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The Effects of Distance Learning on Teachers in a Rural Title I Elementary Education Setting

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Following the sudden switch from in-person to distance learning during the COVID-19 pandemic, much research has been conducted about student learning. However, little information is available about the perception of rural teachers during this time. In this qualitative study, researchers interviewed three rural Title I elementary school teachers. Through thematic qualitative analysis, researchers found that there is an intimate link between the rural community's beliefs about education and the way the teachers perceive their roles in distance learning. The teachers in rural communities view learning and teaching as a social activity that was inhibited by the challenges faced during distance learning despite the support of the community and administration. Teachers overwhelmingly felt that the distance in distance learning inhibited the ability for them to teach and concluded that true learning happens best in an in-person setting.

***Keywords*: education, teacher perception, social learning, distance learning, technology**

With the COVID-19 pandemic came an immediate need to switch to distance learning. This sudden switch to distance learning was trying for many, rural educators included. The transition from in-person to online teaching occurred without warning, without knowledge of how long teachers could expect to teach in a distance learning format, without initial resources, and without a formal plan. As a result, educators across the world made a swift change in the way that they had to approach teaching (Bojović et al., 2020). Many learned that much of what "worked" in the physical classroom was a product of the physical classroom, leaving teachers uncertain of what pedagogical tools could work in this new educational space. Teachers were left to navigate the waters of online teaching alone.

For the researchers of this study, this posed the question: in the era of COVID-19 pandemic and distance learning, how did the shift from in-person teaching to distance

learning affect teachers? The researchers sought to answer this question in regard to rural elementary school teachers specifically, with three research questions: (1) What were the expectations of the teachers during distance learning in a specific Title I rural school?; (2) What challenges were faced by teachers during distance learning in the Title I rural school that hindered the ability to meet the expectations?; and (3) What support was in place concerning distance learning to help teachers in the Title1 rural school meet expectations?

While previous investigations studied how rural teachers use technology (Croft & Moore, 2019; Gray et al., 2010), these investigations did not examine rural teachers' perceptions of expectations in the context of emergency distance learning. Additionally, Kormos and Wisdom (2020) examined online pandemic teaching in a rural setting; however, their quantitative study focused primarily on the digital divide. This study employed a qualitative approach and was unique in that the researchers focused not on the roles of and ramifications for parents (Abuhammad, 2020; Dong, 2020; Wu et al., 2020) and students (Azevedo et al., 2021; Brooks et al., 2020; Donnelly & Patrinos, 2021; Gore et al., 2021; Gonzalez et al., 2020; Kuhfeld et al., 2020; Pier et al., 2021) during distance learning, which largely constitutes the research to date, but instead on the expectations rural elementary teachers perceived during distance learning.

The purpose of this study is to examine the unique perspective of rural teachers' experiences during emergency distance learning, shedding light on the expectations teachers felt they needed to meet for students, parents, and administration along with the supports in place as well as the lack of support in meeting those perceived expectations. As the perspective of rural teachers during emergency pandemic distance learning is absent from current research, this research contributes to rural administrators' understanding of their teachers' perceived expectations so that these administrators can better support rural teachers should online teaching becomes necessary again. Additionally, the research provides insight as to the challenges faced by rural elementary educators during distance learning, which may influence future curricular considerations for teacher preparation programs.

Literature Review

Defining Rural: Setting and Context

Due to the difficulty in defining the term rural (Arnold et al., 2005; MacGregor-Fors & Vázquez, 2020; Sher, 1977), the researchers understand that different rural communities can hold different characteristics of the rural definition. Without disclosing any identifying markers to the particular school district under investigation, the researchers of this study have identified the district as "rural remote" (Johnson et al., 2021) due to the following features: a) the school district is classified as serving 1,000–1,999 students in the entire district by the state school report card (Profile Methodologies, 2019); b) the community is more than 25 miles from the nearest "urbanized area" as

defined by NCES (National Center for Education Statistics, 2006); and c) the community is more than 10 miles from the nearest "urban cluster" as defined by NCES (National Center for Education Statistics, 2006). The distinction among rural school types based on the proximity of a rural school to an urbanized area is an important characteristic when examining achievement scores across grade levels and subjects. Students in rural-remote schools, such as those attending the school in the present study, historically have been shown to have the lowest achievement scores among rural school types, which include rural-fringe (within 5 miles of an urbanized area), rural-distant (between 5 and 25 miles of an urbanized area), and rural-remote (25 miles or greater from an urbanized area) designations (Johnson et al., 2021).

While defining rural proves an area for further research in its own right, "rural districts have valuable stories to tell" (Sherwood, 2001, p. 1). Researchers of this study seek to share the valuable experiences of one rural district's elementary school teachers. Keeping in mind the diversity of rural contexts, this study does not attempt a universal application to all rural situations, nor does the research attempt to compare this particular rural milieu to other rural contexts or its suburban or urban counterparts. The researchers do, however, attempt to demonstrate the elementary teachers' perceptions in a specific rural context during distance learning. As rural education proves to be severely under-researched (Arnold et al., 2005; Bryant, 2010; MacGregor-Fors & Vázquez, 2020; Sher, 1977; Sherwood, 2001), researching teacher perception during distance learning, specifically in a rural context and with a focus on the rural community, fills a current gap in research. As Sherwood (2001) points out:

> Missing information of this kind not only keeps us from learning more answers. It keeps us from asking the right questions. More solid and dependable information from and about rural schools would increase their ability to present a unified, powerful rural America to legislators and other policy makers. The lack of data insures [sic] that many rural issues will continue to be ignored. (p. 3)

This research aims to provide a space for three rural elementary educators to share their specific experiences during distance learning.

Perceptions of Rural Teachers

While Gutierrez de Blume and Bass (2021) focused on students' identities being linked to their rural environment, the same concept can be applied to teachers, especially those teachers who have lived for their entire lives in the rural town in which they teach or who reside in the same rural community in which they teach. In these instances, teachers' "roots are closely linked" to their [established] identities; as rural [teachers continue] to conceptualize their place in the world (Gutierrez de Blume & Bass, 2021, p. 285). Adding to the idea that teaching and learning is established to teachers' social identities, Wertsch (1995) explains that "individuals have access to psychological tools and practices by virtue of being part of a sociocultural milieu in which those tools and

practices have been and continue to be culturally transmitted" (p. 141). Tofel-Grehl et al. (2021) found that in order to prevent cognitive overload for rural teachers, teachers need increased scaffolded professional development for learning new technology use. This phenomenon was identified through private reflection and may be due to "a lack of prior knowledge and experience teaching . . . technologies" (p. 56).

As teachers learned how to teach online as opposed to in person, teachers attempted to use teaching tools outside of their physical classroom as they taught apart from their colleagues and peers. Thus, their normal social environment was replaced with a more solitary version of teaching. When examining how they grappled with online teaching, it is important to note that positive teacher perception proves a key ingredient in successful use of technology in teaching (Chung, 2011; Edwards, 2016; Heath, 2017; Islim et al., 2018; Khlaif, 2018; Kormos & Wisdom, 2021; Prasojo et al., 2019; Yang & Kwok, 2017). It is the change of the sociocultural milieu, from in person to online, and the way in which teachers' perceptions, specifically rural teachers with their strong sense of community (Lyson, 2002; Sherwood, 2001; Tieken, 2014; Zuckerman, 2020), changed during distance learning that the research seeks to understand.

Sociocultural Theory

As there is no unifying theory that can be applied to the rural educational experience specifically, researchers approach the specificity of rurality through the lens of place. Pinar's (2015) idea of place supports the framework as the teachers of this study were specifically situated in a rural Title I elementary school setting. As Pinar points out, "Place is geographical . . . but it is also historical" (p. xii). Thus, the site of education extends beyond geography or a specific building. The place itself holds history and culture. This is especially poignant in rural towns, which tend to heavily value community. Thus, the interactions and perceptions of teachers are highly situated in the specific community of their rural setting. This idea that place and society form one's identity is supported by Vygotsky's (1978) sociocultural theory. Johnson (2009) details the relevance of the theory: "Knowledge of the world is mediated by virtue of being situated in a cultural environment and it is from this cultural environment that humans acquire the representational systems that ultimately become the medium, mediator, and tools of thought" (p. 1). When considering the way in which distance learning affected teachers and the expectations teachers had, both expectations they have of themselves along with any perception of external expectations, one must consider the idea that learning is a social experience. Vygotsky's sociocultural theory considers the many ways in which teachers and students connect and interact with learning, viewing the activity of learning as a social one. In fact, Vygotsky (Penuel & Wertsch, 1995) describes this "living through" experience, *perezhivanie*, in which teachers are a part of an ecosystem of learning, explaining that it is the joint experience of learning that Michell (2016) extends to ideas of

identity, social emotional learning, classroom culture and dialogue, and the teachers' understanding of their own learning experience.

It would follow that teaching is also a social activity, characterized by teachers' own views on how the ecosystem of a classroom should look and feel. Further, Vygotsky (1978) characterizes teachers as mediators, a role that casts teachers as present and available to students to support learning, which can also be characterized by teachers' own perceptions on what that mediation looks like. Vygotsky describes the environment as a context that is key in generating learning, an environment that is carefully constructed and mediated by the teacher for the support of students, which, again, is partially dependent on the teacher's view of what constitutes a productive learning environment. The teacher's personal views on learning, her pedagogy, shapes the classroom environment and the learning experience for both the teacher and the students. This general expectation that teachers should be present to work closely with students and student groups proves to be the crux of expectation upon which much of the teacher expectations rest, making it the unifying theory that frames the research.

Keeping in mind that Johnson (2009) connected these ideas of sociocultural theory and teacher cognition when considering that this "can be understood only in light of the cultural practices and circumstances of their communities—which also change" (Rogoff, 2003, p. 3–4), the question of what a "present" teacher means becomes a question in itself. As the construction of these communities changed from in-person to distance learning, this question prompted researchers to wonder if distance learning changed the expectations for how teachers are to be present for their students. In this study, researchers examine the Vygotskian idea that teachers are central to the creation of the classroom learning experience. Here, researchers consider how this relates to the rural experience in which there is a strong sense of community (Lyson, 2002; Sherwood, 2001; Tieken, 2014; Zuckerman, 2020) as it clashes with the physical distance that distance learning creates.

Distance Learning

Distance learning existed prior to the pandemic, and there is much research surrounding the idea of learning remotely via technology. Even in pre-pandemic times, many were optimistic about the potential of online learning (Hobbs, 2004). However, despite the availability of online learning, educators have expressed mixed feelings (Irvin et al., 2009; Kormos & Wisdom, 2021; Marietta & Marietta, 2021; Mills et al., 2009; Zuo et al., 2020). Distance learning, specifically for rural districts, has been lauded by some for being able to bridge the distance gap for rural areas, helping students who may not have physical access to specific educational opportunities to better participate (Irvin et al., 2009; Kormos & Wisdom, 2021; Marietta & Marietta, 2021; Zuo et al., 2020). However, it has also been noted that there is a disconnect between the educators presenting information in courses and students taking the courses (Irvin et al., 2009). In many rural

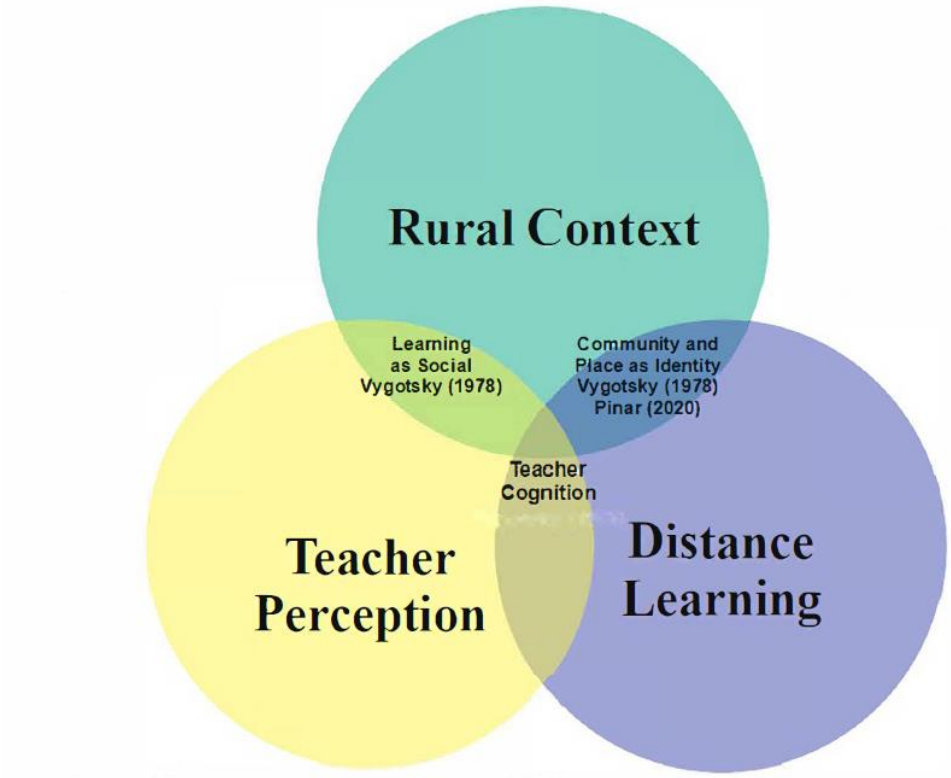
areas, the struggle for quality internet connection remains a hindrance as well (Boerngen & Rickard, 2021; Hobbs, 2004; Kormos & Wisdom, 2021; Marietta & Marietta, 2021; Weiss & Reville, 2019).

Intersection

The intersection of the rural context, Vygotsky's sociocultural theory, and distance learning frames this study (see Figure 1).

Figure 1

Intersection of Rurality, Sociocultural Theory, and Distance Learning



Methodology

Context

The study was conducted at two school sites, Small Town Elementary, grades 3–5, and Country Lane Elementary, grades Pre-K–2, (both names are pseudonyms). Both schools are located in a rural school district that receives several federal grants, including funding for Title I services (serving low-income students) and Title VI services (serving Native students). The entire district serves approximately 17,000 students in grades Pre-K–12th grade across a large rural area, which stretches to include two towns and the surrounding homes and covers more than 200 square miles. The district approached distance learning in a unique style in an attempt to maintain an in-person learning option

for students, keenly aware that many parents leaned heavily on the school and that many students needed to attend school in-person for specific educational purposes and to receive breakfast and lunch. To accommodate these community needs, families were allowed to choose if they wanted their students to attend in person or virtually for the entire semester. Additionally, the district issued a letter from the superintendent every Friday, enumerating the number of COVID-19 cases in the school and issuing a color to indicate the severity of COVID-19 spread in the community. On “green weeks,” families of students attending in person were encouraged and expected to send their children to in-person learning barring any household illness. On “orange weeks,” parents of students attending in person were encouraged to keep their children home to learn virtually if they had the means to do so. On “red weeks,” the district strongly suggested any family with the capability to learn virtually to do so, though this was not a requirement. School remained open for students who attended in person regardless of the color status. Using this method, the district aimed to slow the spread of COVID-19 by minimizing the numbers of students attending in-person classes while allowing the school to remain open. For teachers, however, this meant that each week, their in-person classrooms and distance learning classrooms looked different. With each report, teachers could expect that some students may be learning virtually for the week while others would remain in person. For the entire year, teachers in this district taught a full curriculum to in-person students and distance learning students simultaneously, and the roster for in-person and distance learning students changed weekly. Additionally, students who began the week in-person but were absent mid-week added to the everchanging in-person and distance learning groupings.

Participants

Participants were recruited from the two elementary schools in one rural school district via email. As the district has only one school per age group (i.e., Pre-K–2 and 3–5), participants were recruited from the younger elementary grades from one school and the older elementary grades in the other elementary school. The lead researcher emailed the principals of both elementary schools, who disseminated the emails to all staff. The email explained the purpose of the research and requested participants volunteer their time. Three teachers volunteered to participate in the interviews. Gina, the virtual preschool and kindergarten teacher, and Stacey, a third-grade teacher, taught all content areas to self-contained classrooms. The fifth-grade teacher, Melissa, provided math instruction to multiple sections. Upon agreeing to volunteer, each of the teachers signed a consent form detailing their agreement to participate in Zoom interviews and releasing the information obtained from the interviews to be used in this research study. Participants were not compensated in any way for the study. Each of the three teachers were given pseudonyms to ensure anonymity. All three teachers are female, and one of the three teachers interviewed has lived in the rural town in which they teach for their entire life. The remaining two teachers have lived in the area and have taught at the school for 10

and 15 years respectively. All three are active in the community. It is also important to note that each of the teachers were familiar with technology use, though each had varying degrees of active use in the classroom. One teacher, Melissa, had previously practiced a flipped classroom as part of her in-person teaching. Both Stacey and Gina were familiar with technology and had used it on occasion but were not reliant on the daily use of technology during their in-person teaching.

Methods

This study is qualitative in nature and consists of semi-structured interviews with three teachers followed by a qualitative thematic analysis of the data collected through the interview process. The interviewers reviewed the questions from the NNSTOY survey *Teacher Perspectives on Factors Influencing Effectiveness* (Behrstock-Sherratt et al., 2014) and adapted several of the questions to fit this study. Questions asked included questions about the challenges and supports for teachers as they adapted to distance learning from in-person teaching, their perceptions on how effective distance learning was, and the expectations they felt as educators during distance learning (see Appendix A). The questions were developed to elicit information from the participants that could provide detailed explanations about perceived and explicit expectations when teaching online. Researchers conducted Zoom interviews with the three rural elementary teachers, following up with two of those teachers, to discuss the expectations of rural elementary school teachers during distance learning. Zoom interviews were recorded with the automated transcription feature. After the interviews, researchers listened to the interviews and reviewed the recorded transcription simultaneously, correcting any errors, to ensure the accuracy of the transcriptions. In order to maintain trustworthiness (Lincoln & Guba, 1985), the researchers requested the anonymous participants (dependability) review transcribed interview data (confirmability) to ensure their data was correct (credibility).

Data Analysis

The researchers analyzed the data collected through a thematic analysis using a method described by Bloomberg and Volpe (2008). During a thematic analysis, the researchers examine the data to identify themes that emerge. The researchers worked together to read and review the data collected from the transcribed interviews. This step in the analysis process allowed the researchers to get a sense of the data as a whole. The researchers coded the data and developed categories. During the last phase of the analysis, the researchers combined, collapsed, and/or eliminated codes (Bloomberg & Volpe, 2008). Additionally, the three researchers worked together to analyze the data having discussions regarding each piece of data and determining codes and categories. Through the structured data analysis, the researchers were able to identify three themes: Online Teaching, Administrators' Expectations, and Communication (see Table 1). Under each of these three themes, specific subthemes also emerged. The first theme, Online

Teaching, included subthemes of teacher perceptions of online learning, teachers going above and beyond requirements, the challenges and supports of online instruction, and the challenges and supports of responsive teaching. The second theme of Administration's Expectations included subthemes of the challenges and supports of required educational technology. The third theme of Communication included the subthemes of supports and challenges in communication with both parents and students.

Table 1

Major Themes and Subthemes of a Thematic Analysis of Semi-Structured Interviews with Rural Elementary Teachers about Teaching during Distance Learning

Online Teaching	Administrators' Expectations	Communication
• Teachers' Perceptions of Online Learning • Teachers Going Above and Beyond • The Challenges of Online Teaching • The Supports of Online Teaching • The Challenges of Responsive Teaching • The Supports of Responsive Teaching	• The Challenges of Required Educational Technology • The Supports of Required Educational Technology	• The Challenges of Communication with Parents • The Supports of Communication with Parents • The Challenges of Communication with Students • The Supports of Communication with Students

Findings

Online Teaching

Teachers' Perceptions of Online Teaching Compared to In-Person Teaching

In the interviews, the researchers asked the teachers to compare their experiences with teaching online and in-person. The responses presented a clear preference for in-person teaching over teaching online. Much of the discussion centered around the idea that teachers felt they were not actually teaching initially, a notion that can be connected to the sociocultural theory (Vygotsky, 1978) and place theory (Pinar, 2015) as the teachers felt as if their context had shifted from one of social learning, particularly important to the rural community, to one of independent assignment completion. The teachers made clear that "learning is social," as was clearly articulated by participant Stacey. They did not view distance learning as learning but rather as task completion. Gina explained the disconnect: "I put out the information on a regular basis that I'm, you know, doing the same lessons that they would be doing in-person but not necessarily that I'm teaching them."

The shift in expectation of what teaching is proved trying for teachers, particularly in the sense of shifting away from the rural concept of community. In two of the three interviews, teachers broke down in tears as they detailed the struggle from switching to online from in person. Gina was especially vocal in her struggle: "I really hated it at the beginning. I loathed it, I cried. I did not like it. I was like this . . . I'm not teaching them. I really did not like it, and it just . . . I missed the kids being in the room." As she detailed her experience with teaching online as opposed to teaching in person, she explained that while her experience did improve over time, she never felt the connection to her students when teaching online in the way that she felt connected when teaching in person. She found it particularly difficult to not be in the same physical space as her students when they were experiencing the magic of learning, stating "[I] figured out ways to do things that I love to do in the classroom. It wasn't the same, but you know . . . and I didn't see [their] reactions." While the teacher who worked with older students in one specific content subject did seem to have an easier time connecting to her students, the overall message of the teachers was clear: "If I had the choice of being in the classroom or doing it virtually, I would much rather be in the classroom."

Teachers Going Above and Beyond

As there were no clear guidelines when distance learning began and as the administration was careful in not expecting extensive requirements, teachers were largely left to define their role as a distance learning teacher for themselves. Researchers found that all three teachers consistently discussed surpassing expectations of administration, colleagues, and parents, frequently without even being aware that they were discussing remarkable feats, displaying a continued dedication to their community, even amid

pandemic living. Their dedication to their students was evident as each teacher detailed stories of how they worked to ensure students received the best educational experience they could provide, ironically often lamenting that they felt they were not doing enough to support students.

All three teachers discussed utilizing videos to teach, all of which the teachers created themselves. While posting videos created uniquely for students was not a requirement imposed by administration, it seemed a common practice among the educators. Teachers interviewed were especially cognizant of the students who were distance learning for the week, considering how they as instructors could best incorporate at-home learners into classroom learning. Melissa noted that recording herself teaching became common practice: “I have my video up, and whatever I’m teaching I’m recording.” Gina explained that she recorded audio directions and incorporated them into virtual worksheets to ensure parents and students understood how to complete the work. Many teachers also had YouTube channels specifically to support students and parents.

Gina, who taught only virtual students, worked diligently to ensure that her virtual students were able to participate in some of the more hands-on experiences of the classroom. For example, she observed, “We always hatched butterflies at the end of the year. So, we get the little caterpillars in the net and everything. And so, I would do a video each morning of the net with the caterpillars so they could kind of see it, and then I would send it. And I created an online journal for them to draw pictures on there.” The teachers proved their creativity as they told story after story detailing ways they incorporated special events into learning for distance learning students, such as grab-and-go craft events, outdoor social hours, a socially distanced egg drop event, and even social Zoom hours. None of the previously mentioned activities were required or expected by the administration. These were instances of teachers exceeding expectations in order to provide what they perceived to be the best educational opportunity for students and to ensure students continued to feel connected to their classroom community.

The Challenges of Online Teaching

Teaching online in a rural setting has many challenges in its own right (Kormos & Wisdom, 2021), including slow or spotty internet, low bandwidth, or a complete lack of internet connectivity in some rural places (Boerngen & Rickard, 2021; Hobbs, 2004; Kormos & Wisdom, 2021; Marietta & Marietta, 2021; Weiss & Reville, 2019). The area in which the study was conducted proved no exception. The challenges of online teaching proved numerous but not insurmountable. Teachers expressed the initial struggle to be the most arduous. Again, the perceived value of teaching in a physical classroom seemed to inhibit the ways in which teachers were able to transfer their practice and pedagogy to the online space. While the district did offer training on how to use Google Classroom, much of the ideas came from the staff simply sharing new ways with one another on how to teach online. Gina noted, “I felt like it wasn’t, I wasn’t really teaching, and so it took a

little while and took a lot of research [to] [*sic*] me trying to figure out ways that I could do it. But once I figured that out, it was much better." Though that same teacher ended her commentary with an emphatic message: "I still would not do it again if somebody asked me to." Stacey noted that "It took [me] probably, I would say three to four months to really get in a groove and figure out [like] what I wanted my classroom to look like."

Further, the teachers expressed a general sense of feeling overwhelmed despite the many supports detailed below. One noted, "I've seen the pressure on a lot of teachers. I saw it in our building sometimes where people were just like, 'I can't.' It's the pressure the person puts on themselves. I think that's probably the main thing that I've seen." Stacey specifically addressed these feelings of inadequacy, saying "I feel like I could have done more . . . I was very overwhelmed." While the sense of teacher dedication to their students is not rural specific, the rural context certainly plays a role as the teachers feel a responsibility not just as educators but as community members.

Melissa, the teacher who seemed to have the easiest time transitioning, already had an established Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2007) from her previous flipped classroom pedagogy. Thus, she did not struggle in the same way with the "change in milieu" (Wertsch, 1995), nor did her perception of the sociocultural order (Vygotsky, 1978) need to be addressed as it did in the experiences of other teachers. Both the commentary of teachers stating that time and experience made the transition easier along with the fact that the teacher with higher technological experiences had a more positive outlook suggest that additional educational technology training and experience could potentially support teachers with distance learning.

The Supports of Online Teaching

Each of the teachers interviewed sang the praises of their building level and district level administration, acknowledging that the administration did their best in the circumstances of COVID-19 and expressing their gratitude that the administration demonstrated understanding and support as teachers attempted to navigate new teaching practices. It should be noted that many of the teachers saw the administrators as both a friend and colleague, and many of the teachers are, in fact, related to administration, which is not an infrequent occurrence in rural districts. Stacey had a particularly collaborative grade-level team, and she spent much of her commentary explaining that any success proved to be largely due to the level of trust, equity of work output, and general sense of camaraderie in her grade-level team. When attempting to summarize her team, she said simply, "we trust [each other] to make great plans." Further, both Stacey and Melissa indicated that while there was no pressing expectation to try out every great idea that a colleague tried, most of the faculty were eager to share ideas with one another, supporting each other in trying new strategies or in using new software in

online and hybrid learning. They voiced that their environment was extremely supportive at a building level.

While Gina did not voice the same level of collaboration in her building level, she did mention instances of collaboration among grade levels and explicitly expressed that the administration was extremely supportive both in general and when she needed specific support with struggling students. Overall, Stacey seemed to have the most positive experience due to her continued collaborative relationship with her team. While Melissa and Gina also felt supported by administration, it was Stacey's community-based teaching that she continually referred to as the most effective support during distance learning.

The Challenges of Responsive Teaching

The struggle to be able to mediate student learning was a common theme. All three teachers indicated that mediating learning proved difficult. Gina expressed that in order to support students she worked "24/7," acknowledging that in order to help them when they needed support, she was working when students worked. Melissa expressed similar sentiments, usually responding to student struggles with a personalized video. Stacey also explained that students all worked at different times of day, depending on parent schedules, so she felt as if she always had to be available to support students at the time they needed her. She recollected, "whenever we were all distance learning. I'm crazy. I would sit at the computer and just wait, you know. I would wait, and things would be turned in, and I'd be like, Oh! You didn't do this right, and I'd send it right back to them in hopes that maybe they would see it, you know." Her desire to support her students was evident as she explained numerous instances of mediating student learning, teaching parents so that parents could teach their children, and working to ensure students understood assignments.

Addressing the challenges of responsive teaching during distance learning produced some of the most heartbreaking moments of the interviews. In addition to the unrealistic work schedule in which teachers were working around the clock—"I've had messages from parents at 10 o'clock at night"—each of the teachers addressed the same concern: "I'm not reaching all the kids." Even as Stacey talked about responding to individual students as they worked, she did lament that little differentiation was provided to students, finally stating, "you just can't do it all." Teachers explained that mediating in-person learning proved different from mediating online learning due to the factors that accompany rural living, such as the difficulty faced by working parents trying to teach their children in the evenings, spotty internet, and children without internet who had to work on schoolwork outside of their homes. The physical distance left teachers unable to respond to students quickly or at all if students did not participate in learning.

The Supports of Responsive Teaching

Gina's tearful story of working to support a failing student proved emotional as she detailed the experience of working desperately to find any way to support the struggling student: "I've cried about this because I don't know what to do to help her." The story of support was heartwarming, however, as she elaborated on her heartbreaking discussion with administration, who assured Gina that she was absolutely doing her best, and comforted her as she cried, not for the first time, over her own perceived failure of not reaching this student. "She [the administrator] said, "so that's not on you." She said, "you've done everything you can." Even as the administration proved supportive in the instances of teachers trying to mediate student learning, responsive teaching in general proved to have its own set of challenges and supports.

Administration's Expectations

The beginning of distance learning proved a learning experience for everyone, including administration. All three teachers discussed administrative expectations of teachers casually, noting that the real expectation was that teachers are "making sure [they're] doing everything [they] can to continue the learning." Melissa noted that while administrators would express admiration for a specific teacher's approach, "there's nothing specifically that I can think of that they sent out and said every teacher needs to be doing this." All teachers agreed the messaging from administration was clear: "they (the school) were all like saying, you know, do what you can." Stacey did note that when there were specific expectations or suggestions, those were emailed to teachers initially, "because we were trying to get our sea legs under us, that [expectations and information] was just communicated in staff meetings, emails, you know as issues came up, you know that we, you know, didn't plan for. She would communicate those things out." While there were no initial expectations laid out, some basic policies did emerge as distance learning continued. These expectations were minimal. Teachers should have regular office hours. Teachers were also required to have at least two faculty or staff present in any Zoom call with students. Additionally, the expectations centered around required educational technology and timely communication with parents and teachers.

A faculty Google Classroom page was later set up so that teachers in that building could access resources as needed. It included "everything she [the building principal] expected in writing." All three teachers acknowledged that the uniqueness of distance learning during a pandemic meant that complete plans were not prepared ahead of time, and there was a general sense of understanding that plans evolved as needed. The overwhelmingly positive relationship between the administration and teachers was likely influenced by both the friendships and familial ties mentioned previously.

The Challenges of Required Educational Technology

There were specific expectations that teachers use the required educational technology although even those requirements were minimal. Gina noted, “The district wants us to use Kami;” “they want us to use Clever;” “They expect us to use Google [Classroom], for sure.” Even with these requirements, there appeared to be leeway in every respect with one exception, Google Classroom. Again, Gina stated, “I mean we became a Google school last year so that is a definite must.” Teachers all mentioned the required educational technology with general positivity.

In discussing the required educational technology, Gina mentioned that “I find myself answering, you know, going to rooms and answering lots of questions about Google because the teachers still just aren’t familiar with it.” Though she did not receive additional pay, she found herself as the default technology support person. She expressed that some older teachers struggled with the technology, causing some frustration among the older faculty. Gina explained that while the district provided basic Google Classroom training, it was insufficient for the teachers who were not as familiar with technology. Further, that training focused on setting up and using the Google Classroom rather than on any technologically based pedagogy or online content teaching strategies. All three teachers voiced the struggle of finding a rhythm in the use of the required educational technology.

Additionally, all three teachers noted that even as hotspots were available for students, not all families chose to fill out the paperwork to receive them. Gina speculated, “It’s almost like they didn’t want to, and I don’t know why.” Regardless of the reason, several families continued to struggle with the internet, having to drive to relatives’ houses who had Wi-Fi to complete assignments.

The Supports of Required Educational Technology

In the year prior to the pandemic, the district had passed a bond for one-to-one technology, ensuring each student had access to either a tablet or a Chromebook. This proved essential in the success of distance learning as many families would be without the necessary technology for students to learn at home. Further, the district utilized a large portion of their Title I funding to purchase hotspots that could be given to students on free and reduced lunches, which was a large portion of the district. At a district level, the administration, with the support of the community who voted to pass the bond, ensured that every family had access to not only a tablet or Chromebook for each child but also a hotspot. This reciprocal support between the community members and the district paints the picture of support in this specific rural area.

The teachers repeatedly expressed the support they received from administration proved that the administration understood the challenges inherent in the sudden switch teachers were making. Melissa stated, “If someone didn’t do it [a suggested method for

online learning], I don't think there would be any consequence." In fact, all three teachers expressed a feeling of trust between the faculty and administration, acknowledging that administration required consistency in teaching methods employed for online instruction, choosing instead to trust the teachers to teach to the best of their ability in their given situation. Further, the teachers noted repeatedly that a lack of detailed expectations by the administration proved particularly helpful as teachers attempted to navigate the new terrain of distance learning. As Gina noted, "in our building we're not required to have, you know, a Google Meets or a Zoom where they're all in there at one time." It seemed that the lack of specific requirements from the administration regarding how and when to use educational technology proved beneficial as teachers were more easily able to mediate student learning, working with students as students worked, rather than the prescriptive construct of in-person learning hours. Stacey further clarified this further: "you don't have to be working for all the time from eight to three."

Communication

As distance learning meant that students were working from home, communication emerged as a theme between the teacher and administration, the teacher and students, and the teacher and parents. As much of the discussion has already been dedicated to the expectations communicated between the teachers and administration, the researchers focused on the latter two subthemes.

In discussing the expectation of communication, all three teachers agreed with Melissa's statement that "the expectation [from administration] has definitely been keeping in contact with your parents and kids." In nearly every aspect of the discussion, the teachers interviewed expressed how or what they were communicating to students and parents and what type of communication they received back.

The Challenges of Communicating with Students

As noted in previous sections, all three teachers noted the challenge of needing to be available around the clock to support student learning. As students worked when they were able, frequently in the evenings due to parent work schedules or even on specific days and times as families drove to a location to use the internet, teachers felt that they had to be prepared to drop what they were doing to respond to student questions immediately. Further, Melissa noted that since her students were just learning to use email as a form of communication, there was a struggle for students to be able to effectively use email to communicate questions. Gina, the teacher of the youngest students, acknowledged that her primary communication was between her and the parent, leaving her feeling as if she were not the teacher of the students in her classroom.

The Supports of Communicating with Students

As noted in the *Supports of Responsive Teaching* subtheme, teachers worked one-on-one with students to provide support via email, recorded videos, and written

feedback on specific assignments. Students could also reach teachers daily via Google Meet. Stacey detailed how this worked: “If we knew a student needed, you know, help, we have office hours.” These office hours even included one-on-one lessons, which Gina further described. For example, “Let’s have a Google Meets, and you know I can do a beginning sounds lesson.” Further, all three teachers noted that their policies were full of flexibility and grace. Stacey explained, “As far as the student learning at home—so we’ve been—we’ve really tried to offer as much grace as possible.”

The Challenges of Communicating with Parents

Communication between the parent and teacher proved to be a necessary component of distance learning. All three teachers noted that they communicated with parents often, even daily in some instances. While each teacher had their own method for organizing regularly scheduled parent communications, each teacher commented on the frequent texts, emails, and phone calls exchanged between parents and teachers. Communication to parents about what the teacher believed education should look like proved to be problematic. As parents became the de facto teachers of the household, the classroom teacher attempted to communicate not only what the lesson was to be covered but also how she believed it should be taught. Gina expressed her frustration: “Over the course of time I found that there are some students’ parents that thought they were writing it [student work] for them because they were hand over hand holding the child’s hand—writing it for them, which is not what we do in the classroom.” While Gina felt there was a strong pedagogical reason for the expectation of how to teach specific skills, she found that parents did not always understand the pedagogy of education. She noted, “The biggest thing that I have found doing this is parents don’t truly understand how much I expect my students to do.” Further, all three teachers expressed that parents seemed to struggle to understand what their children were capable of, often providing too much help for students. Teachers expressed, “They [students] know how to do it, and there are times when we’ve had a virtual day when [*sic*] parent will text me and say, ‘I don't know how to get on Google Classroom.’ And I just simply say, ‘Just give the tablet to your child. They know what to do,’ and I think that they think that their kids can’t do it. And, I think they can do more than they [think they] can.”

Even as teachers were teaching students in-person and online, they found themselves often teaching the parents as well. Gina, in particular, found this to be the case most often as her students were youngest and in need of the most parental support. She noted, “It’s almost like I have double the students because I have to teach the parents how to use it, so that they can show the kids what to do.” Further, Gina explained that she found herself having to justify why she was teaching certain skills to students when parents believed the skill or strategy to be unnecessary. So, not only did she feel she had double the students, but she also found herself regularly defending her practice and pedagogy. Even as her expertise as an educator was questioned, parents expected that

she remained the teacher, the one in charge of learning. She stated, “They [parents] don’t know what to do and then they feel like, well, it’s your job to make this happen.”

The Supports of Communicating with Parents

Even as the teacher–parent communication proved difficult at times, teachers worked to ensure that parents had all the information they needed to be able to successfully support their children in distance learning. All three teachers talked about using videos to explain everything from educational technology to personalized lesson plans. Two of the three teachers created their own YouTube channels to publish “how to” videos for parents and students. Gina explained that she would “push that [how to videos] out to parents, so that they could, you know, kind of navigate the programs a little bit better.”

Discussion

The purpose of this study was to share the rural teachers’ experiences during emergency distance learning, specifically noting the expectations teachers felt were required along with the supports and challenges of these experiences.

Expectations of Teachers

As the researchers asked rural teachers to consider what expectations they had of themselves or what expectations they perceived from administration during distance learning, ideas of teacher cognition (Golombek & Doran, 2014) and perception became evident. Without clearly delineated rules and expectations during a time of pandemic teaching, all expectations teachers discussed were perceived expectations. Thus, teachers were asked to cognitively consider the perceived expectations and their implications. Any emotional response can also be attributed to Vygotsky, as DiPardo and Potter (2003) explain that cognition and emotion are intimately connected in his sociocultural theory. While teachers demonstrated moving emotional reactions in the interviews and expressed their gratitude to administration for their support for the emotional tolls of teaching during distance learning, the full extent of emotions during distance learning was not examined in this particular research. What is noted is how the relationship and culture of the rural schools affected how teachers perceived this time of teaching. Any perceptions the participants had of expectations during distance learning would be directly influenced by not only their overall perception of their role as a teacher but also by any community-held beliefs about the teacher’s role in education.

Challenges for Teachers in Meeting Expectations

As the study examines the intersection of distance learning, rural context, and teachers’ perceptions, researchers must consider the relevance of the impact of the community’s views of technology in education, the community’s views about education in the home, and the community’s views of parents’ roles in education. These particular

community views may not necessarily be shared by the individual teachers, but the teachers must acknowledge there are “intimate links between school and community” (Sherwood, 2001, p. 2). Furthermore, the teachers are no doubt aware of popular views held by the community since they live and work in the community. In fact, one participant mentioned hearing parents discuss their views on distance learning on multiple occasions as she worked her second job in the community. Thus, teachers were left affected by community views on distance learning, either because they shared similar views or because they felt at odds with community members.

It is worth noting that Johnson (2009) details that teacher mediation of student academics necessitates that “teachers not only need to understand the task or concept from the perspective of an expert but they must also understand where the student is—in other words, what it is like not to fully understand the task or concept—and then be skilled at providing strategic mediation that enables students to move toward expertise or automaticity” (p. 20). It was this frustration of not being “present” with the students to address struggles immediately that the teachers found frustrating. The feeling that they were not really teaching, but that they were instead issuing assignments to be completed, seemed to be at the head of these challenges. Pinar (2015) warns against the overuse of technology and the harm that overuse can bring to the culture, history, and community of a place, “as place becomes nowhere in particular, cyberspace” (p. 46). Dissolving the physical barriers of place can be especially troublesome for rural communities whose identity is often embedded in those specific boundaries.

The researchers found that there was an intimate link between the community and teacher identity of those in the rural community and the way the teachers perceived their roles in distance learning. Ultimately, the teachers of rural community’s view learning and teaching as a social activity that was challenged during distance learning despite the extensive support of the community and administration. Teachers felt, overwhelmingly so, that distance learning did not allow them to truly teach and that true learning happened best in an in-person setting.

Supports for Teachers in Meeting Expectations

Even as the closeness of the rural community posed challenges, it also proved to be the primary support for the participants. All three teachers discussed the value of feeling supported by colleagues, administration, or parents in their interviews. Teachers felt that a supportive attitude, trust in their ability to teach, and collaboration among colleagues were the most helpful supports during online teaching. Similarly, all three teachers expressed that without the support of the close-knit community, they would have not been able to make it through emergency pandemic teaching.

Conclusion

Teachers interviewed clearly felt a strong connection to their community. That connection, common in rural communities (Coladarci, 2007), affected the way in which the participants viewed teaching and learning. All participants privileged the social aspect of learning and therefore perceived the physical distance aspect of online learning as a negative part of the experience. Further, because the teachers interviewed felt a strong sense of responsibility to their rural community, they also perceived their own failure to meet the expectations they had of themselves as a particularly difficult aspect of online learning. While they reported going above and beyond administrative and parental expectations, it was the expectations they had of themselves that posed the biggest challenge. Supportive administrative attitudes reported by the teachers mitigated some of this challenge. However, rural administrators and teacher preparation programs can consider the implications for supporting educators with self-imposed expectations in future online learning programs as curriculum is crafted for teacher training and professional development.

While the participants reported a supportive administration and collaborative environment at the building level, specific aspects of distance learning proved difficult for all three teachers: the nontraditional work hours of online learning, asynchronous mediation of student learning, and student and teacher access to the internet. Even as the district attempted to support the community with one-to-one laptops and hotspots for those in need, connectivity issues continued to be a challenge for some.

While the administrative expectations of teachers were minimal, there were basic expectations that specific educational technology was used. There were mixed messages from teachers as teachers both noted the policies positively and yet lamented the insufficient training provided. While the teachers perceived the lack of mandates as administrative trust in their ability to teach online, it also left the teachers feeling as if they were failing even as they surpassed expectations. While the grade level that the teachers taught affected what expectations they felt they were not meeting, each teacher bemoaned the fact that she could not better support her students, parents, and ultimately the rural community. It is the intimate connection between the teachers and the rural community that this research offers as a unique contribution to the existing research on distance learning.

Limitations

Although the small number of participants in this study allowed for lengthier interviews, ranging from 65–90 minutes, and for follow up interviews and clarifications that yielded data rich in detail, the study is limited to only three teachers in one rural district. These experiences and perspectives may not match that of all rural elementary school teachers during the COVID-19 distance learning experience. Further, additional limitations are present in the unique way the district approached distance learning.

Because teachers were expected to teach both in person and online simultaneously with an ever-changing student population of in-person students and online students (see "Context" for a complete description), the negative experiences and challenges associated with distance learning were likely affected by having to teach both online and in person at the same time. However, the purpose of this study was not to identify sweeping generalizations of the rural elementary education teacher's experience as rural educators' experiences are all unique.

Implications

Even with the limitation of the number of participants, the findings provide information to rural administrators and to teacher preparation programs as to the types of experiences rural elementary education teachers had during emergency online learning, and that information can support administrators and teacher preparation programs in mitigating potential challenges for rural elementary educators teaching online in the future. As education pushes forward with the likelihood of continued and increasing online learning, the implications for rural teachers prove significant: a sociocultural approach in which teachers can remain connected to their community is of particular importance in a rural school.

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References

Abuhammad, S. (2020). Barriers to distance learning during the COVID-19 outbreak: A qualitative review from parents' perspective. *Heliyon, 6*(11), e05482. https://doi.org/10.22541/au.158872458.85661047

Arnold, M., Newman, J., Gaddy, B., & Dean, C. (2005). A look at the condition of rural education research: Setting a direction for future research. *Journal of Research in Rural Education*, 20(6), 1–25.

Azevedo, J. P., Hasan, A., Goldemberg, D., Geven, K., & Iqbal, S. A. (2021). Simulating the potential impacts of Covid-19 school closures on schooling and learning outcomes: A set of global estimates. *World Bank Research Observer, 36*, 1–40. https://doi.org/10.1596/1813-9450-9284

Behrstock-Sherratt, E., Bassett, K., Olson, D., & Jacques, C. (2014). From good to great: Exemplary teachers share perspectives on increasing teacher

effectiveness across the career continuum. *Center on great teachers and leaders*.

Bloomberg, L. D., & Volpe, M. (2008). *Completing your qualitative dissertation: A roadmap from beginning to end.* Sage. https://doi.org/10.4135/9781452226613

Boerngen, M. A., & Rickard, J. W. (2021). To Zoom or not to Zoom: The impact of rural broadband on online learning. *Natural Sciences Education*, *50*(1), e20044. https://doi.org/10.1002/nse2.20044

Bojović, Ž., Bojović, P. D., Vujošević, D., & Šuh, J. (2020). Education in times of crisis: Rapid transition to distance learning. *Computer Applications in Engineering Education*, *28*(6), 1467–1489. https://doi.org/10.1002/cae.22318

Brooks, S. K., Smith, L. E., Webster, R. K., Weston, D., Woodland, L., Hall, I., & Rubin, G. J. (2020). The impact of unplanned school closure on children's social contact: Rapid evidence review. *Eurosurveillance, 25*(13), 2000188. https://doi.org/10.2807/1560-7917.ES.2020.25.13.2000188

Bryant Jr., J. A. (2010). Dismantling rural stereotypes. *Educational Leadership, 68*(3), 54–58.

Chung, W. C. (Ed.). (2011). ICT integration in a "FutureSchool" in Singapore. In C. Ho & M. Lin (Eds.), Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2011 (pp. 1118–1127). Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/p/38864/

Coladarci, T. (2007). Improving the yield of rural education research: An editor's swan song. *Journal of Research in Rural Education, 22*(3), 1–9.

Croft, M., & Moore, R. (2019). Rural students: Technology, coursework, and extracurricular activities. ACT research. Retrieved February 20, 2023, from https://www.act.org/content/act/en/research/reports/act-publications/rural-students-technology-coursework-extracurriculars.html

DiPardo, A., & Potter, C. (2003). Beyond cognition. *Vygotsky's educational theory in cultural context*, 317–346. https://doi.org/10.1017/cbo9780511840975.017

Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review, 118*, 105440. https://doi.org/10.1016/j.childyouth.2020.105440

Donnelly, R., & Patrinos, H. A. (2021). Learning loss during COVID-19: An early systematic review. *Prospects*, *51*, 1–9. https://doi.org/10.1007/s11125-021-09582-6

Edwards, S. (2016). New concepts of play and the problem of technology, digital media and popular culture integration with play-based learning in early childhood education. *Technology, Pedagogy and Education*, *25*(4), 513–532. https://doi.org/10.1080/1475939X.2015.1108929

Faruk Islim, O., Ozudogru, G., & Sevim-Cirak, N. (2018). The use of digital storytelling in elementary math teachers' education. *Educational Media International*, *55*(2), 107–122. https://doi.org/10.1080/09523987.2018.1484045

Golombek, P., & Doran, M. (2014). Unifying cognition, emotion, and activity in language teacher professional development. *Teaching and Teacher Education*, *39*, 102–111. https://doi.org/10.1016/j.tate.2014.01.002

Gonzalez, T., de la Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of Covid-19 confinement on students' performance in higher education. *PLoS ONE, 15*(10), e0239490. https://doi.org/10.1371/journal.pone.0239490

Gore, J., Fray, L., Miller, D., Harris, J., & Taggart, W. (2021). The impact of Covid-19 on student learning in New South Wales primary schools: An empirical study. *Australian Educational Researcher, 48*, 605–637. https://doi.org/10.1007/s13384-021-00436-w

Gray, L., Thomas, N., & Lewis, L. (2010, April 30). Teachers' use of educational technology in U.S. public schools: 2009. First look. NCES 2010-040. National Center for Education Statistics. Retrieved February 20, 2023, from https://eric.ed.gov/?id=ED509514

Gutierrez de Blume, A. P., Katz, A., & Bass, J. (2021). Impact of literacy across content on middle school students' reading comprehension in a rural context. *Journal of Research in Reading*, *44*(2), 284–300. https://doi.org/10.1111/1467-9817.12334

Heath, M. K. (2017). Teacher-initiated one-to-one technology initiatives: How teacher self-efficacy and beliefs help overcome barrier thresholds to implementation. *Computers in the Schools*, *34*(1-2), 88–106. https://doi.org/10.1080/07380569.2017.1305879

Hobbs, V. (2004). *The promise and the power of distance learning in rural education* [Policy brief]. Rural School and Community Trust. https://www.ruraledu.org/user_uploads/file/Promise_and_the_Power.pdf

Irvin, M. J., Hannum, W. H., Farmer, T. W., De la Varre, C., & Keane, J. (2009). Supporting online learning for Advanced Placement students in small rural schools: Conceptual foundations and intervention components of the Facilitator Preparation Program. *Rural Educator*, *31*(1), 29–37. https://doi.org/10.35608/ruraled.v31i1.440

Johnson, A., Kuhfeld, M., & Soland, J. (2021). T*he Forgotten 20%: Achievement and growth in rural schools across the nation*. AERA Open, 7. https://doi.org/10.1177/23328584211052046

Johnson, K. E. (2009). *Second language teacher education: A sociocultural perspective*. Routledge. https://doi.org/10.4324/9780203878033

Khlaif, Z. N. (2018). Factors influencing teachers' attitudes toward mobile technology integration in K-12. *Technology, Knowledge and Learning*, *23*(1), 161–175. https://doi.org/10.1007/s10758-017-9311-6

Kormos, E., & Wisdom, K. (2021). Rural schools and the digital divide: Technology in the learning experience. *Theory & Practice in Rural Education*, 11(1). https://doi.org/10.3776/tpre.2021.v11n1p25-39

Kuhfeld, M., Tarasawa, B., Johnson, A., Ruzek, E., & Lewis, K. (2020). *Learning during Covid-19: Initial findings on students' reading and math achievement and growth* [Research brief]. NWEA Research. https://www.nwea.org/content/uploads/2020/11/Collaborative-brief-Learning-during-COVID-19.NOV2020.pdf

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Sage. https://doi.org/10.1016/0147-1767(85)90062-8

Lyson, T. A. (2002). What does a school mean to a community? Assessing the social and economic benefits of schools to rural villages in New York. *Journal of Research in Rural Education, 17*(3), 131–137. http://jrre.vmhost.psu.edu/wp-content/uploads/2014/02/17-3_1.pdf

MacGregor-Fors, I., & Vázquez, L.-B. (2020). Revisiting 'rural.' *Science of the Total Environment*, *741*, 132789. https://doi.org/10.1016/j.scitotenv.2019.06.135

Marietta, G., & Marietta, S. (2021). *Rural education in America: What works for our students, teachers, and communities*. Harvard Education Press.

Mills, S. J., Yanes, M. J., & Casebeer, C. M. (2009). Perceptions of distance learning among faculty of a college of education. *MERLOT Journal of Online Learning and Teaching*, *5*(1), 19–28.

Mishra, P., & Koehler, M. J. (Eds.). (2007). Technological pedagogical content knowledge (TPCK): Confronting the wicked problems of teaching with technology. In Society for Information Technology & Teacher Education International Conference (pp. 2214–2226). Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/p/24919/

Michell, M. (2016). Finding the “prism”: Understanding Vygotsky's “perezhivanie” as an ontogenetic unit of child consciousness. *International Research in Early Childhood Education*, *7*(1), 5–33.

National Center for Education Statistics. (2006). The condition of education. Washington, DC: U.S. Department of Education.

Penuel, W. R., & Wertsch, J. V. (1995). Vygotsky and identity formation: A sociocultural approach. *Educational Psychologist*, *30*(2), 83–92. https://doi.org/10.1207/s15326985ep3002_5

Pier, L., Hough, H. J., Christian, M., Bookman, N., Wilkenfeld, B., & Miller, R. (2021). Covid-19 and the educational equity crisis: Evidence on learning loss from the CORE data collaborative. Policy Analysis for California Education. https://edpolicyinca.org/newsroom/covid-19-and-educational-equity-crisis

Pinar, W. F. (2015). *Educational experience as lived: Knowledge, history, alterity*. Taylor and Francis. https://doi.org/10.4324/9781315752594

Prasojo, L. D., Mukminin, A., Habibi, A., Hendra, R., & Iqroni, D. (2019). Building quality education through integrating ICT in schools: Teachers’ attitudes, perception, and barriers. *Quality-Access to Success, 20*(172), 45–50.

Rogoff, B. (2003). *The cultural nature of human development*. Oxford University Press.

Sande, B., Kemp, C., Burnett, C., & Moore, J. (2021). Student preparedness for emergency remote learning. *Theory & Practice in Rural Education*, *11*(1). https://doi.org/10.3776/tpre.2020.v10n1p2-24

Sher, J. P. (Ed.). (1977). *Education in rural America: A reassessment of conventional wisdom*. Westview Press.

Sherwood, T. (2001). *Where has all the “rural” gone?* Rural Education Research and Current Federal Reform.

Tieken, M. C. (2014). *Why rural schools matter.* University of North Carolina Press. https://doi.org/10.5149/northcarolina/9781469618487.001.0001

Tofel-Grehl, C., Searle, K. A., Hawkman, A., MacDonald, B. L., & Suárez, M. I. (2021). Rural teachers’ cultural and epistemic shifts in STEM teaching and learning. *Theory & Practice in Rural Education, 11*(2), 45–66. https://doi.org/10.3776/tpre.2021.v11n2p45-66

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

Weiss, E., & Reville, S. P. (2019). *Broader, bolder, better: How schools and communities help students overcome the disadvantages of poverty.* Harvard Education Press.

Wertsch, J. V. (1995). The need for action in sociocultural research. In J. V. Wertsch, Pablo del Rio, & Amelia Alvarez (Eds.), *Sociocultural Studies of the Mind* (pp. 56–74). Cambridge University Press. https://doi.org/10.1017/CBO9781139174299.004

Wu, M., Xu, W., Yao, Y., Zhang, L., Guo, L., Fan, J., & Chen, J. (2020). Mental health status of students' parents during COVID-19 pandemic and its influence factors. *General Psychiatry, 33*(4). https://doi.org/10.1136%2Fgpsych-2020-100250

Yang, S., & Kwok, D. (2017). A study of students' attitudes towards using ICT in a social constructivist environment. *Australasian Journal of Educational Technology, 33*(5), 50–62.

Zuckerman, S.J. (2020). The role of school leaders in a rural cradle-to-career network. *Theory and Practice in Rural Education*, 10(1), 73–91. https://doi.org/10.3776/tpre.2020.v10n1p73-91

Zuo, M., Gao, L., Wang, W., & Luo, H. (2020). A sense of fulfillment or inevitable stress? Unraveling the phenomenon of teacher anxiety in synchronous online classroom for rural education. *2020 International Symposium on Educational Technology (ISET)*, 224–228. https://doi.org/10.1109/ISET49818.2020.00056

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Appendix A

Interview Questions

General Questions

1. What was your teaching background prior to distance learning?

Support/Challenges

2. What technological or digital components were part of the teaching experience prior to the implementation of distance learning? If any, how have those components contributed to the transition to distance learning?
3. How are you collaborating with other teachers during distance learning? How has the collaboration benefitted all involved?
4. Which lessons were most challenging to translate from in-person learning into distance learning? Why?
5. Which lessons or standards were easiest to translate from in-person learning into distance learning? Why?
6. What successes have you experienced during your distance learning classes?
    a. Students who were previously on-level or below level are working ahead to exceed academic standards for their grade level?
    b. Students who were previously below level are catching up to grade-level material?
    c. Students are pursuing individual educational interests?
    d. Students are able to get one-on-one instruction?
    e. Students are cultivating new and productive relationships with their peers?
    f. Other?

Rural Setting

7. What effects, if any, do you feel the rural setting of the district has played in the successes or struggles of distance learning?
8. What significant differences do you perceive between distance education and on-campus education classes **concerning student success**?
    a. Do you believe any of these differences are exacerbated by the rural setting? If so, which differences and why?
9. What significant differences do you perceive between distance education and on-campus education classes **concerning teacher satisfaction**?
    a. Do you believe any of these differences are exacerbated by the rural setting? If so, which differences and why?

10. Which barriers are you experiencing during your distance-taught classes **that you believe are caused by the rural setting of the district**?
    a. Internet outages/Data caps/Slow internet?
    b. Students who do not have internet or hotspots?
    c. Students who do not have an appropriate device (laptop or tablet necessary)?
    d. Students who have broken school devices?
    e. Working parents without time to support students?
    f. Parents/caregivers unfamiliar with technology are unable to assist students?
    g. Students not completing work?
    h. Illness (COVID or other) has caused a disruption in learning?
    i. General technical support issues?
    j. Other?

Expectations

11. What expectations do you feel that the administration has of you during distance learning? How are those expectations different from in-person learning?
12. What expectations do you feel parents and students have of you during distance learning? How are those expectations different from in-person learning?
13. What significant differences **in expectations** do you perceive between distance education and on-campus education classes?
14. What are your perceived expectations regarding distance learning for the following:
    a. Lesson plans
    b. Time spent meeting (over the phone or via Zoom) with parents
    c. Time spent meeting (over the phone or via Zoom) with students
    d. Feedback on distance learning assignments
    e. Software/platforms to use for distance learning
    f. Differentiation
    g. Equitable learning experiences within your distance learning "classroom"
    h. Horizontal alignment of learning goals and lesson delivery
    i. Vertical alignment of learning goals
15. Where (if anywhere) can you access clearly defined expectations in writing regarding distance learning for the items discussed in the previous question?
    a. If the expectations are not in writing, how have they been communicating to you and your colleagues?
16. How are you expected to measure student success or conduct standards assessment differently during distance learning?