

Stuck in Cycles of Problem Posing: Teachers' Struggles to Center Vulnerable Learners in Remote Instruction

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Abstract: *The pandemic forced schools to employ “emergency remote teaching” (ERT), so teachers had to enact new kinds of improvisation, reflection, and problem solving. This study explores how practicing teachers enrolled in graduate education programs navigated the uncertainties and unique challenges of ERT in effort to meet the specific needs of vulnerable students. Findings suggest participants' equity-focused critical reflections rarely aligned with their practice, describing “survival” instructional practice inadequate for supporting vulnerable learners. Implications suggest that professional development and teacher preparation may need to adjust to foster better alignment between critical reflection with teacher praxis.*

Key Words: COVID 19, Vulnerable learners, Reflection, Uncertainty, Differentiation, Scaffolding, Intervention, Praxis, Teacher development

In March of 2020, as the COVID-19 pandemic swept the globe, school buildings shut their doors, and formal learning halted while teachers and administrators were left to piece together learning opportunities to meet the diverse needs of students and families in many different contexts (Anderson, 2020, Trust & Whalen 2020). UNESCO estimated that globally over 1.2 billion students from PreK through post-secondary in 144 countries experienced the suspension of in-person education (UNESCO, 2020). In the U.S., 48 states closed schools impacting the education of approximately 55.1 million K-12 students in over 124,000 public and private schools (Education Week, 2020). Many of these schools in the U.S. and other wealthier countries reopened instruction in online formats (e.g., synchronously, asynchronously, or a combination of the two) (UNESCO, UNICEF & the World Bank, 2020.) This shift was dubbed Emergency remote teaching “ERT” defined by Marshall, Shannon and Love (2020) as, “a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances” (p. 46).

Unfortunately, ERT, appears to have negatively impacted historically marginalized students and families disproportionately (Leonhardt, 2022). Goudeau, Sanrey, Stanczak,

Manstead, and Darnon (2021) argue that “social class is associated with unequal access to digital tools, unequal familiarity with digital skills and unequal uses of such tools for learning purpose” (p. 1273). Similarly, emerging research conducted during the height of ERT concluded that vulnerable learners—(Multilingual Learners (MLLs), students living in poverty and students with special needs—faced significant barriers to participating in remote instruction (Sugarman & Lazarin, 2020). A study by Los Angeles Unified School District determined that “English learners, students with disabilities, homeless students and those in the foster-care system had lower rates of online participation” (Esquivel & Blume, 2020, ¶ 4). This situation was not easily remedied as reports suggest that these same students had less opportunity to choose in person learning as these schools were less likely to offer in person learning (Belsha, Rubinkam, LeMee & Fenn, 2020). To further compound the challenges of remote learning for vulnerable students, many parents from all demographics reported that they feel unequipped to support their children’s learning (Garbe, Ogurlu, Logan & Cook, 2020). The New York Times and other outlets predicted that the Spring 2020 closures would have devastating impacts on all students and disproportionality so for low income students and students of color (Anderson, 2022; Goldstein, 2020). Adding to the mounting inequities many districts’ professional development programs have historically failed to address the integration of pedagogy and technology (Sugarman & Lazarin, 2020). Taken together these conditions have exacerbated the historic educational opportunity gaps for our most vulnerable learners (Darling-Hammond, Schachner, Edgerton & Learning Policy Institute, 2020).

While inequities due to structural inequality related to poverty and access continue to be well reported in the press and the literature, we know less about how equity was (or was not) addressed in ERT instruction. This research seeks to examine the ERT experiences of practicing teachers with specialized training to differentiate and scaffold for vulnerable students. While ERT may fade as students return to in person school, understanding these teachers’ experiences with technology mediated instruction and related problems of practice may be instructive for the equity-focused teacher preparation and professional development programs and provide some direction to cultivate 21st century equitable education capable of supporting vulnerable students, their families and their teachers.

THEORETICAL FRAMEWORK

Operating from a constructivist-interpretivist framework (Mackenzie & Knipe, 2006; Mertens 2007; Schwandt, 1994; Thanh & Thanh, 2015), this research draws on educational literature around teaching and reflective practice. Dewey’s (1991/1933) focus on teacher reflection is foundational in this literature. Dewey suggests that when routine teaching encounters a barrier to the normative practices of the school, then the opportunity to engage in reflection emerges. While some teachers will simply accept the common understanding of the situation, others—reflective teachers—will seek to consider multiple ways of meeting and responding to the problem or difficulty.

Building from Dewey, Schön (1991/1983) describes teacher reflection as an artistic and intuitive process. One typology offered by Liston & Zeichner (1991) describe four different kinds of reflection: Factual, procedural, justificatory and critical.

- Factual, focuses on routines and procedures of classroom teaching.
- Procedural, centers on evaluation of teaching outcomes
- Justificatory, considers the rationales for teaching

- Critical examines the social context of teach and learning and extends to contemplate the implications of classroom practice for social justice.

Teachers may apply any of these four kinds of reflection as a way to make sense of the messy events. Schön (1983) proposes that as part of the reflection process, teachers frame and reframe problems or puzzles of practice (Munby & Russell, 1990) drawing on their own practical theories and information gained in their schools. Zeichner and Liston (2014) explain that in framing the puzzles of practice, teachers “interpret and frame (appreciate) their experiences through the repertoires of values, knowledge, theories and practices that they bring to the experiences... Then, during and/or after their actions, they reinterpret and reframe the situation on the basis of the experience in trying to change it... looking at it from a new perspective.” (p. 18). Problem setting and framing and reframing would not likely occur if teachers had clear cut and straightforward solutions to their problems, however, the nature of teaching is very complex and there is often little definitive best practice research in most areas—and certainly not in ERT! Therefore, during ERT, teachers were compelled to face significant uncertainty. Building on work by Floden and Clark (1988), Capobianco (2011) offers the following description of uncertainty in teaching,

uncertainty in teaching is grounded in the important and inevitable unpredictability of classroom life...teachers...face uncertainties about instructional content, ranging from difficult choices about what to teach, to imperfect understandings of difficult concepts, to the fragile foundations of the academic disciplines themselves. (p. 646)

In the end, uncertainties lay the groundwork to move past knowns and construct our own knowledge. COVID-19’s immediate shift to remote teaching removed the option of normative practices and thereby forcing teachers to frame problems and experience uncertainty.

This research was guided by the following research questions:

1. How are teachers with specialized training (CLD, SPED, Reading) delivering instruction centering vulnerable students in the remote context?
2. How are teachers with specialized training (CLD, SPED, Reading) reflecting on instruction centering vulnerable students in the remote context and defining related problems of practice?
3. What uncertainties do these teachers in this context experience?

METHODS

This study described here is part of a larger study focused on practicing teachers experiences with remote teaching and their work with vulnerable populations. This study was approved by our Institutional Review Board (IRB). The teachers participating in this study are all practicing teachers enrolled in one of our graduate education program designed for added endorsements in one of three areas: Culturally and Linguistically Diverse (CLD) education; Special Education; and Reading Intervention. All of the participant teachers have completed the bulk of their coursework with the program.

PARTICIPANTS

Thirty-four teachers (25 CLDE, 5 SPED, 4 Reading) responded to the survey. The focus groups included 21 participant teachers (13 CLDE, 4 SPED, 4 Reading) drawn from the larger

survey pool (34 teachers). Focus group participants were all experienced, licensed educators with a mean of 5 years of experience. Selection criteria included: Enrollment in a graduate professional program to specifically support vulnerable learners (CLD, SPED, Reading Interventionist); more than 4 months teaching experience in remote/hybrid K-12 contexts; and agreement to participate.

DATA COLLECTION AND ANALYSIS

The data reported in this study were derived from surveys and focus group interviews. 34 teachers completed the survey which included 13 demographic items, 3 learning platform items, 8 Likert scale items, 11 open-ended responses. Survey respondents who met the criteria for participation in the focus groups were invited to one of five separate 90-minute focus group interviews conducted on Zoom. The focus group recordings were sent to a transcription service and once returned, they were reviewed for accuracy with segments of the audio recordings. Once all of the transcriptions were complete, they were loaded into a web-based qualitative coding application. To analyze the focus group interviews, I worked with two other faculty members who acted as auditors—I will refer to this triad as the research team. Phases of analysis included a combination of open coding, axial coding and selective coding (Strauss & Corbin, 1990, 1998). All data were analyzed for recurrent themes or patterns relevant to understand the instruction, reflective practices and uncertainties of participant-teachers. A list of themes evident from each data source was generated and a cross-case comparison by focus group was facilitated through the use of Dedoose software. Themes were listed and cross-referenced for each focus group according to all qualitative data sources indicating the extent to which a theme was present or absent in the data.

Trustworthiness for the thematic analysis was enhanced by establishing credibility, dependability and confirmability throughout the various phases of analysis, through an audit trail and member checking preliminary findings with the research team and participants (Schwandt, Lincoln, & Guba, 2007). These represent the central traits of believability or trustworthiness for qualitative data as described by Lincoln and Guba (1985). Member checking address credibility of the findings and was accomplished by sending the preliminary results to the focus group participants for review. The participants agreed that the findings represented the data drawn from the focus groups. To establish dependability (consistency of findings) and confirmability (degree to which the findings are unbiased representations of the data and can be corroborated by others) each member of the research team participated in examining the audit trail and examining the coding of the data. When there were any discrepancies, the team conducted discussions and came to consensus on a code.

In addition to the structured analytic methods outlined above, I also employed vignette analysis, a form of analysis that encourages the researcher to consider the data more holistically (Buxton, 2001) than coding. Vignette analysis pushes the researcher to consider the larger “story” of the data and is meant to be used in conjunction with other forms of analysis. Graue and Walsh (1988) describe vignettes as “narrative snippets that crystallize illustrative issues in the field. They are stories formed by the writer to make an interpretive point...with vignettes, it is the synthesis or integration of common elements that provide insight” (p. 189). Van Maanen (1988) when describing the structure of a vignette explains, “The intention is not to tell the reader what to think of an experience but to show them the experience from beginning to end and thus draw them into the story to work out its problems and puzzles as they unfold” (p. 103).

In this study, the story, or vignette, was constructed with those common themes and categories that emerged in the interviews and surveys. Ultimately, as Erickson notes, the vignette

“is an abstraction; an analytic caricature (of a friendly sort) in which some details are sketched in and others are left out; some features are sharpened and heightened in their portrayal...and other features are softened, or left to merge with the background” (1986, p. 150). Furthermore, Erickson argues that in vignettes, validity is achieved through the descriptive richness and the analytic interpretation which provides “connections to theoretical ideas and interpretive insights” (1986, p. 221).

FINDINGS/EVIDENCE

I begin with a vignette (Van Maanen, 1988) to represent the conditions for teaching and learning that participant teachers described and orient the reader to the themes and trends evident in the qualitative data. The vignette illustrates some of the challenges students and teachers experienced with remote engagement and the kind of professional learning participant teachers valued. Following the vignette, I offer more specific findings and evidence drawn directly from the data.

It is several weeks into remote instruction in the Spring 2020 and local schools have been teaching remotely since the beginning of April in order to stem the spread of COVID19. School administrators and staff in the area have worked hard to ensure internet access for many of their families, delivering mobile hotspots and when possible, hardware.

Ms. Bravo, the middle school science teacher at Lakeside Middle School, turns on her school issued Chromebook and opens Google Meet to start her lesson. She spent the weekend developing a lecture on the water cycle and has put together some questions for students to answer in breakout rooms, but she is nervous about sending students off by themselves. She has only tried this once; remote meeting technology is new to her and she misses her ability to monitor the whole class at a glance.

At 8:30 Ms. Bravo has taken attendance and walked students through an image of the water cycle, highlighting the key vocabulary and explaining to students that this cycle connects the ocean, land and atmosphere. She is ready to explain what students will do in groups. She keeps thinking about how much easier this would be in her classroom where her science word wall would display all of the important vocabulary, where she would have previewed all of the vocabulary before posting it. The word wall would have the words “precipitation” and “ground water” with visuals to help her beginning language learners, but here in this virtual classroom, she hasn’t figured out how to recreate her word wall—or her anchor charts that describe the different student discussion moves they need to engage in an academic conversation. She pushes students out to their breakout groups and sends them the link to their shared document where they are asked to describe the water cycle. She pops into Claudia’s group, only half of them have their video turned on and they are not talking, and two of them are typing on the google doc. She queries the blank square representing Claudia a multilingual learner who is approaching the expanding level of English proficiency, “Claudia, where does the rain and snow end up?” The students stop typing and everyone is silent. Ms. Bravo tries again, “Claudia, after the rain falls from the sky, where does it go?” Nothing. Ms. Bravo sighs, she isn’t even sure if Claudia is there listening, maybe she is helping her little sister, or maybe she doesn’t understand the question, or maybe she is too afraid to speak. Ms. Bravo will try and catch up with Claudia later in the day when the new remote schedule allows for some one-to-one time. She asks the group and Rebecca quickly responds, “the ocean. The rain and snow return to the ocean as precipitation or as run off through rivers that

lead to the ocean.”

Ms. Bravo wishes that Claudia had answered, but knows that they are all struggling. They all need to feel successful and encouraged, “Great job Rebecca! You were really paying attention. Well done!”

Ms. Bravo brings the whole group back together to debrief the questions and again Claudia and the other multilingual learners remain silent. In the remote faculty meeting later in the day Ms. Bravo asks her colleagues what she might do to scaffold her vulnerable students and promote discourse and engagement. Her colleagues throw out a lot of different apps she might try, “Nearpod, peardeck, seesaw, padlet, jamboard, flipgrid...” The options are overwhelming, but one of Ms. Bravo’s teammates direct messages her and says, “I was asking the same question earlier in the week and some teachers on Twitter suggested using Flipgrid for students like Claudia. The kids can record their answers as many times as they need to until they feel comfortable, and they can do it when their house is quiet, and they aren’t worried about all of the background noise.” Ms. Bravo decides it is worth a try and pulls up her Google voice app and texts Claudia, “please come to office hours at 2:30. Let’s spend 15 minutes talking about today’s lesson and looking at Flipgrid together.” Ms. Bravo texts her colleague and asks if she would teach her how to use Flipgrid so she can work with Claudia in a few hours.

This vignette highlights the conditions that teachers reported in the focus group interviews and surveys. In what follows, I share the themes and evidence that emerged from the data. Referring back frequently to this vignette as a composite narrative of the experiences many of the participants report.

TEACHING AND LEARNING PRACTICES EVOLVING (OR NOT) IN ERT

As depicted in the vignette, in the beginning of emergency remote teaching (ERT), all participants expressed significant problems of practice delivering general core instruction. These experience were elaborately detailed in the focus groups interviews in response to the initial question, “Tell us a little about your experience teaching remotely. When you began teaching you likely had some successes and challenges that shifted--How have your teaching practices in the remote environment shifted over time?” These stories typically began with descriptions of overcoming the logistics of getting all students the needed technology and attempting to establish new norms for participation and behavioral expectations. A secondary language arts teacher, JM, expressed, “*Well, we’re trying to focus on the executive functioning aspect of, of learning, of set your phone, set a timer, set, you know, give yourself that space. Where do you sit? I tell my students, there’s a difference between being in bed and sitting on your bed. Are you in your bed right now? Are you underneath the covers? Are you cuddled in? That’s the difference between sitting on your bed. Some of our students don’t have that option to be sitting at a dinner table, they don’t have that, so giving them those skills to say, I need to advocate for myself. I need to make sure that when I’m learning, it’s quiet. I need to put my cell phone on silent and put away from me, so I’m not distracted by that...So, that’s been a huge focus--establishing the new expectations and routine.*” JM’s experience of establishing expectations for learning and student behavior and engagement is reflected in the vignette when Ms. Bravo sets norms for the breakout groups but lacks the audio and visual information on Claudia to guide her support and scaffolding for the student.

The participant teachers accounts suggested that as time passed they gained some basic familiarity with the logistics and delivering general, that core instruction, but they described mostly unresolved problems of practice adjusting and adapting their remote and hybrid instruction for

their vulnerable learners. When responding to survey items and focus group questions designed to answer the research questions, “How are teachers with specialized training (CLD, SPED, Reading) delivering instruction centering vulnerable students in the remote context?” Teachers appear to feel more negative than positive (see Table 1). The survey contained three Likert items (scale of 1-5) specific to specialized instruction for the various populations of vulnerable learners (differentiation, scaffolding, and literacy intervention) where the median responses indicated that they felt somewhat negative and while some felt very negative, none felt very positive.

Table 1
Teacher Success Differentiating and Scaffolding Instruction and Literacy Interventions

Question (N=34)	Mean	Very Negative (1)	Somewha t Negative (2)	Neutral (3)	Somewha t Positive (4)	Very Positive (5)	No Respons e Recorde d
How successful do you feel you have been in differentiating instruction for students in this time of remote/hybrid learning?	2.4	7	14	4	6	0	3
How successful do you feel you have been in scaffolding instruction for students in this time of remote/hybrid learning?	2.6	6	12	2	9	0	5
How successful do you feel you have been in providing literacy interventions for students in this time of remote/hybrid learning?	2.3	6	13	4	5	0	6

These negative feelings around differentiation, scaffolding and employing effective literacy interventions were also apparent in the focus groups: Participant teachers offered challenges with student access to the engagement issues and the limited flexibility of the remote environment as explanations for their lack of success.

As would be expected, participants responses to centering vulnerable populations in their remote instruction differed depending on the kinds of students they work with: These differences aligned closely with their graduate programs. Participants enrolled in our Reading Specialist program described significant challenges with maintaining motivation amongst their struggling readers, delivering meaningful guided reading instruction, and progress monitoring effectively. Participants enrolled in our CLDE program described high levels of absences in their MLL population and a hesitance of those MLLs who did log into class to participate and speak. They described serious challenges their MLLs had with this shift to a heavier reliance on text in instruction and assessment. These teachers also noted that many of the MLLs were simultaneously caregiving for siblings while “in school” because adult family members were largely essential employees working outside the home. Participants who are enrolled in our SPED program described a group of students who struggled with the technology due to their levels of disability and need for continuous technological assistance. This group of educators were mixed in their reporting of family engagement with half of the SPED teachers noting that they felt they had developed a partnership with their families as a result of the remote conditions and the other half noting that they have had less engagement with families. All of the SPED teachers echoed A.V.’s concerns, “Trying to work through IEP goals with actual activities has been very challenging for our students and staff.”

The participants often described their instruction as survival teaching and reported that despite desires to better meet the needs of their vulnerable learners, conditions of ERT and their own limited experience teaching remotely confined their practice to a mostly transmission model of teaching and learning through teacher-centered presentation/lecture. High School Math Teacher, R.G. notes, “I’ve been frustrated this year, once remote learning began and, there was a decision made that we were not gonna ask kids to have their cameras on or use their microphones, so I’ve been teaching now for however many months to just avatars, you know, icons (laughs). And forty-one icons and trying to say please, chat, please let me know, do you understand? And it’s, just teaching to a vacuum, especially for my MLL students, this has been really bad. I’ve had several of them failing” As seen with Ms. Bravo, many of the best practices that teachers were using in their physical classroom required at the very least cameras and microphones to monitor understanding, yet like R.G., school policies and student preferences eliminated that option and made best practice instruction difficult to replicate in the remote setting. In addition, while teachers’ were flooded with technology training, they described just being overwhelmed by the options and paralyzed by indecision but felt most efficacious with vulnerable learners in one-on-one meetings. High School teacher W.H. notes, “The kids that do come to my office hours, are the ones that are doing well. I can’t force them to come and I also can’t force them to do break-out rooms, but the ones who do, are doing great.”

Critically Reflecting on Equity

Survey items and focus group questions aligned with the research question, “How are teachers with specialized training (CLD, SPED, Reading) reflecting on instruction centering vulnerable students in the remote context and defining related problems of practice?” resulted in

themes in which participants expressed deep concern for even basic equity issues of access to content and basic learning. For example, A.V. an elementary teacher in the CLD program shares,

Remote really threw me for a loop. This is had me questioning myself more than ever. I've always felt like teaching was a really natural profession for me and going remote really threw everything off. My monitoring wasn't great. I know I wasn't sheltering for my language learners well enough. I know I haven't been helping my students with special needs enough this year. I feel like I'm missing a whole bunch of stuff and in a lot of ways, it feels like information overload. I've got so many different programs and things that could be helpful, I can't pick one. And so, that's made things almost more difficult for me. On top of that, because I'm teaching language learners, it's really difficult to get them to converse, stay on top of the work and make sure that my directions are really clear for them. I feel like I have a harder time doing sheltering. I feel like a weaker teacher this year and it really has me concerned and frustrated.

Many of the participants shared these sorts of stories which often extended beyond the factual and procedural categories of Zeichner and Liston's teacher reflection typology and demonstrated a more critically reflective stance addressing barriers for specific populations to effective teaching and learning. In this case, A.V. clearly recognizes that her populations of language learners are not being well served in ERT but she is unable to act to effectively address the challenges she identifies. The categories that emerged from the data around reflection in general and critical reflection specifically included the following challenges: limited resources; lack of adult supervision and support in the home; limited student and teacher technology skills; absence of resources to support students' basic needs such as food, trauma both from the pandemic and from the larger racial unrest; refusal to participate; lack of peer connection/social aspect of development. Many of the participating teachers expressed deep concern for equity and social justice for their vulnerable students and their families. For example, S.V. notes,

my biggest concern is around access to internet and access to technology. We were able to give all of our kids a Chromebook to take home, but you'd still hear a little bit about, "Well, this Chromebook's not working or I'm having this problem with it." And then the access to internet. Xfinity was reaching out to our families and giving them internet, but the speed that they were getting was pitiful, where they really couldn't even participate a Google Meet. When it comes to solve that problem, I don't know how without improving our social safety net. To ask the government to spend a lot of money and invest in broadband access for all communities. Without the money, I'm not sure what the, the solution to that is in terms of things that we can control.

S.V. demonstrates a critically reflective stance on digital equity, yet he recognizes this as an issue outside of teachers' control.

One notable exception to connect critical reflection with meaningful transformative action was seen in the initial phase of the pandemic when focused on student/family access to technology. Many participant teachers detailed extraordinary efforts by themselves, their administrators and their school communities to address limited or lacking technology and internet. Beyond that, some

of the Special Education teachers described themselves and their paraprofessionals going to students' homes in order to teach students and caregivers how to use the basic technology necessary for remote instruction.

Closely related to the critical reflection was the kinds of uncertainties that participants reported. The most common uncertainty shared by most participants related to the shifting schedule and everchanging organizational conditions created by the pandemic. Within their instruction, participants most reported uncertainties were related to providing the specialized supports, scaffolds, and differentiation to vulnerable learners (n=13). For example, one common concern was well articulated by secondary educator, D.S.

I'll be 100% honest and say I'm really struggling with this. I feel like I'm failing my vulnerable students because I don't know how to help them. It takes so much longer online. So... And, like, I keep thinking about, like, the word walls I put on the wall, how am I supposed to, you know... do this online? I, I honestly, I feel like I'm failing them. I don't feel like I'm doing a good enough job trying to reach them."

The next most frequently reported uncertainty related to access and equity to technology and adult support in the home environment (n=10)—participants also described their uncertainty around what was preventing students from logging in, engaging and demonstrating learning. They shared that these uncertainties made problem solving very difficult and felt that their relationships with students and families were less effective as a result.

DEVELOPING MORE EFFECTIVE REMOTE PEDAGOGY

All of the participants noted that when they were initially thrust into the remote environment they faced significant uncertainties around how to adapt any instruction into this new remote format. The degree of uncertainty lessened as communities worked together to reshape instruction and develop instructional routines adapted to this format, yet even one year later many of the participants described only small gains they have made in their remote online instruction. This process of learning and developing more effective practices was highlighted by veteran Special Education Learning Specialist, C.D. response,

With the shift to remote instruction. there was a lot of professional development. It's almost not enough and too much at the same time. I was really overwhelmed. I tried to take advantage of everything that was out there. I would sit for an hour and not have a clue what they were talking about. They were already starting at a level a little bit above where I was, so I didn't know what was going on and it was overwhelming. There was a lot at the beginning, like, too much to take in all at the same time. You had to take those little pieces and just practice a couple of little things. And, it was word of mouth, you know, what's working for somebody else and what can I try? And, that worked. I felt like, good, I have one tool." (laughs).

C.D.'s reflection on her experience with her own learning was reinforced by other teachers who also described an emphasis on technology in their school and district organized professional development.

While these small gains likely improved teachers' core instruction, 86% of them still expressed significant difficulty engaging students and differentiating for their needs one year after

our state went remote. Three participants did report “turning a corner” where they were gaining some sense of efficacy in delivering remote instruction and strategies to support their vulnerable learners. They attributed this shift to more experience with remote instruction, shifts in the instructional schedule that allowed for more one on one meetings with vulnerable learners and to their professional communities which they extended into virtual spaces such as twitter and facebook.

District level instructional coordinator, A.M. explained what she is seeing in her district,

There's so much information and direction coming out now. We've been at this since March and there are books that are coming out, you know, Fisher and Frey did the distance learning playbook and Doug Lemov, he's come up with some distance learning stuff. We're finding just from the numbers of teachers that are trying things, what's working and what isn't working. In our district we're kind of trying to turn that corner -- getting out of survival mode and now we know better. Now we need to think about quality instruction and what that looks like online... And now we're seeing the results of teachers all over the planet. Having done this since March, they're communicating with each other and we're finding out what works. And now we're trying to kind of pivot towards that. And I would say that from a professional development perspective, social media has become a real source for some serious PD because that's how teachers are communicating with one another on a day-to-day basis. "Hey, I tried this in my l- class today, and it was great. I am gonna do it differently. I am going to do it this way tomorrow or whatever." It is absolute real time PD and teachers that never ever would have gone to Twitter for PD before March of last year, are now on Twitter and they're on Facebook and they're in Facebook groups and they're learning from each other. And that is what is gonna save us.

Like C.D., A.M. noted that a large-scale focus on developing and sharing effective practices in the online and remote environments through published books, social media and regional educational communities (state, district, school), provides tested guidance toward improvement.

CONCLUSIONS AND SIGNIFICANCE

Participant teachers were clearly interpreting and framing their experiences and problems of practice. They were engaging in both surface-level factual reflection and deeper levels of reflection about centering vulnerable students in their remote instruction, however, participants limited instructional technology knowledge and experience coupled with uncertainties around the root of some of the problems limited their action and truncated the reflective process to mostly reflection without action. Exceptions seem to be at the initial phase of ERT where schools and teachers organized technology distribution and teachers and paraprofessionals went to students' homes to teach students and families how to access the learning materials. The latter was similar to a finding by Schuck and Lambert (2020) on the phases of ERT that SPED teachers in their study reported, “The first [phase] was making initial contact with families and setting up the technology. Academics were not the focus during the first stage (p. 325).” Teachers working with vulnerable populations in Schuck and Lambert’s study like this study, addressed the very important need to

support families access and activation of technology in order to deliver instruction remotely. This of course is an issue of equity in the US where the Harvard Business Review reports,

The digital divide also reinforces racial inequity. Nearly half of Americans without at-home internet were in Black and Hispanic households. With a 14-point gap in broadband access between white and Black households with school-going children, and a 12-point gap between white and Hispanic households, we find that up to 40% of disconnected K-12 students from Black, Latino, and indigenous communities struggle with insufficient digital literacy, language obstacles, and other disincentives to use the internet and find ways to gain better access (2021, ¶ 9).

However, beyond addressing the digital divide together with their administrators and district leaders, participant teachers reported few actions to address the equity concerns within the instructional space. They appeared to be aware of educational inequity for vulnerable students, but only in those few cases were participant teachers able to progress through reflection to a level of praxis which Freire (1972) describes as “reflection and action upon the world in order to transform it” (p. 52).

Implications of these findings suggest that support for transformative action may be needed at the points in which teachers are stuck in cycles of problem posing and critical reflection. While an immediate and complete restructuring of teaching and learning such as ERT may be behind us, lessons could be transferred to more typical instructional problems. Not unlike previous research, this research suggests that school and district professional development and teacher preparation may be useful supports if they can be more responsive to the problem posing and uncertainties identified by practicing educators as they happen and structure physical and virtual time and space to gather and share as communities of practice (Darling-Hammond & McLaughlin, 2011; Patton, Parker, & Tannehill, 2015; Poekert, 2011; Vangrieken, Meredith, Packer, & Kyndt, 2017). Addressing problems of practice and uncertainties in real-time and providing ongoing engagement through social media communities may be strategies that can be used to foster better to alignment between critical reflection with teacher praxis (Freire, 1972). More research is needed to determine additional strategies for connecting critical reflection and action, or praxis so teachers’ practice in remote or other technologically mediated contexts can actually cultivate contemporary equitable education for vulnerable learners. Focusing research on teachers who felt they had “turned the corner” might offer a more complete picture of the process beyond stuck in reflection and possibly through to praxis. However, additional research should be conducted to determine where or not these teachers had a positive impact on student achievement.

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