this new age of information the boundaries of what could be accessed within a classroom had clear impacts on foundational tenets of education (Balas & Davies, 2017; Lindsay, 2016; Philip & Garcia, 2013; Philip & Garcia, 2015; Selwyn, 2003; Selwyn, 2012), democratizing pedagogy and fostering student centered learning (Ng, 2015). Yet despite these pre-pandemic advances, the pandemic highlighted the disparity in access to quality devices

capable of handling online learning. In the survey data educators most often expressed concern about students having to share devices at home or not having reliable access to powerful enough device to work well. As one educator survey respondent shared,

> We were not able to roll out virtual learning right away because we were not 1-to-1 with devices. We had to develop a system to get each family a device and internet service if needed. We still aren't 1-to-1 at this time. The goal now is to make that happen which will be a huge expense. Also, we are down enrollment for next year compared to years past. This will impact our budget. We are also afraid there will be a cut to funding our school gets from the state. (Educator Survey, May 2020)

Educator and caregiver discourses focused generally on relief if they could provide one-to-one devices, particularly if they had previously been one to one school, or anxiety about the struggles of not having adequate devices. As the following educator transcript selection illustrates:

1	Researcher	Yeah, absolutely. Um, you mentioned that 60% of the kids in your school had free and reduced lunch. Do you think that there was some sort of like equity issues with, you know, maybe not everyone had access to things
2	[Zelda]	Some
3	Researcher	…and stuff done?
4	[Zelda]	Yes. There was absolutely some. Um, this year for the people that went option two, the online, they did give them Chromebooks, but you know, Zoom, isn't really designed to work on a Chromebook as a classroom. Uh, it's designed to be a meeting. And they're having some difficulties with it. The Chromebooks just don't have the capacity to handle the CPU usage. So I know they're having some difficulties with that. We had some problems with that in the spring.
5	[Zelda]	But we had a lot of kids who, if they had siblings and they had one device, they were sharing one device. We had par- I had a couple parents that were first responders that were working around the clock and had four kids and were, you know, you can't really blame them. They're, they're doing the best they can. And I, I did feel like as a teacher, we were on 24/7. And I don't think a lot of people realize that. A lot of people thought, oh yeah, you're at home, you're at home. No, I was getting phone calls, text messages and emails at 10 o'clock at night and all weekend long that there was never a

> downtime. And it didn't mean I sat in front of a computer all day, but I was constantly being requested because that, that was the times that they had

Similarly, many caregivers expressed fiscal hardship when being forced to buy devices and peripherals for their children to use during online learning. As one caregiver shared in the survey,

> Most students in our school district don't have internet. We live in a rural, poor community. Packets were sent home but it's still difficult to watch zoom meetings, google hang outs and check class dojo if you don't have a computer or internet. I purchased a computer with my stimulus money to make it easier on my family. (Caregiver Survey, May 2020).

Ensuring one to one access with devices and peripherals which can handle the demands of online learning are a crucial component to implementing an equity focused online learning program. This may mean that implementation cannot be considered without adequate fiscal resources to ensure continued efficacy.

Software.

Education and human-computer interaction researchers have long since understood the benefits of high-quality educational software for student learning and this becomes even more important in an online environment. Having access to software that is well-designed; long-lived, adaptive, collaborative, and autonomous produces significant learning outcomes particularly for challenging content (Detlor, 2004; Moreno, Mayer, Spires, & Lester, 2001; Serenko, 2007). At the elementary level in particular having access to such well-designed software can not only increase learning performance measured in traditional assessments but also foster a positive perception of learning (Tay, Lim, Nair, & L, 2014; Lester, Voerman, Towns, & Callaway, 1999; Yilmaz & Kilic-Cakmak, 2012). This research further supports these previous findings by

highlighting their importance for both educators and caregivers alike during the coronavirus pandemic.

When educators and caregivers expressed contentment, success, or ease with online learning half of the time they mentioned specific software which they believed allowed them to be more successful online. As Jamie, a suburban first grade educator describes in the following transcript selection:

1	[Jamie]	Yes, 'cause we had no idea. I mean, luckily, we use Seesaw for everything. So that, have you heard of that LMS.
2	Researcher	Yeah
3	[Jamie]	Oh it's-
4	Researcher	…did you use that before?
5		... glorious, yes. Glorious like savior for K-2. So they're not fighting Canvas and they're not fighting Google Classroom for kids who don't know how to type, for kids that don't know how to read. Right? Seesaw is basically just like listening to my voice in a recording of my voice. So yeah, we basically prepared a week at a time to send stuff out to kids. We were one-to-one already. So the kids had Chromebooks. So luckily for that, they had taken everything. We were told, "Send it all home." So we sent everything home with the kids, to all their books and then we were allowed to come in that Friday to basically, you know, get what we needed as teachers. And then we were kind of allowed random. I say random, like the week after spring break, before they're like your building shutdown, (laughs) you know?
6	[Jamie]	Yeah. So yeah, I taught from home. I absolutely taught from my house. Every Sunday I would record my lessons. I took my anchor charts home with me, and then I recorded myself teaching, sent them out everything on Monday, and it was three days a week, right? I had everything from Monday, Wednesday, Friday planned. And then my team, there's four of us who teach first grade in our elementary school. There's three elementary schools in our corporation. So we plan together. I work with a great team like still now, right? Because we're still doing it. We, we gave our kids an option coming back to stay virtual or go in person. So I'm teaching 18 in class and five that are virtual in my class.
7	Researcher	And you have to do that simultaneously?
8	[Jamie]	Yes. But, thank goodness for Seesaw that we put them all in a class. All my virtual learners are in a class. So we take turns as

		first grade teachers and like I would send out all the Monday stuff. My next teacher sends out Tuesday stuff, then Thursday, right? Wednesday, Thursday. And then me being Monday, I have to do Friday. So we just kind of roll if that makes sense.
9	[Jamie]	And then if it's your day, you're responsible for a live video or a recording, right? We, we just, we don't do live. We just record ourselves and then post it to YouTube, have a YouTube approved channel and then the kids would push out the YouTube channel
10	Researcher	So had you used Seesaw before the switch to online learning?
11	[Jamie]	Yes.
12	Researcher	So you had experience, it wasn't like you had to learn everything from the ground up.
13	[Jamie]	Right. And like I said, we're, we're one-to-one, so, and luckily our admin, we fought for them not to lock us in an LMS. They were gonna lock us all in the canvas, K-12 canvas. And we were like, "No."
14	[Jamie]	No way
15	[Jamie]	So luckily, they let us keep using what you're using. Right? So that's what we prefer, and that's what we stuck with. So yeah, I used it in kindergarten for five years, and then this is my third year in first grade using it. It is amazing.

Having access to high quality software which educators and caregivers felt comfortable with made a significant difference in how educators and caregivers approached online learning. As Claire, a parent and professor in library sciences shared,

> How it was for me? Because I do teach at the college level, and my class is entirely online, it has been for several years. I did not have much trouble navigating the remote learning environment. It was very intuitive for me. I'm not sure that it was that intuitive for the teachers. And I can definitely sense the frustration. Um, and my son, it's not technology, but the motivation to do the work when he's not surrounded by his peers. So apart from that, and even that, like he did... he does very well with the assignments. It's just trying to figure out how to get him engaged is my biggest challenge. (Claire Interview, September 2020).

To implement an equity focused online learning environment all involved parties need to have accessible, high-quality, well-considered software to support the unique needs of their communities.

Training.

Stories from educators and caregivers who felt empowered during online learning included a confluence with all three previous considerations: accessing the internet, navigating a personal device, and implementing and using related software, however, this took time, experience, and when lucky great training. Frequently implemented and studied frameworks such as the Technological Pedagogical Content Knowledge (TPACK) (Mishra & Koehler, 2006) or ICT-Pedagogy Integration Teacher Training (Jung, 2005) equally highlight the importance of training in teacher and community buy in for any successful technology implementation. Yet, few studies have been found to address the importance of caregiver training, particularly with younger users. As participants demonstrated having the time and practice to engage with the mechanical tools of online learning supported with adequate training such that all involved parties have the confidence to engage with the technology makes online learning a more enjoyable and equitable environment for all. In one unique situation as demonstrated in the following interview transcript, [Claire] a small-town public librarian recognized the disconnect between the tools being implemented and caregivers such as herself:

1	[Claire]	Well, one thing that I have been doing at... you know, as a public librarian is creating a lot of different, like, how to instructional videos for the parents. I feel like in our school, like there's just a big disconnect between the parents and administration. Maybe it's just because it's a large system, I don't know, in a very small town. You know, my graduating class was 99 students. So I'm used to there being more of a close knit community. And... But as a... you know, and also has a public library, the town that I work in is smaller than the town that we live in. So I may be expecting too much. But I felt like that

		was one thing that was missing was that there wasn't enough support for the parents
2	[Claire]	So, we are recording videos on how to use Google classroom, different, like how to tips, how to mute your microphone, and how to turn on your video camera on, and stuff... you know, just really basic things. I know there's a lot of grandparents who are stuck being caregivers, who are just totally confused. I've... I do a lot of computer help at the library. And especially during quarantine, people were just like, what do we do? (laughs)
3	Researcher	Sounds like you're creating resources for them
4	[Claire]	Yeah. And I know the schools are, the schools are stretched out too. And I feel like the library is a way that we can help... you know, we can support the schools. We, we can't be all things to all people, especially with pandemic resources, but we can, at least if we see an opportunity that's in our niche, we should take it.

Similarly, educators who felt well trained and who had a community of practice which they could turn to reported similarly more positive experiences with online learning. As one educator survey respondent shared,

> My district has provided a lot of information and instruction around online learning. It was overwhelming at first. Once I got into the groove, I was very thankful for these resources and for my colleagues who are happy to coach me on new technology if I need help. (Educator Survey, June 2020)

Educators who expressed more negative language within the survey often simultaneously expressed a lack of adequate training, time, or professional support in the transition to online learning. As another educator survey respondent simply stated, “Need more professional development to support teachers. This came upon all of us very quickly so everyone is doing the best they can but there needs to be improvements” (Educator Survey, May 2020). Training to support educators and caregivers who will support online learning can help ensure an equitable foundation for engagement.

Conscious

Relevance

For any learning, traditional or online, to be equitable for the students, families, and communities represented within it, each stakeholder must be embraced for their unique cultures and the assets our differences offer us. Research has repeatedly demonstrated the benefits of culturally and linguistically relevant, responsive, and sustaining pedagogies for fostering historically marginalized student groups (Castango & Brayboy, 2008; Gay, 2010; Gonzalez, Moll, & Amanti, 2005; Griner & Stewart, 2012; Ladson-Billings, 1995a; Ladson-Billings, 1995b; Ladson-Billiings, 2014; Ladson-Billings, 2021a; Ladson-Billings, 2021b). In the data this often presented as caregivers and educators equally feeling connected with open lines of communication saying such things as "checks in frequently" or "communication was [positive emotion]" which indicated a trusting, respectful relationship where communication went both ways. As one caregiver survey respondent shared, "Our youngest child is on an IEP and she has live online meetings 2-3 times a day with special educators. She is doing very well!" (Caregiver Survey, June 2020). When this personal relevance to the students and families was not present then negative emotive words presented more heavily in the caregivers' responses. As one caregiver survey respondent described,

> Schools should recruit volunteers to check in with students frequently. More of the work should be project-based learning. Instead of having the child write sentences about their feelings, have them write a story about a time they felt sad. Becomes real instead of contrived. (Caregiver Survey, June 2020).

In educator surveys and interviews these issues of being able to relate and celebrate their students' identities and provide what they knew to be relevant to their students was frequently met with barriers due to administrative and legal expectations and requirements, transitions to

new media, and adaptation to online learning models. As [Edith], an urban Kindergarten teacher in a Title 1 Community School shares in the following transcript selection:

1	Research	So you discussed in your survey and maybe this has happened, um, that, you know, if this continues next year which is this year-
2	[Edith]	Mm-hmm (affirmative).
3	Researcher	... uh, you kind of need to recreate your expectations for teaching and learning, you know, since it's not the same as being in person and we can't kind of expect it to be the same thing as being in person. Uh, do you feel like maybe you've achieved that a little bit or is it still kind of a push and pull and learning process?
4	[Edith]	I think that it's really tricky with our school in particular. Um, so I've been, I've been a member of the race and equity team for like the eight out of the last 10 years that I've been at [School]. And every year we've had this grand vision over the summer we spent so many hours like planning what is our curriculum gonna look like, how are we going to infuse the anti-racist practices. And we do all of this work and we come out really strong in August. And then by October, it's like, well, we have assessments to do, and we have this to do.
5	[Edith]	And we have, you know, and it's like, it falls by the wayside and this year. And at the end of last year, we had kind of like a big conversation as a staff in smaller groups but talking about what will this year look like. And we kind of came to the consensus that this is an excellent year to try out project based learning and utilizing all the adults that we're gonna have present every day, like in kids' homes.
6	[Edith]	And so we made this whole, uh, well, and then of course we were watching this talk by Gholdy Muhammad and, you know, I'm sure everybody has seen this talk that was online. And so we were like, "We need to do cultivating genius. Like how do we get the historically responsive framework into our school?" And so we made this incredible plan trying to figure out ways to kind of like incorporate like history and culture and language and everything into our, our work all day.
7	[Edith]	And it felt really promising because this is such a different way of doing school. Like, like we broke the system, let's start over and then of course we're starting up and it feels like it's the same stuff all over again where it's like, well, hey, but here's your literacy block and what's your shared reading and here's your small group time and how are you breaking that into 15 minute chunks. And so I think that was a really great opportunity that we tried for.

8	[Edith]	And then it was like the minutes came down and the schedule got real. And instead of having more of the holistic approach to education, it got very much siloed again. So I'm hopeful that our team has taken enough of the steps to continue to implement features throughout everything, but it's certainly not the vision that we had.
9	Researcher	And so that's a, a school-based thing that you're trying to do in this program that you're really proud of. Um, that sounds like it would be really great and beneficial for your students. Uh, but it's kind of the structures of like policy and like statewide sort of things that are kind of getting in the way of doing that sort of thing?
10	[Edith]	Yeah. Yup. And it's just, it's like just the logistics of how do you, how do you make it so that if a kid misses your reading lesson that they can engage with the work. And well, it's like, well, the work is discussion-based and so if they miss it, they really can't get what we were working on. And so then there's just even the logistics of how do you get kids makeup work.
11	[Edith]	And so we're being required to film everything and post it and, you know, and it's just like, it's hard to capture a conversation that hasn't happened yet so that the kid who missed it can watch it later that night. You know, it's just, it's that kind of stuff that's getting in our way. (Edith Interview, Pos. 128-148)

Culturally and linguistically relevant and sustaining pedagogies and the connections and relationships they build are an important component to any classroom, including online classrooms.

Agency.

The development of agency in learning is important an important component in any equity-focused classroom (Calabrese Barton & Tan, We be burnin'! Agency, identity, and science learning, 2010; Freire, 1970; Freire, 1985; Macrine, McLaren, & Hill, 2017; Matusov, Von Duyke, & Kayumova, 2016). Developing a strong sense of agency in learning is a key component in creating lifelong learners (Ya-Hui, 2011). Prior to the coronavirus-19 pandemic researchers were already aware that students could demonstrate agency in virtual learning environments in ways which directly impacted student learning outcomes as measured on

traditional assessments (Mercier, Avaca, Whissell-Turner, Paradis, & Mikropoulos, 2020). During the pandemic, yet other researchers connected student agency to online engagement (Almusharraf & Bailey, 2021). In the data, caregivers who expressed success and/or positive emotions around online learning often discussed opportunities for their children to take leadership in their own learning. As one caregiver survey respondent shared, “Yes-ish. The most critical thing missing is the in-person support. The zoom classrooms are too large, and my child has to fight to be heard, and b/c she’s polite she sometimes ends up being ignored” (Caregiver Survey, May 2020). Yet there is no doubt that educators and learners adapted to online learning throughout the experience learning new tools and technologies to be successful and demonstrate agency in the classroom. As [Katie] shared in her interview by the fall semester of online learning in 2020-2021 educators and learners had adapted new techniques to foster agency,

> Um, so I still have to help her with log in and everything. Um, but it is not as time-consuming as it was in the spring. It is a lot more structured, so I can, um, she's also a lot more independent. She has like specific buttons that she knows like she has, her teacher has, um, pictures of when she's supposed to push the microphone button and when she needs to have her microphone off. So that really seems to help. And, um, so basically, I just help her with log in and I help her with any transitions that happen. So she's able to, now that it's structured more like a school day, she's able to be more independent and I am able to get some stuff done. (laughs). (Katie Interview, October 2020).

It is also important to note that students in a democratic classroom (Apple, Teaching and technology the hidden effects of computers on teachers and students, 1987) need to be able to demonstrate agency both individually and collectively. In the interviews [Jamie], expressed frustration with only being able to offer online learning in asynchronous formats, most often

prerecorded videos. Yet she compensated for this administrative requirement by offering live sessions for morning meetings and a form of office hours expressed by many educators and caregivers alike as being beneficial stating,

> Just recorded. So like me teaching a phonics lesson, me teaching a reading skill, me teaching a writing skill. So the kids would watch that video and then have an activity on Seesaw to complete. And then I had also on top of it, live Zoom sessions. Um, I think I had a morning meeting twice a week, and then individually if parents wanted me to meet with their kid individually, I would do that as well. (Jamie Interview, September 2020).

Providing students, educators, and caregivers with opportunities to express agency in their own learning fosters an equity focused online learning implementation.

Differentiation.

Differentiated instruction (Tomlinson, 2014) or individualized instruction (Waxman, Alford, Brown, Hattie, & Anderman, 2013), has long been an important component in inclusive classrooms benefiting all students through pedagogical practice and technological implementation (Deunk, Smale-Jacobse, de Boer, Doolaard, & Bosker, 2018). Online learning has long been touted to create more accessible educational opportunities for all students through individualized education (Cavanaugh, Barbour, & Clark, 2009; Hashey & Stahl, 2014; Picciano, Seaman, Shea, & Swan, 2012). Perhaps due to the rushed implementations on such a massive scale this opportunity often seemed missed in the data around online learning in the elementary level. Many of the caregivers in the survey expressed either an appreciation for educators who were providing differentiated learning experiences online often specifically saying some variation on “differentiation” or “individualized” or a desired for less “cookie-cutter” or

“contrived” work. When asked about school grading policies one caregiver survey respondent shared,

> We use Seesaw and he gets teacher feedback on most individual assignments. The title of the assignments indicates the standard the teacher is targeting. He is given 5-6 daily tasks, but several (2-3) are asterisked and those are the ones we are told he should focus on first. Attendance is taken based on those assignments, but I believe we have a week to complete them. I'm not really sure, we just do everything daily in our house. The workload is below his capabilities, but the teacher is trying to differentiate. I have no idea how he is being graded, and there seems to be confusion on the area Facebook Mom Group about grading as well. I don't think they are planning on doing grading (Caregiver Survey, May 2020).

In fact as the following transcript selection describes, [Susan] a small town, southern librarian and mother described choosing to pull her son from public schools in favor of home schooling, in part, due to the lack of differentiated and diverse learning opportunities and curriculums available at her local school:

1	[Susan]	And this feels like a way better job. It's still, I would like to supplement it on Africa 'cause it does not do enough sub-Saharan Africa. But we can, we can have a more diverse curriculum. We can, you know, we can just have a more interesting and, and just, and, and, and all those things. So that, that is a, a plus for us, but we definitely wanted something that had all those kind of features to it. And that narrowed it down a lot. So it was either this, or, um, there's a [Curriculum] is this very hippy dippy nature thing, which we liked a lot, but the literature was still pretty white. So, (laughs) once you like, kinda go through all the things you wanted, there was only one or two that actually fit, fit the bill
2	Researcher	Well, I'm glad you found something good (laughs) I'm glad you got to put your skills to good use.
3	[Susan]	(laughs) Well, it is funny. Like, we could learn anything and like, you know, to go through all the fun, you know, the fun

> stuff people put together. But, um, yeah, it's almost like, um, a faceted classifications game, um, where like when, when you're done with it, there's not that much stuff that actually fits your bill. And then, then, then we still had to pick a math curriculum. So honestly, we picked, um, I kinda liked the slightly hippy math, but really, we picked it because it was about the only thing in stock. Um, everybody all of a sudden is homeschooling. So you can't get this stuff. I mean, it is, it is, uh, everything used is the same price as new. It's, it's crazy. Evidently like, um, all the people who are veteran homeschoolers are really weirded out by it and very angry [laughs] that... (Susan Interview, September 2020).

In another unique position during online learning during the pandemic was [Thelma], a special educator in a "most-restrictive environment" described the measures to which she and her colleagues took to ensure a differentiated learning experience online through relationships, relevance, and individualized attention, in the following interview transcript she shared

1	Researcher	So I guess kind of what does virtual learning look like given how specialized, you know, what you do is?
2	[Thelma]	Yeah. So we, um, are running classes, we're trying to adhere to, uh, the state, um, has passed down which I believe is something around four hours of instruction and I'm glad I'm not the principal and didn't have to figure out how (laughs) to make all that happen. Um, and so, and then I help support the behavior team. We have not only teachers, paraprofessionals but also registered behavior technicians. And so, uh, I do a lot of just joining in those classrooms. So it's about, it's kind like a, 'cause I, I, I created the data sheet recently so it's kinda like they do a little bit of an intro and large group instruction. They shift into some smaller groups or rotations, maybe breakout rooms, individualized support. Sometimes that looks like utilizing tools that we don't directly teach like i-Ready or Prodigy or, you know, those kinds of things.
3	[Thelma]	And then, um, we roll into RBT time is what we've been rolling into and then in office hours kind of after that for Q and A and things. And we're sh- gonna shift that a little bit. We're gonna start providing a recess because we had some kids in the high school class be like, "There's no girls at the school." And we're like, "No. There's, there's several. And like, you saw them last year, you went to school with them, uh, but they're just in a different class." So we're like, "Oh,

> that's a good point. Like, I bet it's a very isolating for them to only see their class and only the staff that are in their class." There's no, you know, hallway walk bys anymore. Um, and then on Wednesdays are reduced days. So we have clinical groups that happen on that day. We have a full-time clinician on staff. And so it's a little bit of class time and then, um, a group with the clinician and he uses, uh, WhyTry curriculum that shares what he's been planning out. So, yeah. (Thelma Interview, Pos. 10-14)

As previous research has shown, online learning and educational software can provide a unique opportunity for individualized, differentiated learning (Cavanaugh, Barbour, & Clark, 2009; Hashey & Stahl, 2014; Picciano, Seaman, Shea, & Swan, 2012) when well implemented. Embracing differentiated instruction must be considered in an equity focused online learning implementation.

Socioemotional.

The idea that children develop social relationships online has been an evolving concept since the advent of home computing, online bulletin boards, messenger services, and social media networks. By the late 2000's the majority of youth viewed electronic communication methods as "critical tools for their social life" (Kowalski, Limber, & Agatston, 2008, p. 2). Researchers who investigate issues of cyberbullying and youth internet use know that children place importance on online social relationships (Blais, Craig, Pepler, & Connolly, 2008; Bohnert & Garcia, 2020; Mishna, Saini, & Solomon, 2009; Palfrey & Gasser, 2008) and that these relationships are forming beyond previously confining local social networks (Abbasi-Shavazi & Homayoon, 2016). Further researchers are aware about the benefits of building online communities of practice to foster collaborative, deep learning (Brooks, 2010; Lejealle, Castellano, & Khelladi, 2021; Wenger, McDermott, & Snyder, 2002). Yet throughout the data

many educators and caregivers expressed a flat-out disbelief that socio-emotional learning could occur in an online environment. As one caregiver survey respondent shared,

> No, we are not supported enough. We need live regular feedback with instructors. We need some kind of feedback and encouragement at least. There are no rewards or consequences for anything. Worse, the social-emotional piece is completely absent and SO critical for kids in K or 2nd grade (and so much more so for my kids with behavioral differences) (Caregiver Survey, June 2020).

Similarly, an educator survey respondent simply stated, “They are too young for that type of learning, they need social opportunities” (Educator Survey, June 2020).

Many caregivers and educators described a sense of isolation or loss in the sudden transition to online learning. As one caregiver survey respondent shared, “I really wish the teacher would interact by video or phone with the students, even if just for 5 minutes per week. I wish the class could hang out on video calls with each other. We feel very isolated” (Caregiver Survey, June 2020). Similarly, an educator survey respondent shared, “Our school is the heart of our community! With school basically shut down, I'm concerned with what the isolation has done to our community” (Educator Survey, May 2020).

As the data has demonstrated, these is an intense need to focus on providing ample socioemotional development opportunities for students and families and, as in any classroom, foster strong relationships between stakeholders, schools, homes, and communities. Drawing from social networking and online communities of practice an equity focused online learning implementation must consider the students’, educators’, and caregivers’ socioemotional connections and opportunities in the online environment.

Discussion

Throughout this article I have demonstrated the connected nature between a balance of both the mechanical and the conscious aspects of an equity-focused online learning implementation framework and discussed the relevant implications for implementation. This framework does not replace previous research but rather updates previous work as exampled by educators and caregivers experiencing emergency online schooling at the elementary level during the coronavirus -19 pandemic. The insights gained from those adults on the frontlines of elementary emergency online schooling has implications far beyond the pandemic. While I am in no way attempting to advocate for online schooling as the defacto method of education, for some students, families, and educators it was an environment in which they thrived and should continue to have access to beyond the pandemic. The effects of emergency implementation had a no doubt negative impact on public perceptions of online learning and yet as this framework demonstrates we collectively improved online schooling as the pandemic continued. The intent of this equity-oriented framework for implementing online schooling is to take that growth and condense it into something we can use moving forward not only to implement online schooling equitable but to also consider how me implement technologies into traditional in-person classrooms.

When accounting for the conscious this framework allows us to borrow from culturally relevant and other asset-based pedagogies (Castango & Brayboy, 2008; Gay, Culturally responsive teaching, 2010; Ladson-Billings, 1995a; Ladson-Billings, 2021b) to allow us to focus on the individual child as well as the collective classroom. Focusing on students' collective socioemotional development and individual relevance while providing opportunities for agency in a differentiated classroom is meant to call attention to the whole of what we have learned not

just prior in educational research but through the lived experiences of educators and caregivers who tested online learning and voiced their needs in the data.

While the mechanical aspect of this framework may seem straightforward as the data has shown us it is not always black and white. Where infrastructure and devices were dominate in the discourse, they share an equal space in the conceptual framework with software and training because when they were missing from participants experiences, they formed a nearly equal barrier to participation for those participants.

While the data originates and was initially intended to focus specifically on online schooling the nature of the framework may serve as a valuable guide for how we move forward with technology-integrated learning in classrooms to come. Future co-design (Burkett, 2012) based implementations to test this framework in equity-focused, elementary online learning environments as well as when considering technology integrated learning implementations in traditional in-person classrooms would be beneficial and may lead to further refinement of the framework. On the same note, this framework requires further researching the experiences of the students with the implementation of this framework would certainly led to further refinement.

Conclusion

During the coronavirus-19 pandemic, education faced major overhauls in an incredibly short period of time but through these experiences educators and caregivers have uncovered best practices for themselves and their communities. In this collective knowledge we may be able to move forward and continue to provide online learning experiences for all interested stakeholders in equity-focused ways through this theoretical framework. While many of the considerations in this framework rely on infrastructure that may not be accessible in all areas yet by identifying the importance of each of these components we may advocate for a more equitable future and

consider each component as equally important for each involved stakeholder before implementation.

Chapter 5: Forward

I am certain in ten years when I go in for tenure review after a happy and hopefully somewhat prolific career I will reflect upon this dissertation with amusement and laugh over how bad I will think it was. I will joke to my students and peers that a dissertation is only a start, a proof of concept. And beginnings, while magical, are almost never graceful. As such this dissertation serves as a testament to the chaotic, iterative, and sometimes overwhelming nature of the work all of us as scholars engage. The limitations I found myself within, and my hopes for the future of this work are all pieces of this beautiful and terrifying process.

Limitations

Throughout this grounded theory dissertation, I have experimented with a variety of methodological tools, some which ended up included with this work and even more that were left to the wayside. I found myself, at the beginning tempted to launch myself into a phenomenological or ethnographic study which, in many ways, I still feel would provide further insight into the understandings and frameworks presented within this study. To further refine this work participant, community based codesign work must be implemented to test and further refine the theories within.

One of the most limiting factors revolved around the participants themselves. This dissertation is based on the results of a widespread survey which represented a variety of geographic and demographic backgrounds and while socioeconomic status was more openly discussed race was less often included. While I had initially made the mistake of assuming more diverse participants would have joined the study, specifically targeting those who identify as people of color would have provided more insight. All but one of the interview participants was visibly white or self- identified as white. Through presentation does not always indicate a

person's racial and/or ethnic background, as a white-presenting Native American woman I advance it does at least confer a level of white privilege in American society without, of course, ignoring the other complicated issues of cultural erasure, microaggressions, and other pervasive forms of racism the complex situation entails. As such, work more specifically dedicated to the exact experiences of self-identified people of color during online schooling would benefit and should lead to further refinement of this work. Further, because this work focused specifically on educator and caregiver experiences student voices should be used in the future to further refine this work. There is no doubt that the lived experiences of students own learning is both highly complex and intrinsically important. I hope to explicitly focus on student engagement with online schooling and technology-integrated learning in further iterations of this work.

Future Research

While this dissertation shared a common thread, which each building on the previous, this dissertation was written as a series of three independent articles for publication in educational research and teacher education journals. As previously stated, I view this dissertation as a launch pad and as such I hope to refine and submit each article for publication over the course of the next academic year. Further, this research is the beginning to an experiment where I hope to implement, test, and further refine the sum of this work perhaps into something entirely new. It is important to me, as a researcher, former elementary educator, and parent of children entering public schools next year that educational research positively affects educational opportunities for all students therefore I aspire to further reflect and refine each article such that they may be practical for classroom implementation, teacher education, and ongoing community building and professional development opportunities in schools. It is important to me that the

next step in this research is a collaborative, community based codesign project to further refine the theories and conceptual frameworks within.

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APPENDIX A

Educator Survey Questions

Start of Block: Educator Questions

Q8 The following questions are geared toward educators. They are designed to give us a better understanding of your experience during the sudden shift to online learning due to the COVID-19 pandemic. Please answer them openly and honestly when possible. You may skip questions you would prefer not to answer.

Q4 What grade level(s) do you teach?

Q6 In which state do you teach?

Q7 Describe your community and school. (For example: What are the demographics of your school? What is your community like? How would you describe your school to a friend?)

Q9 How has the COVID-19 pandemic impacted your teaching practice?

Q54 How has the COVID-19 pandemic impacted your school?

Q10 Are you expected to grade your students based on their online schoolwork? How do these online assignments impact their overall grade? How does this make you feel?

Q11 Has equity been considered/discussed in your school in the transition to online learning? If so, how?

Q12 What does equity during this transition look like to you in an ideal situation? How does your ideal situation compare to your current situation?

Q19 Is access to internet, devices that can access the internet, and support for learning being managed by your school? If so, how?

Q22 Do you feel that all your students have the tools and support to succeed at online learning?

Q47 Approximately how many hours a week are you working?

Q46 How is your online workload compared to your regular in-person teaching workload?

Q20 Have you adapted your materials for online learning? If so, in what ways?

Q49 Has the transition to online learning impacted your productivity (in work, in other household responsibilities/tasks, or personal commitments)? If so, how?

Q23 Do you feel that you have been adequately supported in the transition to online learning?

Q24 Is there anything else you would like to share?

Q26 Would you be willing to participate in an online call (through Zoom, Google Hangouts, Skype, BBCollaborate or another platform of your choice) to share more of your story with the research team?

End of Block: Educator Questions

APPENDIX B

Caregiver Survey Questions

Start of Block: Caregiver Questions

Q54 The following questions are geared toward parents/caregivers. They are designed to give us a better understanding of your experience during the sudden shift to online learning due to the COVID-19 pandemic. Please answer them openly and honestly when possible. You may skip questions you would prefer not to answer.

Q32 What grade(s) is/are your child(ren) in?

Q34 Describe your community and your child's elementary school. For example: How would you describe the community and school to a friend?

Q35 Is your child being graded based on their ability to do online schoolwork? Feel free to elaborate by sharing your thoughts and/or feelings about this.

Q37 How has the transition to online learning impacted your family?

Q38 How much time per day does your child(ren) spend on online learning? If you have multiple children in elementary school please specify each child's grade level and the time they spend on school work per day individually.

Q39 How much time do you spend per day supporting your child(ren) during online learning?

Q40 Has the transition to online learning impacted your productivity (in work, other responsibilities, or personal commitments)? If so, how?

Q41 Do you feel that your child/family is adequately supported by your school and has all the materials and resources necessary to succeed in online learning?

Q42 Do you have anything else you think is important to share?

Q43 Would you be willing to participate in an online call (through Zoom, Google Hangouts, Skype, BBCollaborate or another platform of your choice) to share more of your story with the research team?

End of Block: Caregiver Questions

APPENDIX C

Interview Questions (ALL)

Interviews		
Educators		
Edith	Kindergarten 78% free lunch	4. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 5. You talk about the varying levels of engagement with online learning. Can you talk about the differences a bit more? a. You mentioned that some families dropped out, did you get to know what other plans they had or why? 6. You mentioned struggling to serve as a community school without being able to have kids in school to get resources. Were you able to come up with alternatives? How did you feel about everything? 7. You mentioned a lack of guidance, can you say more about this? 8. You talked about not knowing how to fffairy record students learning while maintaining relationships with students and families. Can you say more about that? 9. You talked about equity being a priority in your district but noticing that the people checking in and access materials tended to be higher SES families and those students already doing well. Can you expand on this? 10. Your ideal in the survey was to have students across all groups tto be accessing and learning at the same rate but that wasn't what you school had. How did it look in practice? 11. You said you relied on parents to ask for support with internet access/chromebooks/other support, how do you think that went? 12. You said you didn't feel like your students had all the support they needed to be successful. Can you say more about that? 13. You discuss that if this continued next year we would need to recreate our expectations for teaching and

		learning since it isn't the same as being in person. Can you expand on this? 14. You discuss working from home teaching while being a parent to a young child where care falls mostly to you. Can you say more about this? 15. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? b. You mentioned that you didn't feel your position was valued. Do you feel your position as a music teacher is being taken more seriously? 16. What do you wish families and/or policy makers understood about online learning?
Jamie	1st Grade Teacher	4. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 5. You mentioned you worked in a large rural district, has being rural affected online learning? 6. You mentioned you had to get creative to only teach essential standards, what did this look like? 7. You said the shift to online would impact your school for years, particularly with budget cuts. Can you say more about this? 8. You didn't give grades last year for the last quarter of school. Did that impact engagement? 9. You talked about how everyone was sharing the load in contributing and being responsible for students. Can you say more about this support/community? 10. You said you felt like administration didn't trust you to teach the children and get them where they needed to be but instead was micromanaging. Can you say more about this? 11. You mentioned you learned a lot last year with what worked and didn't and were then asked to shift to a new LMS. Can you say more about this? 12. You talked about how there was variability in not knowing what parents would do with children at home for school. Can you say more about this? 13. You said in the survey that you were doing this all while raising two young children of your own. How have you managed?

		14. You mentioned that your administration waited to do anything productive then left you to fend for yourself and then started micromanaging. How does this affect you? a. How do you feel it has affected your ability to be a professional. 15. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? b. You mentioned in the survey that you were encouraged to put together online lessons for the beginning of the year last year. Has that been used? Helpful? 16. What do you wish families and/or policy makers understood about online learning?
Kim	2nd Grade Teacher	4. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 5. You mentioned your school shifted from academic, teacher lead instruction with assessment to video lead instruction with many video check ints and more focus on student and family well-being. Can you say more about this? 6. In the survey you expressed concern about missed standards and instruction that will need to be addressed this fall. Can you expand on that? 7. You said equity was a big topic of discussion at your school. Can you say more about this? Has this changed? 8. You said you didn't feel that your students had everything they needed for success because of parent choices. Can you say more? 9. You said you are working more with online learning. Can you say more about why? 10. You said the combination of working at home and the safer at home orders has affected your productivity in other areas. Can you say more about this? Has this changed? 11. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? b. Do you feel comfortable with the plan?

		12. What do you want policy makers to understand about this whole online learning experience?
Martha	K-5 Music Teacher Title 1 Community School / DLI (Spanish) Large Black and Latinx populations	3. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 4. I noticed you no longer give grades and were only seeing students if a gen ed teacher invited you. How do you feel your position has changed? 5. I noticed you taught yourself how to make music learning videos. What was that like? 6. What does online music education look like now and what would it look like ideally? 7. You mentioned that tensions were running high about uncertainty for Fall. How has that played out? 8. You mentioned the struggle to provide for students' needs and ensure that things are equitable and yet much of this seems out of your control. Has this changed? 9. It sounds like you did a lot of adaptation to online learning in the Spring and I commend you for that. How do you think it compares to being in the classroom? 10. I noticed you said that you are working about the same amount of time but having trouble keeping things within the school day. I know you said you don't have a lot of personal commitments but how has this changed your days/weekends? Do you still find a way to separate your work from the rest of yourself? Do you see this continuing in the fall? 11. You mention the support for teachers being cathartic. Has this continued? 12. You mentioned having a pet peeve of calling this homeschooling. What do you wish parents and decision makers outside of school understand about the work you are putting in? 13. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? b. You mentioned that you didn't feel your position was valued. Do you feel your position as a music teacher is being taken more seriously?
Thelma	Special Educator Wildfires	5. Is there anything you want to expand on since you took the survey or say about virtual learning in general?

		6. You have a unique role and school. What did virtual learning look like? 7. You said you are seeing students a lot less with virtual. Can you say more about this? 8. What do daily meetups look like? 9. You mentioned access to the internet being a barrier. Can you expand on this? Were you able to offer supports? 10. You talk about grading on engagement rather than academics, can you expand on this? a. How does that impact academic tracking in your IEPs? 11. You said some powerful things about equity and how trauma and how that can affect students learning at home and needing more family support as well. Can you talk more about this? 12. You said you don't feel your students have all the things they need to succeed at online learning. Can you expand? 13. You talk about the struggle of not being able to go to students and family, can you saay more? 14. You discuss being frustrated with the online environment and lack of movement and repetitive behaviors, can you share more? 15. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring?
Zelda	1st Grade 60% Free & Reduced Lunch 35% "Minority"	3. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 4. Do you feel supported by your administration? Families? 5. What does online learning look like in first grade? 6. You mentioned that it was hard to find assessments that were both fair and equitable, can you say more about this? 7. You mentioned struggles with access to the internet and how students may not have devices or need to share with siblings. How did you handle these issues? What kind of support were you offered? 8. You mentioned that you worked a lot more on digital learning can you say more about that? 9. What is your school's plan for this fall?

		a. Does it seem to be more academic/supportive than last Spring?
Caregivers		
Cassie	3rd and 10th grade children	1. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 2. You mentioned that you lived in a smaller community without reliable internet access. How has this affected online learning? 3. What does French immersion look like with online learning? 4. You mentioned online learning being very stressful, can you say more about that? 5. You mentioned you had to leave your job because working at home while doing online learning was too much. Can you say more about that? 6. You're a single parent and that puts a lot of responsibility on you, how have you managed through these times? 7. You said the school was supportive and did the best they could. You mentioned appreciating being checked in on. Can you tell me more about this? 8. You talk about wanting to interact more with your teachers by video or phone and the feelings of isolation. Can you share more about this? 9. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? 10. What do you wish families and/or policy makers understood about online learning?
Claire	4K and 1st grade children	1. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 2. Assignments were graded pass/fail and you found this to be an equitable way of doing things, could you expand on that? 3. You were working from home and also teaching but were able to find balance, can you talk a bit about what your day looked like? 4. You have experience in classrooms and online teaching in the past. How did this help you? 5. You mentioned seeing how it could be stressful for others, can you expand more on that?

		6. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? b. You mentioned that you didn't feel your position was valued. Do you feel your position as a music teacher is being taken more seriously?
Katie	4K child	1. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 2. You mentioned that working from home while helping your four-year-old get into Zoom could be difficult. Can you say more about that? 3. You mentioned that it was hard to schedule a day around the required zoom meeting, can you say more about that? 4. You have a background in elementary education, how did that help you with this? 5. You mentioned connectivity issues occurring, how do you think this impacted learning? 6. You mentioned online learning being frustrating for you and your daughter and how hard it can be to ask questions or have enough time to talk. Can you expand on this? 7. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? 8. What do you wish families and/or policy makers understood about online learning?
Roxanne	3rd Grade child	1. Is there anything you want to expand on since you took the survey or say about virtual learning in general? 2. You said you love your school, but felt that in the spring they were just passing everyone. How do you feel about this? 3. You said your child is stressed about the difficulty of the online work. What made it so stressful? a. Has that improved in the fall? 4. Your job was cut from 5 days to 3 days a week. How has that impacted your family? 5. You mentioned feeling distracted and having a hard time returning emails. Can you say more about why?

		6. You mentioned that it is hard to be heard online, that zoom classes are large and as your child is very polite, she gets ignored. Can you expand on this? 7. You mentioned that there is a heavy burden being placed on parents because of covid and the online learning transition. Can you say more about this? 8. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring? 9. What do you wish policy makers understood about online learning?
Susan	Kindergartener Deep South	1. Would you like to expand on any or your answers or share your thoughts as they have evolved since you took the survey? 2. You mentioned that your school is better funded than surrounding schools in your district, how has this helped? a. What do you think this means for surrounding schools? What has your school been able to offer that they couldn't. 3. You mentioned being concerned about equity issues. Could you say more about that? 4. What did virtual kindergarten look like for your family? 5. You mentioned that a kindergartener can't work independently in virtual learning, how was the required support handled in your family? 6. What is your school's plan for this fall? a. Does it seem to be more academic/supportive than last Spring?

APPENDIX D

EDUCATOR EQUITY-ORIENTED INTERVIEW QUESTIONS & TRANSCRIPT SAMPLE

Educator Interviews		
	Equity Oriented Questions	**Transcript Selection**
Edith	**17. You talked about equity being a priority in your district but noticing that the people checking in and access materials tended to be higher SES families and those students already doing well. Can you expand on this?** 18. Your ideal in the survey was to have students across all groups to be accessing and learning at the same rate but that wasn't what you school had. How did it look in practice? 19. You said you didn't feel like your students had all the support they needed to be successful. Can you say more about that?	**Edith**: Mm-hmm (affirmative). **Researcher**: Can you kind of say more about this or how it kind of has changed since this fall? **Edith**: Um, I think that it has changed a little bit. I've seen the, um, like the backgrounds of my kids being more, more representative of our school in general, which I'm really happy about because in the spring it definitely felt like families who were already doing fine, we're still doing fine. And the kids who were gonna be okay, were the ones who were signing, signing in. And so that was really troublesome. And it was also hard because we knew that at that time everyone was in panic mode, and we're trying to make sure that families felt supported to like get their, their needs met and you know, people were working and that kind of thing. But also how could we keep that academic press going for kids who needed it, who were not, you know, like the white middle-class kids who are already like in the TAG programs and that kind of thing in our school. I do see, I think I have 14 kids in my class and I have all but one kid who have like officially logged in and like been in my class. And that feels a lot better this year, a lot, you know, like there are just more of my kids are here, and like actively participating in things like that. So that, that feels better to me.
Jamie	17. You mentioned you worked in a large rural district, has being rural affected online learning? 18. You said the shift to online would impact your school for years, particularly with budget cuts. Can you say more about this? **19. You talked about how there was variability in not knowing what parents would do with children at home for school. Can you say more about this?**	**Jamie:** Right. Exactly. I was probably three quarters were engaged. Right. And I kind of, I made it fun. Right? Like every morning meeting we had, right? We started out with, like something they didn't wanna miss. Do you know what I mean? Like I would do hangman, right? Where we were doing hangman, I would do scavenger hunts. I would do joke of the day, like, uh, stuff like that, and then telling them what was coming next. "Hey, we're going to do this, you know, tomorrow," or whatever. And then those kids who weren't there, I would try and send an email to those parents, "Hey, it's nine o'clock on a Thursday is our next meeting. I would really like to see you, blah, blah, blah." But and then I actually went to their houses, the end of May, beginning of June, kind of like an end of year awards or whatever, just basically like knocked on the door and they came to the door and I just like laid their, um, certificate on their doorstep, right? And just kind of like waved from afar. And I remember seeing those ones who I didn't hear anything from. Right? I got to see everybody that day. It like took me five hours- **Researcher:** Yeah. **Jamie:**... to go see, I think I had 19 kids last year, to 19 of their houses and just talk with them and it just broke my heart. Right? Of just the

		ones no wonder, like I see your house, I see who's inside of it. What's inside of it. No wonder I didn't get to you, you know. And it just, oh, broke my heart. But yeah, I would say three quarters were engaged. And then, I mean, I had one who lived in a trailer, in a campground. I had one who lived or lived, her parents worked like swing shift and double shifts and her grandpa who with Parkinson's stayed with her during the day. So of course I didn't get to see them, you know, it's like, they were just surviving. Yeah.
Kim	13. You mentioned your school shifted from academic, teacher lead instruction with assessment to video lead instruction with many video check ins and more focus on student and family well-being. Can you say more about this? **14. You said equity was a big topic of discussion at your school. Can you say more about this? Has this changed?** 15. You said you didn't feel that your students had everything they needed for success because of parent choices. Can you say more?	**Researcher:** Hmm. Um, you, you kind of talked about this a little bit before with being rural and so doing the prerecorded videos, um, you said that equity was a big topic of discussion at your school. Um, aside from the videos that you did, or choosing to do prerecorded videos, were there other steps you did to kind of make it more equitable or, you know, you're back in school now, so that hasn't really changed, um, because they're back in, right? **Kim**: Right. So we have, we do have one to one devices, so students are equal that way. That's all the way through our kindergarten to our high school, there are one-to-one devices. Um, we did for those who did not, or were not able to get the wifi, we did print out packets and our administrators did deliver some of those, but that too, um, there was a few families that we weren't able to get a hold of, or weren't, um, I guess buying into the reason for doing this. Uh, we had some that felt, they thought the kids could go without anything until fall. **Researcher:** That kind of leads me to my next question. You said that you didn't feel that the students had everything they need to success, or for success because there was such a variety of parent choices and how much parent involvement it took to kind of complete this online learning esp- especially with second graders. Could you kind of say more about your thoughts or how that worked or the variety you saw? **Kim**: Well, I think it's the value that education has for the parents in our area. I think some of them put a high value on education and there, they're more than willing to help their students to achieve because they have plans for their kids. We have others that their plan for their children is different and they don't have as high a value on education, um, don't see the necessity of all the work they think... I, I don't know what the overall view is, but it just seems to be different.
Martha	**14. You mentioned the struggle to provide for students' needs and ensure that things are equitable and yet much of this seems out of your control. Has this changed?** 15. It sounds like you did a lot of adaptation to online learning in the Spring, and I commend you for that. How do you think it compares to being in the classroom?	**Martha:** Um, our district is in general, like pretty progressive on those fronts. Um, we send out hotspots, it's a one-to-one tech, um, elementary school that I'm at. So all students have access to a Chromebook, um, which can be mailed if they can't pick it up. Um, you do have to request a hotspot, uh, and that's hard to figure out, you know, like send me an email if you don't have internet, you know (laughs) like, um, it is a little, uh, I'm not sure of the entire process but I do know that that access is a huge thing. Um, and yeah, having some lessons be asynchronous and some be synchronous, I think, is trying to kind of, uh, walk that line for people's timings which are just yet impossible to. And we did have some confusion in the spring, like we had on, when we left school on Friday, we thought it was going to happen. And literally like a half hour after school ended, the governor said, "All right, starting Wednesday, we're going to close schools." But as it turned out, we weren't coming back. And so no one knew that until like that Sunday night. So like no one was able to roll materials out. It was just suddenly you're at home. And we ended up sending hotspots and laptops but now that we're starting at the same time and we all understand the needs, uh, that need to be met, there's a lot more

		talk of like, "How are we gonna get materials to students?" And, um, there is a, uh, all of the students of the entire district in Madison are getting free meals. Um, and you do like a once a week pickup, I believe and they don't ID and things like that. So it's, I, I think they're, they're trying to do the right things and, you know, as things pop up, I'm not sure what the response is in the moment but over the summer it seems there was a lot of planning on that, uh, front.
Thelma	16. You mentioned access to the internet being a barrier. Can you expand on this? Were you able to offer supports? **17. You said some powerful things about equity and how trauma and how that can affect students learning at home and needing more family support as well. Can you talk more about this?** 18. You said you don't feel your students have all the things they need to succeed at online learning. Can you expand? 19. You talk about the struggle of not being able to go to students and family, can you say more?	**Thelma**: Yeah. That's still a concern. Um, you know, you're, we're working with a population where 80% of our students and I would even argue probably more, um, have like diagnosed mental health issues. Um, and we work with a large population of, you know, foster students. Um, thankfully most of the placements, at least when it comes to the foster care placements, those are very strong, um, supports in those cases. So those kiddos, those are some of my thriving kiddos. Those are some of the kiddos that have that increased structure and support. And they're, they're getting down on a family that like, they've never had, like, I'm just thinking of one kid we had his IEP yesterday, uh, he's matured and grown so much. And (laughs) then the foster parent was a huge and ferocious advocate for like, he needs to get to a less restrictive environment. And so we have, thankfully there are some of those out there and, and you can see that that's benefited. We have another family where our student walked into find his father deceased, and then he and his mother… lost her living situation. So about a month or two, after that, they had to move into a shared housing situation. And they were the ones that, they didn't have internet in the house that they were in already. And then they didn't, super didn't have internet in the place that they were at. So we worked really hard to get him a hotspot and to get him reconnected with us. Not that he's super loved school or anything but we did have, we felt like good relationships with him and he has been engaging a lot more and that's been nice to see or at least showing up … So, so it's, it's been varied…. So you're reminding me of all the things I need to do when I get back to work on (laughs) Monday. There were a couple of families I needed to reach out to but, um, those concerns are still there. Thankfully, I think that they're not there for as many now that we've gotten those connectivity issues, there's more connections happening.
Zelda	10. What does online learning look like in first grade? 11. You mentioned that it was hard to find assessments that were both fair and equitable, can you say more about this? **12. You mentioned struggles with access to the internet and how students may not have**	**Zelda**: Yes. There was absolutely some. Um, this year for the people that went option two, the online, they did give them Chromebooks, but you know, Zoom, isn't really designed to work on a Chromebook as a classroom. Uh, it's designed to be a meeting. And they're having some difficulties with it. The Chromebooks just don't have the capacity to handle the CPU usage. So I know they're having some difficulties with that. We had some problems with that in the spring. But we had a lot of kids who, if they had siblings and they had one device, they were sharing one device. We had par- I had a couple parents that were first responders that were working around the clock and had four kids and were, you know, you can't really blame them. They're, they're doing the best they can. And I, I did feel like as a teacher, we were on 24/7. And I don't think a lot of people realize that.

	devices or need to share with siblings. How did you handle these issues? What kind of support were you offered?	A lot of people thought, oh yeah, you're at home, you're at home. No, I was getting phone calls, text messages and emails at 10 o'clock at night and all weekend long that there was never a downtime. And it didn't mean I sat in front of a computer all day, but I was constantly being requested because that, that was the times that they had. So I, I can't, in one sense, you understand, 'cause you feel bad for the parents, but in the same sense, it's like, look, I need a break here. I have a family too. My daughter was graduating high school last year. So that was, that I thi- and that was, I think across the board, I think all of our teachers. And we have a lot of teachers with younger children. I can't even imagine how they did it. I had my own computer. My daughter had her computer. She did her work. I did mine. But, you know, some of these people with young children, I felt bad for them. I'm sure that was very hard. **Researcher:** Do you feel like you were offered any like extra supports from your administration or your coworkers or, you know, state? **Zelda**: Um, I think admin did as much as they could. Um, we have a really good technology guy. He was really helpful. But you know, it, it was, I think right now I don't do the online, so I don't really know if they feel supported or not, or what's expected of them. Um, they, I mean, I think, I, I think that our upper administration is making the best decisions they can. I, I would not want to be in his shoes. And I think that our admin at our, at our building, you know, I, I feel for them because I just, I think they're doing the best they can with what they have. They have no prior experience. No one does. There's no prior experience for this. And they don't teach you this in principal schools. (laughs). So, you know, you're, you're in your EDU and your EDL classes, they're not telling you, "Hey, how do you run a school in a pandemic?"