

**Introduction to the Themed Issue:
The Response and Responsibility of School-University Partnerships in a Time of Crisis**

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Abstract: This article is the introduction that provides context for the Themed Issue of *School-University Partnerships* entitled The Response and Responsibility of School-University Partnerships in a Time of Crisis.

KEYWORDS: Partnerships, technology, social-emotional needs, COVID-19 pandemic, cultural competence

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission: A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Three: Professional Learning and Leading: A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation: A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Five: Research and Results. A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets.

Introduction to the Themed Issue:

The Response and Responsibility of School-University Partnerships in a Time of Crisis

During the past year and a half, our country has been devastated by the three-part crisis of a deadly, once-in-a-lifetime pandemic, the resulting economic recession and the long-awaited spotlight on racial discrimination and oppression brought on by the horrific murders of George Floyd, Breonna Taylor, Ahmaud Arbery and far too many others. In the call for this themed issue of *School-University Partnerships*, titled “The Response and Responsibility of School-University Partnerships in a Time of Crisis,” we asked authors to focus on the enormous responsibility we have as a community of educators and educational researchers to use this time of social upheaval as a catalyst for change.

Each article in this issue of *School-University Partnerships* addressed this call with dedication, insight, and rigor. Though they exemplify a similar commitment to the challenges of our current moment in history, the authors focused on different groups of participants and used a variety of research methods. Following a brief discussion of participants and research methods, we will explore the five themes that emerged from a review of the findings from these disparate studies.

Participants and Methods

The eleven articles presented in this themed issue focus on different groups of participants in the educational process. The articles by Hoppey et al., Butville et al., Tipton and Schmitt, Shields et al., Taira, et al., and Fisher-Ari et al. were all concerned with the preparation of teacher candidates either in undergraduate or graduate initial certification programs. In contrast, the work of Shively and colleagues documented the perspectives of a principal, a teacher and a teacher educator, while Ogletree and Bey shared information about a summer program designed to encourage high school students to consider careers as teachers, and especially as teachers in science, technology, engineering, and mathematics (STEM) fields. Fu et al. also reported on a summer program for high school youth. Using a different perspective, Myers showcased the “radical shifts” necessarily made by classroom teachers to provide just and equitable learning environments for all the children in their classrooms. Finally, the work of Galindo et al. looked across groups to explore the benefits of an equity-based partnership program for classroom teachers, undergraduate volunteers, and elementary school students. Thus, the articles contained in this issue represent the perspectives of a variety of stakeholders engaged in learning within school-university partnerships.

The methods and methodologies used by the authors represented a variety of perspectives and various types of qualitative research, again highlighting the breadth of research being conducted in school-university partnerships. The research of Hoppey et al., Tipton and Schmitt, and Shields et al. utilized surveys of their targeted group, and Hoppey et al. and Tipton and Schmitt also included semi-structured interviews of their participants. In a slightly different approach, Galindo et al. reported on research based on both interviews and classroom observations.

The research of Butville et al. also included the use of surveys and interviews, but was framed by a phenomenological approach, while Taira et al. conducted their research within the guidelines of an auto-ethnographic self-study. Additional approaches to qualitative research were found in the articles by Ogletree and Bey which used a case study method, and in the piece by Shively et al. which used narrative inquiry to focus on the lived experiences of participants.

Finally, the research presented by Fu et al. was conducted within the tradition of youth participatory action research to center the knowledge, expertise and agency of their youth participants, and the work of Fisher-Ari et al. was designed to foreground the voices of their participant-authors.

Themes

Despite the differences in method and in the groups targeted in the research, there were notable consistencies in the findings presented by this group of authors. Specifically, five themes emerged from a review of the articles that make up this special issue. These themes were the pivotal role of technology in the current educational context, the increased need for attention to social-emotional needs, an expanded awareness of the value of cultural competence, the direct impact of COVID-19, and the power of partnerships to support collaboration and reciprocal learning.

Technology

Technology featured prominently in the findings of the articles in this issue; for example, the work of Shields et al., Taira et al., and Ogletree and Bey indicated that the social isolation resulting from the pandemic encouraged, if not forced, participants to try out and learn new online platforms and tools. In addition, technology was significant in the findings of Hoppey et al., Shields et al., and Tipton and Schmitt who were unequivocal in their call for teacher candidates to be better prepared to use technology effectively and with ease.

Galindo et al. found that technology actually improved the communication between classroom teachers and undergraduate volunteers during the time schools were not meeting in person and pointed out that technology might be able to mitigate long-standing barriers to partnerships such as scheduling times to meet face-to-face. The work of Hoppey et al., Taira et al., Fu et al., and Tipton and Schmitt drew attention to the dramatic disparities in access to technology among students from different environments and to the consequences this had for their educational experiences and achievement.

Social-Emotional Needs

A second notable theme found in the articles was that the uncertainty and anxiety brought on by the pandemic required teachers and teacher educators to be more attentive to the social-emotional needs of their students. Tipton and Schmitt discussed the need to focus on the social-emotional needs of their teacher candidates and Ogletree and Bey reported on their attempts to support high school students who participated in their summer program as the high school students were confronted with frequent and unexpected changes.

Shields et al. noted that the work load for students and teachers increased during the shift to online learning and thus increased stress levels. Hoppey et al., Taira et al., and Ogletree and Bey also reported on the stress-inducing changes caused by the pandemic and explained that they responded to these challenges by reducing the workload required of students and/or the amount of time that students were expected to be engaged in course work.

Finally, Hoppey et al., Taira et al., and Ogletree and Bey discussed techniques used to meet the social-emotional needs of university students and K-12 students. These techniques included an intentional focus on listening, more regular ‘check-ins,’ and other deliberate actions designed to foster a sense of community among groups of learners separated by space.

Cultural Competence

The third theme found among many of the articles was a focus on cultural competence and the urgent demand for educational experiences that are supportive of all children and youth, especially children and youth from groups that have historically suffered from disenfranchisement and oppression. Myers described the critical need to enact teaching practices that are based on the principles of cultural responsiveness and that are explicitly anti-racist and pro-Black. Taira et al. discussed the use of place-based techniques and an improvisational approach as culturally responsive practices. Ogletree and Bey also centered their pedagogical practices within the lived experiences of their students.

Fisher-Ari et al. reviewed the need to diversify the teaching force in order to increase the number of teachers who are representative of, and similar to, the students they teach. They suggested that by providing purposeful supports for global-majority teacher candidates it will be possible to meet the goal of diversifying the teaching force and providing more culturally sensitive and culturally responsive educational environments for students. Finally, the article by Butville et al. used a first-person account to showcase the ways in which an inquiry stance resulted in courageous teaching practices that were both culturally responsive and centered in racial justice.

The Impact of COVID-19

Most articles in this issue discussed the changes wrought by COVID-19. Articles by Tipton et al. and Hoppey et al. documented some of the most dramatic ways in which the COVID-19 pandemic impacted the experiences of teacher candidates at their institutions. Shively et al. and Galindo et al. described the ways they and their colleagues worked to maintain pre-existing programs in spite of the disruptions caused by the pandemic. Perhaps the most notable common finding among the articles in this issue was the fact that the exigencies of online teaching revealed and exacerbated the long-standing inequities in our society. Students who lived in low-income homes and neighborhoods had less access to the infrastructure of technology and were less able to stay engaged with their school work. As noted earlier in the section on technology, these profound inequities in access to technological resources were significant findings in the articles of Tipton and Schmitt, Hoppey et al., Fu et al., and Taira et al.

Partnerships and Collaboration

The fifth theme evident among every article in this issue is that of partnerships and collaboration. Myers described work done in a partnership setting that has been in existence for 30 years. Strong school-university partnerships were evident in the fact that many of the articles in this issue were written collaboratively by teams of university and school-based educators and several of the articles articulated the benefits of different types of partnerships and collaborations. For example, Shields et al. found that teacher candidates and mentor teachers supported each other during the pandemic and that teacher candidates helped their mentors learn about technology because the teacher candidates were more skilled in this area. Taira et al. reported on the collaboration between university teacher educators and K-12 teachers, and reciprocal learning is noted by both Shively et al. and Ogletree and Bey. Shively et al. shared the story of reciprocal learning that occurred as a math teacher and math teacher educator engaged in on-going conversations, and Ogletree and Bey presented evidence about reciprocal learning between faculty from the university and K-12 schools. In addition, the work of Fu et al. placed

emphasis on the collaborative relationship between university researchers, school-based educators and the young people with whom they worked.

Finally, several authors reported on the potential of partnerships to address urgent contemporary problems in education and mitigate the impact of unexpected and dramatic changes such as those that resulted from the COVID-19 pandemic. Galindo et al. suggested that productive school-university partnerships can help to counteract the disparities in educational opportunities that are born of entrenched income inequality. Butville et al. showed how an inquiry approach, a characteristic of many teacher preparation programs grounded in school-university partnerships, can be leveraged to interrogate current social structures and support teachers and their students in a quest for understanding and for change.

Introduction to the Articles

When looked at holistically, the eleven articles in this themed issue paint a picture of the depth and breadth of research and practice in school-university partnerships. The research presented in these articles used different methods, focused on different groups and came from a wide variety of settings including urban, rural and suburban contexts from many different regions of the United States. This variety highlighted the various ways in which partnerships can be leveraged to improve educational outcomes.

As a group, the contributing authors have facilitated the progress of the field of school-university partnerships by pointing the way towards important next steps in our research and in our practice. They have highlighted society's obligation to level the technology 'playing field,' and the education profession's obligation to pay closer attention to the social-emotional needs of students at all levels of education. The authors of the articles in "The Response and Responsibility of School-University Partnerships in a Time of Crisis" have made it clear that it is our responsibility as a community of researchers, scholars, teacher educators and practitioners to use all the tools at our disposal to create environments for students that are culturally responsive and deliberate in their intent to fight oppression, dismantle racism, and make learning a journey of exploration for all.

We begin this issue with two invited articles, "The Radicals Shift Because it Matters: Teaching for Equity and Justice in PDS Partnerships," by Michele Myers and "A Case Study of a School-University Partnership Focused on Literacy and Educational Equity: Responding to COVID-19 in the Early Grades," by Claudia L. Galindo, Susan Sonnenschein, and Mavis G. Sanders. Following these two introductory articles are three articles that focused on teacher education in traditional spaces: "Teacher Candidates' Perspectives of Infusing Innovative Pedagogical Methods and Trauma-Informed Practices into a Teacher Education Program During the COVID-19 Pandemic," by David Hoppey, Karly Mills, Debbie Reed, and Chris Collinworth; "An Investigation of Mentor Teachers' and Student Teacher Candidates' Perceptions of Co-Teaching during the COVID-19 Pandemic," by Mariha Shields, Sue Rieg, and Sara Rutledge; and "Preparing Preservice Teachers in the Midst of a Pandemic," by Sara Tipton and Vicki Schmitt.

The next two articles also centered the preparation of future teachers, but in programs that were somewhat less traditional and geared towards teacher candidates who were already working as teachers and/or who represented groups typically under-represented in the teaching profession. These articles are: "Dismantling Barriers to the Demographic Imperative: Illuminating and Addressing Hurdles Experienced by Global-Majority Teacher Residents in School-University Partnerships," by Teresa Fisher-Ari, Anne E. Martin, DaShaunda Patterson,

Haimanot Getahun Haile, Elizabeth Tennes, and Huan Ngo; and “Intentional Improvising: An Extreme Pacific Region School-University Self-Study in Response to the COVID-19 Crisis,” by Brooke Ward Taira, Keith Cross, Summer Maunakea, Ivy Yeung, and Deborah Zuercher.

The next four articles each targeted a different set of participants in the educational process. The article by Danielle Butville, Sarah Hanrahan, and Rachel Wolkenhauer titled, “Prepared to Take Responsibility: Practitioner Inquiry for Social Justice in a Professional Development School Partnership,” shared the perspective of novice and experienced teachers and teacher educators. In the article titled, “Academy for Future Teachers: Transitioning to Virtual Delivery,” Susan L. Ogletree and Yasmine Bey reported on their summer program with high school students. In the next article, “Figure it out: Stories about a PDS Partnership that Put the Needs of Students First,” Christopher Shively, Elizabeth Malinowski, and Jill Clark shared their experiences as educators during the pandemic. The final article, “Critical Creative Out of the Box Thinking in COVID Times,” by Shuang Fu, Ruth Harman, and Maverick Y. Zhang closes our themed issue with a description of a summer program for youth and an explicit focus on democratic, anti-racist and liberatory educational practices.

It has been an honor and a privilege to serve as editors for this themed issue of *School-University Partnerships*. The process has been immensely rewarding and we have learned a great deal from each group of authors. We anticipate that readers will be similarly rewarded with new understanding, a broader perspective on the current status of work being done in and about school-university partnerships, and a renewed commitment to “advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners” (NAPDS, 9 Essentials, 2021).

Reference

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**The Radicals Shift Because It Matters:
Teaching for Equity and Justice in PDS Partnerships**

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Abstract: In these tumultuous and divisive times in our country, educators at all levels (k12 and university) have a tremendous responsibility to make intentional shifts in their actions to promote equity and justice for all students. This article details six shifts that members in one school-university partnership made to ensure that they continuously dismantle the racist practices and policies that are deeply rooted in all aspects of schooling to better educate their students.

KEYWORDS: culturally relevant teaching, countering anti-blackness, restorative justice, pro-Blackness equity, school-university partnerships

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Essential One: A Comprehensive Mission. A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Three: Professional Learning and Leading. A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

The Radicals Shift Because It Matters: Teaching for Equity and Justice in PDS Partnerships

These are tumultuous and divisive times in our country. One can turn on the evening news only to watch an insurrection targeted against elected officials under the guise of *Making America Great* again. One can log on to a social media account only to read the most recent demeaning Tweets by the former president of the United States targeted against people of Color. One can flip to the front pages of the *New York Times* to read the latest headlines, *8 Dead in Atlanta Spa Shooting, With Fears of Anti-Asian Bias*. One can chat with colleagues only to find out that a new name that has been added to the list of innocent people of Color who have died at the hands of white supremacist, right winged groups or from the gun fire of police officers who took an oath to protect and serve. What is deeply disheartening about all of these examples is the fact that they all happened. Racism is behind many of the issues that we experience on a daily basis and is embedded in every institution and in every system that shapes our lives. Yes, these are dangerous and frightening times. Despite the distance between the 8 minutes and 46 seconds of the summer of 2020 as we watched George Floyd take his last breath to the insurrection of January 6, 2021, and now the Atlanta shooting on March 16, 2021, it becomes clearer that our commitment to addressing issues of injustice, hatred, racism, and countering anti-blackness is ever more urgent today than it has been in the past.

We, as educators, have a significant role in addressing racism, intolerance, and hate as we educate children for a better world. We, as educators, must hold firm to our commitment to love, equity, justice, and democracy and take intentional and concerted actions to dismantle racism, intolerance, and hate for a more just world. As educators, we are the embodiment of the citizens Margaret Mead described when she espoused, “Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.” I call these thoughtful citizens radicals, meaning those who advocate vigorously for complete political and social reforms in all systems of which they are a part. Over the last seven years, I served as the university liaison in a Professional Development School (PDS) partnership with an elementary school filled with radicals who are committed to this work. I have worked with radicals who have taken up this mission and are doing the work with fidelity. In this article, I will detail aspects of our combined actions. I will describe the context in which this work occurs, explain six key principles that guide our work, and share implications and ways others may do similar work in their own contexts.

The School and University Partnership

Long term and continuous collaboration among partners, mutually trusting relationships, as well as committed involvement in research and funding form critical elements of effective and lasting partnerships (Tseng et al., 2017). The University of South Carolina (UofSC) Professional Development School (PDS) network is one of the largest and longest standing PDS networks in the nation, with 30 years of collaboration, and over 21 schools from five local districts. The PK-12 schools in this network offer spaces for our undergraduate and graduate preservice teacher candidates to collaboratively work with exceptional in-service teachers as they hone their skills, grow their competence, and satisfy university course requirements. In-service teachers support and guide our preservice teachers as they align important theoretical concepts learned in their university courses with opportunities to practice them in embedded experiences in PK-12 sites

while receiving supportive, real-time feedback. The University of South Carolina and Meadowfield Elementary School (MES) have one such partnership. UofSC and MES have been PDS partners for thirty years. I have served as the university liaison for MES for the past five years. Even with changes in personnel within this partnership, a high level of mutual trust and commitment to the work remains constant.

Meadowfield Elementary is an urban prekindergarten through grade five school serving approximately 750 students. Sixty-five percent of the students are Black; twenty-one percent are White; eight percent are Latinx; and six percent identify with two or more racial groups. Approximately fifty-four percent of the students identify as males, and forty-six percent identify as females. The school has a seventy-eight percent poverty index; seventeen percent of the students identify as students with special needs; and ten percent of the students require ESOL services. The faculty composition is slightly different, consisting of an eighty-nine percent females and eleven percent males teaching force. Of those, sixty-seven percent are White; twenty-five percent are Black, two percent are Latinx and four percent identify with two or more racial groups.

I serve as the university liaison for Meadowfield and as a faculty member in the elementary education undergraduate and graduate degree programs at UofSC. My research focuses on culturally sustaining pedagogy, anti-racist education, and familial networks of support in children's literacy development. The goal of my work is to help educators understand the importance of immersing themselves in the lives of children and their families as they shift their stance from learning *about* families to a stance in which they learn *from* and *with* families, children, and community members to uncover the rich resources and support structures that exist in homes and communities. In addition, my work seeks to create teaching and learning spaces in which participants actively dismantle racist practices and center the lives, stories, histories, and joys of communities of Color. Members of this partnership (preservice teachers, in-service teachers, administrators, liaison, and students) have made an intentional decision to grow our collective knowledge regarding anti-racist teaching and learning and to take actions to dismantle practices that only privilege some students but not all. I narrow the scope of this article to highlight six radical shifts that the teachers with whom I work make as they create spaces to center the lives of their students.

Synthesis of the Literature

Transformative teaching for equity and justice requires three essential ways of knowing: knowledge of self, knowledge of students, and knowledge of curriculum. Researchers espouse that children of poverty, children of Color, and children who are multilingual are disproportionately taught by teachers who are underqualified and underprepared to adequately and effectively teach them (Darling-Hammond, 2004; Barton, 2004). Milner (2014) reminds us that White teachers may not feel efficacious in their abilities to teach about race and often shift the attention away from it to focus on socioeconomics. Milner avers that White teachers feel uncomfortable reflecting on their own racial identities and the identities of their children of Color. In order for teachers to be qualified and prepared to teach children in culturally responsive, anti-racist ways, it is essential to have a high level of personal and professional knowledge about self, their students, and their curriculum (Howard, 2016; Gay, 2018). Howard (2016) espouses that teachers must transform themselves and the social conditions of injustices that stifle the potentials of children from different racial, ethnic, cultural and linguistic backgrounds. He charges both White teachers and teachers of Color to do the work of raising

their personal consciousness as a way of demonstrating their commitment to racial healing for positive change. The teachers or radicals, my term of endearment, with whom I work most closely at Meadowfield are Sara Suber and Alexandra (Ali) Jenkins. Ali is a multi-racial kindergarten teacher, and Sara is a White third grade teacher. I host my embedded culturally sustaining pedagogy undergraduate and graduate courses in Sara's and Ali's rooms to provide my UofSC students opportunities to witness the seamless alignment of theory and practice. Over the years, I have witnessed these two radicals as they continuously make intentional shifts within themselves and their curriculum to transform their classroom practices for their students. What follows is a brief description of the six shifts that are evident in their practice.

Radical Shift #1: Create classrooms on the foundations of equity and justice.

Equity and justice are the guiding principles which serve as the foundation and govern all action and interactions in Ali's and Sara's rooms. Equity and justice are not mere add-ons to an already sanctioned curriculum but permeates every aspect of every system. One notices these principles in the curriculum as these teachers make shifts in what is taught to give voice and choice to their students. Equity and justice also show up in the ways these teachers spend their funding for classroom resources as well as in the policies they develop and sanction with their students. They are always evaluating who is being privileged or marginalized and whose voices and opinions are being heard or whose voices and opinions are absent from the conversation or curriculum. This is an ongoing process that these two teachers engage in on a daily basis as a means of providing the kind of schooling that Love (2019) reminds us is possible. Love avers that we must build new schools based on "justice, anti-racism, love, healing, and joy" (p. 11).

Radical Shift #2: See color

Many White people subscribe to colorblindness because they are unaware of how race affects Black, Indigenous People of Color (BIPOC) in society on a daily basis. They believe it is helpful to assert that race does not matter (Tarca, 2005). This is not true. Race does matter. For people of Color, race permeates every aspect of one's life. A stance of being colorblind is very counterproductive when it comes to dismantling racism. Equity conscious teachers, like Sara and Ali, see color and make it a priority to enact initiatives that are designed to support their Black and Brown students in their classrooms. When they make decisions, those decisions are always filtered through the lens of the positive or negative impact the decision may have on their students of Color. If the decisions will have positive ramifications for their students of Color, they implement those decisions. However, if those decisions are not supportive or could have potentially damaging or negative consequences on students of Color, these teachers tweak those decisions or abandon them all together.

Radical Shift #3: Become an antiracist

Racism is behind many of the storylines that we read about or view on a daily basis. One cannot turn on the television or scroll through an online platform without coming across an incident that was racially motivated. Racist practices and racism are real, but many people shy away from such conversations or take a position of neutrality. Many espouse, "I have Black friends." Others share, "I am not a racist." Kendi (2019) reminds us that it is not enough to be non-racist. He avers, "One endorses either the idea of a racial hierarchy as a racist, or racial equality as an antiracist" (2019, p. 9). Kendi goes on to explain that there is no safe space as "not racist." I have found that talking about race and racism can be frightening, overwhelming, and

dangerous. But these conversations are very necessary, if we are really serious and committed to dismantling racist practices and policies within our classrooms and school systems.

Ali and Sara are racial justice-oriented educators who are not afraid to have conversations in their classrooms that center on race. Once on the playground, Ali overheard two White kindergarteners tell one Black kindergartener that he was not allowed to play with them because he was Black. Ali immediately shifted her curriculum to create a unit title, “*It Doesn’t Matter if You Are Black or White*” (Myers & Jenkins, 2020). Ali and Sara collaborated to plan and implement the unit. They created spaces for their learners to explore concepts of race and racism through Socratic seminars. These racial-justice oriented teachers confronted racism in their work with young learners. This is important because there is a dearth of literature that addresses ways to counter anti-racism with early childhood learners.

Radical Shift #4: Commit to Pro-Blackness

The disdain for Black people is deeply embedded in all institutions and systems. When one is not victimized by it, it becomes difficult to notice. One can navigate all spaces with little or no concern because everything appears normal or the way that it should be. The opposite is also true. When one is oppressed by anti-Blackness, one notices it everywhere and has to carefully navigate all spaces at all times. Pro-Blackness is the opposite of anti-Blackness. Pro-Blackness does not mean anti-White or *anti* anything. It simply means that the humanity of Black people should be respected just as the humanity of others are respected and held in high regard (Boutte, et al., 2021). Take for instance the insurrection that occurred on January 6, 2021. Many Black Americans compared that event to the #BlackLivesMatter protest of summer 2020. During the #BlackLivesMatter protest, protestors were met at the state capital by thousands of armed guards, and many protestors were arrested for peacefully demonstrating. During the Insurrection of 2021, there were lives lost, and the few arrests that were made were done in the days and weeks to follow. The resounding pro-Black sentiment from many Black Americans was that Black people should receive the same treatment that the right-wing White demonstrators received.

Those who are committed to promoting a just and equitable world are pro-Black. As pro-Black educators, Ali and Sara take concerted, intentional actions to ensure that Black children are loved, are safe, and that their souls are healed from the damage of White supremacy (Boutte, et al., 2021). Their commitment manifests itself in their curriculum, their attitudes, and the way they manage their classrooms. They are very cognizant of their role in breaking the Cradle-to-prison-pipeline (CTPP) for many students of Color, children with disabilities, and children with limited English proficiencies.

Radical Shift #5: Institute restorative discipline

The Cradle-to-prison pipeline (CTPP) is a term that describes the structural, systemic, institutional, and societal barriers that produce inequities, racism, and other forms of discrimination that affect children of Color, children with disabilities, and children with limited English proficiencies (Milner, et al., 2019). Milner and colleagues (2019) aver that some of the root causes of the CTPP are: zero tolerance policies, subjective teacher and administration practices, a lack of teacher preparation in understanding race and class, and the criminalization of school facilities. Sara and Ali are cognizant of the need to move away from approaches to classroom management that are punitive by design. They understand that the over-policing, suspension, and expulsion of students are not beneficial and can be detrimental and traumatic to

a child's overall wellbeing. Punitive approaches to discipline often position offenders on the outskirts of a classroom community. Instituting a restorative discipline approach to behavior management is essential in supporting all children, but children of Color, children with disabilities, and children with limited English proficiencies in particular. Restorative discipline is a relationship-oriented, conflict resolution approach to managing student behavior (Morrison, 2007; Amstutz & Mullet, 2005; Milner, et. al., 2019). Restorative discipline provides students opportunities to take responsibility for the harm they may have caused others, make amends, and then to return to the classroom community in good standing (Wachtel, 2016). There are three elements to support restorative discipline: affective language, circle processes, conferences. Affective language is language that genuinely expresses feelings and emotions. It is usually done through statements and/or questions that get to the core of the problem. The circle process is designed to promote a sense of community and is built on mutually respectful relationships. The conferences are held so that involved parties may address the conflict, take responsibility, and find a mutually agreed upon solution. In Ali's and Sara's classrooms, the circle process sometimes includes the children's family members. This is because Sara and Ali understand the importance of treating families with dignity and respect. They also understand their roles as a part of the children's familial networks that support the children.

Radical Shift #6: Build effective familial networks of support

The final shift that the radicals make is in their treatment of families. There are racial inequities in our schools and communities. This is problematic when some students end up at the bottom of all the good lists and the top of all of the bad lists. More often than not, we blame the kids and their families as opposed to looking at the system to determine the root causes. Radicals understand the significance of getting to know families by becoming a part of the family's networks of support (Myers, 2013). These radicals reject the limited, deficit views of familial involvement and build on the rich resources and support structures available to the families as they learn from and with families on how to best educate the children they share (Myers, 2013). In doing so, they begin to see families in new ways and begin to understand the many ways that families help their children navigate schooling, ways that are not situated in White, middle class norms.

Implications

I am going to briefly address what the response and responsibility of school-university partnerships should be during this time of crisis. I will address what we should be doing now if we are committed to dismantling racism, countering anti-Blackness, promoting pro-Blackness, and challenging all forms of hate to promote a more just and equitable world for all. Our commitment is even more important today than it was just six months ago. Bearing this in mind, I offer the following implications.

1. We must understand how racism works. We must remain mindful that no strategy can help us cultivate equitable schools if we're unwilling to understand how racism operates. Racism is prevalent in every aspect of schooling, from the curriculum that is sanctioned to the testing that is required, to the ways that students are identified for placement in gifted and talented or special education and even to the ways that punitive classroom discipline is exercised and against whom.
2. We have to take actions to grow our collective knowledge to better understand the intersections of the social identities of the students in our care. The more we know about

the children in our care, and the more we know about best practices for educating children from culturally and linguistically diverse backgrounds, the better equipped we are at educating them in ways that truly matter. This means that it is essential to take actions to grow the knowledge of individuals in the organization as well as the collective knowledge of all in the organization. We must all muster the courage to act, to act in ways that support the collective humanity of us all.

3. Remain cognizant of whose voices are missing from the decisions. If everyone at the table looks and thinks like you, go to another table. In this way you foster an environment wherein diverse perspectives are not only welcomed but invited.
4. Knowledge is never stagnant. Continue to learn and grow and apply new knowledge and learn from that. I always tell folks that my job is to plant the seed. Their job is to nurture the seed, and time will yield the fruits of those seeds. Some of you are going to be radical enough to go right out and apply the ideas shared here, others will take some time to internalize it, and yet for others, these ideas may fall on dry, rocky soil and soon wither away. My hope is that the seeds that I am planting will propagate and yield thriving plants in different spaces so that the legacy continues.
5. It is critically important to honestly examine your own prejudices and biases. What you believe and value guide your every decision and action. Your beliefs will show up in your work and practice.
6. Stop trying to fix students of Color but instead fix the inequitable policies, practices, and conditions that are operational in the institutions and systems you engage in daily. In this way, you are getting at the root causes of the problem and not the individuals who are affected by the problem.

Conclusions

In conclusion, ordinary people can resist systems of oppression through our collective powers with others who have teamed up to do this work on an everyday basis. Our verbal and written commitment to promoting equity and justice is not enough; it must also show up in our daily actions. We as educators are moving forward and must engage in forward thinking. Poet and activist Amanda Gorman (2021) at the Presidential Inauguration for President Joseph R. Biden said, “There’s always light, if only we’re brave enough to see it. If only we’re brave enough to be it.” My challenge to you is to act, and act now in radical and brave ways. Be the light. Our children are depending on you. Our world, the better, more just world, is at stake.

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A Case Study of a School-University Partnership Focused on Literacy and Educational Equity: Responding to COVID-19 in the Early Grades

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Abstract: School-university partnerships have emerged over the past three decades to increase educational opportunities for underserved students. One example is the Literacy Fellows Program (LFP), a recently created partnership between the Sherman Center for Early Learning in Urban Communities at the University of Maryland, Baltimore County and two Baltimore City public schools. The LFP recruits and coordinates undergraduate volunteers to support literacy teaching and learning in first and second grade classrooms. This paper draws on interviews with 11 teachers and 20 volunteers, and 32 classroom observations conducted before and during COVID-19. Classroom teachers and undergraduate volunteers recognized multiple benefits of the program for all participants. COVID-19 has imposed challenges for teaching and the implementation of the LFP that have temporarily reduced the program's effectiveness. However, these challenges also provide important lessons for improving implementation in the future. Implications of these findings for future research and partnership practice are discussed.

KEYWORDS: School-university partnerships, literacy, early childhood education, classroom/community volunteers, underserved schools, COVID-19

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission. A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Eight: Boundary-Spanning Roles. A PDS creates space for, advocates for, and supports college/university and P-12 faculty to operate in well defined, boundary-spanning roles that transcend institutional settings.

Essential Nine: Resources and Recognition. A PDS provides dedicated and shared resources and establishes traditions to recognize, enhance, celebrate, and sustain the work of partners and the partnership.

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A Case Study of a School-University Partnership Focused on Literacy and Educational Equity: Responding to COVID 19 in the Early Grades

Despite ongoing education reforms, many children in large urban school systems like Baltimore City Public Schools (BCPS) are denied equitable learning opportunities (Anyon, 2014; Payne, 2008). These inequities are visible in school outcome data. For example, in 2018, 81.4% of elementary students in BCPS *did not meet expectations* on the Language Arts Partnership for Assessment of Readiness for College and Careers (PARCC) compared with 49.5% for the state (Maryland Report Card, 2019). Such statistics suggest the need for early interventions if we want to improve educational outcomes for underserved students.

One of these interventions is a school-university partnership between the Sherman Center for Early Learning in Urban Communities (Sherman Center) at the University of Maryland, Baltimore County (UMBC) and BCPS schools. A key initiative of this partnership and the focus of this article is the Literacy Fellows Program (LFP). The LFP is a service-learning project designed to improve literacy outcomes for first and second grade students at two Baltimore City schools whose student populations are primarily low-income, and Black or Brown. The LFP assigns UMBC undergraduates to schools and classrooms. Before the transition to online learning due to COVID-19, volunteers supported classroom language arts instruction face-to-face twice a week from 1 to 1.5 hours each time during the fall and spring semesters. During COVID-19, the program's overarching goals remained the same, but the instructional support was provided through ZOOM, a synchronous virtual platform.

In this article, we respond to the call of scholars to expand the knowledge base on the implementation and sustainability of partnerships (Coburn & Penuel, 2016). We report findings from a multiple case study examining the perceptions and experiences of university (undergraduate volunteers) and school (classroom teachers) stakeholders participating in the LFP. We also analyze how the shift to a virtual platform due to COVID-19 affected program expectations, implementation, and mission. This study builds from the literature on school-university partnerships and overlapping spheres of influence (Epstein, 2010). Using qualitative data from interviews with classroom teachers and undergraduate volunteers and observations in classrooms, it asks: 1) *What are the perceived benefits of the LFP for students, teachers, and undergraduate volunteers?* and, 2) *How did the program modify its practices to respond to new teaching realities resulting from COVID 19 and with what effects?*

By answering these questions, we highlight the process, including successes and difficulties, of implementing a school-university partnership program that centers equity and social justice. We also elevate the perceptions and experiences of teachers and university undergraduates who were key stakeholders in the implementation process.

Literature Review

School-University Partnerships

With the passage of the *No Child Left Behind Act* in 2002, and the related press to close demographic-associated academic disparities among students, schools have increasingly turned to community engagement strategies to address educational concerns. School-university partnerships is one of the four major community engagement strategies that have emerged over the last three decades (Sanders, 2003). Callahan and Martin (2007) discuss different

classifications of school-university partnerships based on their goals and types of connections between the two organizations. According to Walsh and Backe (2013), the majority of school-university partnerships have focused on three areas: (1) teacher training and development, (2) co-construction and evaluation of curriculum, instruction, and leadership strategies, and (3) service learning.

- (1) *Teacher training and development.* While these partnerships originated from the need to have sites for preservice teacher development, they have evolved into more egalitarian partnerships between schools and universities (LeFever-Davis et al., 2007). The increasingly egalitarian relationship has resulted in longer-lasting, more positive outcomes for all stakeholders. Student-teachers have an opportunity to link theory to practice and observe teaching in real settings as well as share their knowledge of current pedagogical practices and support classroom instruction (Darling-Hammond, 2006; Hascher et al., 2004; Reischl et al., 2017).
- (2) *Co-construction and evaluation of curriculum, instruction, and leadership strategies.* In contexts where principals and teachers are struggling to provide students with meaningful learning opportunities, universities can be thoughtful partners and assist with reform implementation (Borthwick et al., 2003; Jeffery & Polleck, 2010; Rosenquist et al., 2015). In this type of partnership, schools and universities work collaboratively to support systemic change. In many cases, schools lack resources to rigorously evaluate the effectiveness of the practices and programs they implement. In contrast, universities have the tools, resources, and expertise to evaluate programs implemented by schools, and facilitate the use of research for education decision-making (Bryk et al., 2015).
- (3) *Service-learning.* This type of partnership is usually based on a critical need displayed by one partner, typically the school, and the ability of the other partner, typically the university, to address that need. Universities can offer a wide range of services, including food pantries and health-services, educational materials, tutoring programs, and afterschool programs, to support the multiple needs of schools and students as part of their service-learning requirements (Bringle et al., 2009; Walsh & Backe, 2013; see also Donaldson & Daughtery, 2011). Some recent service-learning approaches follow a participatory model where school personnel are actively engaged in designing the service-learning experience and involved throughout the decision-making process (Mitchell, 2007). In these cases, school stakeholders not only participate in defining the scope of the experience but also become critical agents in refining and monitoring its implementation.

Although these types of partnerships have a long history, they have recently come under increased interest as universities expand their commitment to work with local schools as part of their social and civic responsibilities (Bringle & Hatcher, 2000). These partnerships are also considered a possible means of closing learning disparities and opportunity gaps (disparities in access to high-quality schools) between underserved students and their middle-income or White peers (Brabeck et al., 2003; Sanders & Campbell, 2007; Sanders & Galindo, 2014).

Theoretical Framework

Educational and developmental theorists have long discussed the need to consider the overlapping and interacting contexts in which students develop and the relations between these contexts to optimize their learning (e.g., Bronfenbrenner & Ceci, 1994). Epstein's (2010) theory of overlapping spheres of influence provides a theoretical perspective to better understand the

transformative potential of school-university partnerships, in general, and of the LFP, more specifically.

Epstein's (2010) theory posits that the *overlap* between and among contexts of influence, the family, school, and community, enhances benefits for students' learning and overall well-being. This study focuses on a collaboration between two of these contexts, the school and the community, to improve primarily low-income, and Black or Brown students' educational opportunities.

The quality and degree of *overlap* between these contexts determine the success of the partnership. Instead of taking a top-down approach, successful partnerships place schools and their students at the center and identify common goals that are oriented toward facilitating academic success and other positive outcomes (e.g., social emotional development, improved attendance). Partners also share responsibilities and maintain positive collaborations that are based on trust to achieve common objectives (Griffiths et al., 2021).

To build successful partnerships with schools, universities have a major role to play in establishing mutually beneficial, bi-directional relations that go beyond their self-interest (Buys & Bursnall, 2007). The university commitment to successful partnerships needs to be reflected at the individual and organizational levels. Weerts and Sandmann (2010) posit that individuals at the university need to take the following leadership roles to support successful school-university partnerships: *community-based problem solver, technical expert, internal engagement advocate, and engagement champion* (p. 642). At the organizational level, a university's commitment to school partnerships must be an integral part of their overall mission, with dedicated staff and funding (Sanders, 2003). Individual and organizational-level support will enhance the *overlap* between schools and universities and their capacity to improve underserved students' learning opportunities. One example of a recently created school-university partnership is the Sherman Center at UMBC.

The Sherman Center and The Literacy Fellow Program

The Sherman Center was established in 2017 with a generous gift from the George and Betsy Sherman Family Foundation. Through applied research, professional and leadership development, and partnerships with schools, families, and communities, the Sherman Center seeks to build a strong educational foundation for children from birth to age eight in Baltimore City, and develop empirically tested early childhood education practices for urban schools. The Sherman Center's implementation strategies and goals are delineated in its theory of change (see Fig. 1).

Sherman Center Theory of Change

The Sherman Center for Early Learning in Urban Communities seeks to build a strong foundation for lifelong learning and academic success by connecting theory, evidence, and practice.

PARTNERSHIPS.

Collaborating to expand resources and opportunities for young learners, birth to eight.

Activities: Diverse Books Project; Families, Libraries, and Early Literacy Project; Literacy Fellows Program

MULTIDISCIPLINARY RESEARCH AND SCHOLARSHIP.

Producing and disseminating new knowledge on early childhood education policies and practices.

Activities: Faculty Recruitment, Faculty Research Award



PROFESSIONAL AND LEADERSHIP DEVELOPMENT.

Building professional knowledge and leadership in early childhood to promote transformational change.

Activities: Teacher Summer Institute, Maryland Early Childhood Leadership Program



The Sherman Center currently partners with five PreK-8 schools serving racially and ethnically diverse, low-income students in a historically industrial section of South Baltimore. It began working with two of these schools in the 2017-2018 academic year (AY). In AY 2018-2019, the Sherman Center expanded its work to include two additional partner schools. A fifth school (beginning with its kindergarten team) was welcomed in AY 2020-2021.

The Sherman Center collaborates with its partner schools to implement site-specific and cross-site projects to enhance early literacy instruction, resources, and outcomes. This focus reflects the schools' goals and a recognition of the importance of early literacy for young

children's life-long success (International Literacy Association, 2018; Schwanenflugel & Knapp, 2016). Currently, the Sherman Center implements four school-based initiatives: the Diverse Books Project, the Teacher Summer Institute, the Families, Libraries, and Early Literacy Project, and the LFP.

Established in fall 2018, the LFP is a collaboration between the Sherman Center and the Shriver Center (a service-learning center at UMBC) to provide undergraduate volunteers to assist with literacy at two schools. Early childhood teachers at these schools identified the recruitment of classroom volunteers as a major challenge and indicated the need for "extra hands" to support their teaching and learning. Through consultation with school principals, first and second grade classrooms were selected for participation in the LFP.

Each school is assigned a team of undergraduate volunteers led by literacy fellows, one or two undergraduate students interested in education and community service who enroll in the Shriver Center's Community Service & Learning Practicum (Leadership Section). Literacy fellows apply for the position and are interviewed and selected by Sherman Center and Shriver Center staff. Each literacy fellow receives a stipend, works a minimum of four hours per week, serves as a literacy volunteer, and recruits and organizes an additional three to five volunteers for their assigned school. Literacy fellows are also responsible for transporting volunteers to and from school sites using vans provided by the Shriver Center, managing the online volunteer service verification forms, and documenting volunteer hours and activities in end-of-semester reports.

Literacy fellows and volunteers reflect UMBC's highly diverse student population. They serve as classroom helpers two days per week for 60-90 minutes during the first and second grade language arts instructional blocks. The classroom teacher determines volunteer activities. For example, a volunteer might assist with a whole-class instruction activity, work with small groups, provide one-on-one support to individual students, or assist the classroom teacher with developing and preparing instructional materials. Each team of volunteers at a school receives \$500 per semester to purchase instructional materials or student incentives for their host classrooms. UMBC faculty and staff provide support, guidance, and professional development to facilitate volunteers' work and success.

In March 2020, the activities of the LFP abruptly ended when Maryland's governor, Larry Hogan, issued a stay-at-home order in response to COVID-19. This study describes perceptions of the LFP's impact before and during COVID-19. It also discusses implications of the study's findings for school-university partnerships that seek to improve educational experiences and outcomes for underserved students.

Methods

Based on data collected as part of a mixed-methods, multiple case study, this paper examines the *implementation and effectiveness* of the LFP at two Baltimore City schools.

Setting and Participants

The participating schools served primarily low-income, and Black or Brown students and had an increasing multilingual population (see Table 1). Students in these schools were warm and welcoming, yet many struggled in mathematics and English language arts with average proficiency-levels well below the district's averages. The study's participants included first and second grade students, parents, and classroom teachers at the two case schools. Undergraduate

volunteers, and UMBC faculty and staff supervising the undergraduate fellows and volunteers were also part of the study.

Table 1.
Student Characteristics and Outcomes, School Year 2018–2019 (in percentages unless otherwise specified)

	School One	School Two
Size (number of students)	317	222
Racial/ethnic composition		
African American	44	68
Latinx	19	26
White	32	5
Other	5	1
English learners (ELs)	15	17
Students eligible for free and reduced-price meal (FARM)	61	67
Student Outcomes		
Proficient in Mathematics	4.5	4.1
Proficient in English Language Arts	5	6.6
Chronologically absent	55	46

Notes. Information comes from the AY 2018-2019 Maryland Public Schools Report Card. AY 2018-2019 is the latest year for which data are available. At the time of the study, both schools were combined. Report data came from the elementary grades. Chronologically absent students are considered those who missed school for 10% or more school days.

All participating classroom teachers were women, and 80% had fewer than five years of experience working in their schools. Around half of the undergraduate volunteers identified as Black (African American or of African descent; 55%) and 90% were women. Sixty percent were freshmen and 25% were juniors. Fifty five percent were majoring in social sciences or humanities, and 30% in natural science or mathematics. The study used a multi-source, multi-methods approach to gather rich data and increase credibility.

Data Collection

The first two authors collected data over a period of two years, beginning in AY 2019-2020. Data collection included semi-structured interviews (30-60 minutes) with program leaders at UMBC and volunteers and teachers from the two case schools. These interviews addressed the goals, successes, and difficulties of the program and practices or activities that volunteers were implementing in the classroom. Undergraduate volunteers and classroom teachers received \$30 and \$70, respectively, for each interview as a thank you.

Data collection also included individual interviews with first and second grade students using structured questionnaires (lasting 7-12 minutes) to assess their reading motivation and self-

concepts. Additionally, it included telephone interviews with parents (mostly mothers; 15-25 minutes) to examine the frequency with which children read at home, and more generally, the home reading environment. Interviews with Latinx students and parents were conducted in Spanish, their preferred language. Students received stickers and parents received \$15 for each phone-interview as a thank you.

The first two authors also observed first and second grade classrooms during the language arts instructional block (60 minutes) to examine teacher instruction, volunteer engagement, and teacher and volunteer interactions. In most cases, one volunteer was assigned to each classroom, but there were a few exceptions where two volunteers worked together in one classroom. Data collection also included the review of relevant documents, specifically website postings, handouts from professional development activities for volunteers, recruitment documents, newsletters, and literacy fellows' end-of-semester reports. Each school received \$1500 as a thank you for its participation at the end of the study in the fall of 2021.

For this paper, we analyzed qualitative data derived from classroom teacher and undergraduate volunteer interviews and classroom observations collected during the fall semesters of AYs 2019-2020 and 2020-2021. There are two main differences between data collection during the two academic years: one, data collection was face-to-face in AY 2019-2020 and virtual in AY 2020-2021, and two, fewer classroom observations were conducted in AY 2020-2021 than in AY 2019-2020 due to technological challenges associated with COVID-19.

Data Collection during AY 2019-2020

School visits were conducted at least once a week during the fall of 2019 to collect data. Nine teachers (six at School One, three at School Two) and 14 volunteers (seven at each school) were interviewed, and 24 formal classroom observations were conducted. Instrument protocols are included in the Appendix.

Data Collection during AY 2020-2021

Data were collected from two first grade classrooms in School One and one first grade and one second grade classroom in School Two via ZOOM. These classrooms were observed two times each between September and December 2020. Six teachers and nine volunteers were interviewed, and eight formal classroom observations were conducted. Across the two years (AY 2019-20 and AY 2020-2021), four teachers and three volunteers were interviewed twice. These were teachers who taught the same grade level at the same school and volunteers who participated in the LFP during the two academic years. Data collection with students and parents was not possible during AY 2020-21 because of constraints presented by COVID-19.

Data Analysis

Interviews with teachers and volunteers were audio-recorded and then transcribed. Classroom observations were recorded using hand notes and also transcribed. All transcribed data were imported into Nvivo software and then analyzed using an open coding approach (see primary and secondary codes in Table 2). By taking this emic approach to coding, we centered participants' perspectives and understandings (Saldaña, 2015).

Table 2.
Primary and Secondary Codes

Primary Codes	Secondary Codes
Perceived benefits for students	Literacy learning opportunities
	Behavioral regulation
	Bonding with adults
	Role models
Perceived benefits for teachers	Instructional support
	Facilitate their work
	Help with stress
	Educational Resources
Perceived benefits for undergraduate volunteers	Opportunities for learning
	Making a meaningful impact
	Bi-directional bonding
Challenges during COVID 19	
Teaching	New mode of instruction
	Time pressure
	Stress
Undergraduate volunteers' experiences	Fewer bonding opportunities with students
	Fewer opportunities to support learn
	Underutilized
	Less impact
Positive aspects during COVID-19	
	Partnership program remained
	Volunteers commitment
	Improved commitment
	Parents support

Data analysis started with data collection. After each session of data collection, the first two authors recorded their thoughts and identified areas for further inquiry. For this paper, data were reviewed and analyzed individually and collectively. In a series of meetings, the authors met to discuss emergent themes related to LFP implementation, benefits, and challenges identifying points of convergence and divergence. To refine the final narrative, we systematically triangulated data sources, identified key patterns, and considered contradictory evidence (Merriam & Tisdell, 2015). We edited quotes for clarity and brevity as needed, but we mostly maintained participants' voices and idioms. We use the pronoun "they" to guard the anonymity of volunteers.

Findings

Interviews and classroom observations revealed LFP successes and challenges. Below, we discuss these findings before and during COVID-19.

The LFP before COVID-19

As described below, study participants (classroom teachers and undergraduate volunteers) valued the multidimensional impact of the LFP on underserved students, teachers, and undergraduate volunteers.

Perceived Benefits for Students

Teachers and undergraduate volunteers described multiple benefits of LFP activities for students, including increased literacy learning opportunities, better classroom behavior, greater opportunities for bonding with other adults, and access to role models. Overwhelmingly, teachers and undergraduate volunteers recognized that students' literacy skills were improving. One teacher at School Two shared,

Their scores [are improving]. It is undeniable; you can see it in the DIBEL [Dynamic Indicators of Basic Early Literacy Skills] scores. I monitor my red and orange groups, which is the largest portion of this class...My red and my orange groups are both below grade level. They [a volunteer] worked with these groups, they needed that double dose. But, you also see improvement in their verbal skills...and even in small things like handwriting and in anything that they [the volunteer] could help them with.

Undergraduate volunteers also acknowledged the improved literacy skills that many students demonstrated in foundations (e.g., phonological awareness, knowledge of alphabet), and reading skills. Volunteer A explained how the small group or individualized interactions with students generated positive learning outcomes:

I have seen a significant difference in the reading levels of some students. Students who were below the class reading level did not get much targeted help before because they are not on grade level, and there are twenty other students who would not be getting the needed instruction if [teachers] prioritized those below grade level.

Undergraduate volunteers in the classroom supported learning by offering additional exposure to previously taught content or giving different explanations than those initially offered by teachers. When explaining why Volunteer C observed improved learning, they shared:

Volunteers could have different ways of teaching students and have them understand it better. One student might not understand how the teacher's explaining it. But maybe the volunteer explains it differently, and the student is like, 'Oh, I understand it now.'" Depending on whether the student is a visual learner or an auditory learner. The volunteers could help the student learn it better or build off what the teachers already taught them.

Teachers and undergraduate volunteers also recognized significant behavioral benefits for students, identifying behavioral management as a significant challenge in these schools. Teachers acknowledged that the presence of undergraduate volunteers, walking around while students worked independently, was useful to control minor misbehaviors (e.g., calling out, out of seat) and helped students stay on task. Undergraduate volunteers also mentioned that some students became "less disruptive" over time because they were actively involved in assisting them to focus on learning and interact more positively. Volunteer D explained the behavioral benefits as follows:

When I first walked in the classroom, I noticed that many children were distracted and weren't paying attention to directions. But once we had that one-on-one time, they began to warm up to us, and then they became more enthusiastic about learning and following directions.

Volunteer E elaborated,

I am very tough love. When they have good behavior, I am very, very happy. But when they have bad behavior, I discipline and talk to them... Sometimes the way that they [students] talk to each other, they know that when they talk to me, they can't talk like that. Some students have become more polite or treat their friends better.

Undergraduate volunteers not only helped students understand how to communicate respectfully with other peers or stay focused on their learning tasks, but some of them also intervened when major behavioral problems (e.g., fighting, disruptive outbursts) occurred. Volunteer C explained, "Sometimes I stepped in [to help with behavioral issues] ... to help them refocus and calm down. We talk about the problems one on one; they ask me questions, and I ask them questions." The teacher appreciated the involvement of this volunteer in de-escalating behavioral difficulties.

Another significant benefit for students of having undergraduate volunteers in the classroom was having additional bonding opportunities with adults. Undergraduate volunteers, whom teachers commonly described as "patient," "respectful of students," "calm," and "firm" were intentional about building positive relationships with students, and students were responsive to these attempts. Teachers acknowledged, "students love the volunteers, they are happy to see them," or "students trust the volunteers, and they looked forward to working with them." Participants' descriptions of the close relationships between undergraduate volunteers and students were consistent with our observations. In our visits, we perceived a sense of caring and positive connections between undergraduate volunteers and students. When undergraduate volunteers arrived, students often ran to hug them and chatted with them. Moreover, when they were working together in groups, we observed lively interactions.

Some teachers used a family analogy to explain the connections that students and undergraduate volunteers developed, "teachers were like parents and volunteers were like older siblings.... When your parents tell you to do something, you don't want to do it...But, with the volunteers, when I ask them [the students], to go through this with them [volunteers], they do it."

A related benefit of the LFP undergraduate volunteers was that they served as role models for low-income, and Black or Brown students who might have limited contact with college students, particularly those who were male or Black or Brown. Thus, students in the first and second grades developed positive relationships with successful university students who looked like them. As role models, undergraduate volunteers served as positive influences and sources of inspiration.

Perceived Benefits for Teachers

LFP undergraduate volunteers also provided direct support to teachers during classroom instruction. In general, teachers recognized the importance of having "extra hands" in the classroom to help with small groups and time management. Teachers acknowledged that sometimes they struggled to work efficiently with all small groups because of limited time; however, this was not the case when the undergraduate volunteers were visiting. Because of division of labor, no group was left out. A teacher in School Two explained,

I really love it when they [volunteers] come. They are a huge help with rotations [students working in different centers]. I am like ah, yes, they're going to be here so I can do this activity during small groups. I put one volunteer at one center and the other volunteer at another center. In this way, I am not over here one minute and over the other

center the next. I know that my students are going to have that adult set of eyes to help them with it.

Undergraduate volunteers not only "helped a lot," they also made teachers' work "easier and less stressful." A teacher at School One described how they felt less overwhelmed when undergraduate volunteers were in the classroom; volunteers were very supportive and willing to help with what was needed,

I appreciate that they are so eager to help. It doesn't really matter with what, they just want to help. The volunteer is always saying, 'I just want to help, whatever I can do to help.' I really like that because we could use more and more help.

The instructional support that undergraduate volunteers provided to teachers was especially appreciated when teachers needed to monitor students' progress individually or in small groups (four or five students at a time). While doing this, they did not have time to focus on the rest of the class. In these situations, having the undergraduate volunteers to help with instruction was much appreciated.

Another support that teachers recognized was the material resources that undergraduate volunteers were able to get for students. One teacher shared, "[The volunteer] noticed that a couple of students needed wider pencils, and they brought some for them." As we mentioned earlier, each team of undergraduate volunteers received \$500 per semester to spend in their host classrooms. Some of the teams utilized that funding to buy needed educational resources.

Perceived Benefits for Undergraduate Volunteers

Undergraduate volunteers joined the LFP for multiple reasons. Some had personal or professional interests in education or thought it could be an interesting experience. For others, it helped them fulfill a university program requirement. Regardless of the reasons, undergraduate volunteers recognized that being part of the LFP was an important learning experience.

Volunteer F shared,

The best is you get to work with kids. You get to learn about yourself along the way too like your own weaknesses and your own strengths with kids. Working with different kinds of students [well behaved or those who don't follow instructions easily] helps you understand kids as a whole and it helps you become more patient and more understanding. When you are outside of your comfort zone, you learn a lot.

For those undergraduate volunteers who came from affluent backgrounds and were less knowledgeable about the challenges faced by low-income students or the schools they attended, participating in the LFP was an eye-opening learning experience. Volunteer G reflected how participating in the LFP expanded their worldview,

I feel like it also gives us [volunteers] a chance to meet different people and to see how others are living. I grew up in Affluent County; this was very different for me. I actually loved the experience [LFP] very much. I thought everyone received an education like the one I did. Now I am realizing that that is not the case; it gives me a different perspective. In the same way that the kids are learning from me, I am also learning from them.

For a few undergraduate volunteers, having the opportunity to "serve" or "make an impact" was very important; they "felt passionate about social justice" and wanted to give back to their community acknowledging their "privileged" upbringing. For other undergraduate volunteers, although giving back was not an original intention, they "felt proud" to be making a difference in the lives of underserved students. The following quote reflects the perspectives of many of the LFP undergraduate volunteers:

It makes me feel really accomplished when I see that the kids are learning and that they are really interested. I was working with a Spanish-speaking student—whose English was not good. One time, I taught him how to spell 'sun.' He was so excited when he finally got it. He drew a picture of a sun, wrote S-U-N and showed it to the rest of the class. He was just so excited. It was nice to see that even with only a couple of hours that I was in the classroom, I was already making changes. (Volunteer H)

The sense of accomplishment that came from feeling they were *making a difference for students* positively impacted the undergraduate volunteers' levels of commitment. Volunteer E described their volunteering experience at School Two,

When we get to school. I feel like everyone [volunteers] forget about everything outside of the school. Everyone becomes very immersed in the kids and what they have going on. Everyone has formed connections with their kids. When they come in, some of the kids are in the hallway and they're always coming up and hugging the different volunteers... You could just see that they are very engaged teaching the kids different things.

Finally, the undergraduate volunteers valued the bonding experiences they had with students. Volunteer E shared, "I like the kids; they listen to me. When you build a relationship with kids, they just stick to you more. They pay attention to you more." Volunteer C added, "I am excited to see my kids and I'm excited to work with them. As soon as I step through the door of the classroom, all the tiredness and groggy energy just go away. I am just filled with positive feelings, like, they're my priority; they have my full attention."

The LFP during COVID-19

The COVID-19 pandemic by necessity changed the teaching and learning realities of participating students, teachers, and undergraduate volunteers in diverse ways. These changes influenced both teaching and the implementation of the LFP.

Before the start of AY 2020-2021, BCPS distributed electronic devices to students in the district so they could attend classes virtually. Some schools were designated as *student-learning centers*, where students with the most potential difficulties (e.g., English language learners or students with individualized Education Plans) or those who had no childcare provider at home could come to self-contained spaces with adult supervision to attend classes online. COVID-19 brought major difficulties to the implementation of the LFP, but also provided some positive lessons that could inform program implementation after the pandemic ceases.

New Teaching Realities and LFP Implementation

Before the start of AY 2020-2021, the Sherman Center and participating schools agreed to resume the LFP to provide volunteer support during online literacy instruction. Teachers and undergraduate volunteers involved in the program knew that the new academic year would bring unknown difficulties and that flexibility and adaptation were needed to implement the program during COVID-19.

While coping with the personal consequences of the pandemic, teachers needed to learn to teach virtually, shorten or modify their curriculum, implement strategies to maintain the attention of young students, and build relationships with students through a different mode of interaction. One teacher from School One described how her teaching changed after the pandemic,

Teaching is taking a lot more. The prior years, I had my weekends off. I did not have to spend much time on [planning]. Now, I am planning seven days a week. It is hard to do everything online (like the small groups). Sometimes, I don't do too much instruction, because there are so many different things to pay attention to like technology. We have a lot of technical issues that prevent things from flowing smoothly... You never know day to day what is going to happen.

Another teacher from School Two compared her current teaching to a "marathon" and explained, "I teach a twenty-minute curriculum in about 15 minutes. I teach Foundations (the phonics program) in about 5 to 10 minutes, but it should be twice [that time]. We run, run, and run."

At the same time that teachers felt pressured to fulfill teaching goals in a shorter period of time, they also struggled to help students remain focused on the content of the class and build a sense of community with their students. A teacher in School One noted, "I don't know the students as well. They are still babies--they like hugs. It is difficult to do through a screen."

Undergraduate volunteers who had participated in the LFP before COVID-19 also missed the social interactions with students and having meaningful bonding opportunities. New undergraduate volunteers also missed the bonding interactions with students. Volunteer C explained:

None of the students know my name. In the face-to-face classroom, everyone is calling you, 'I need help.' It is not like that in the online classroom. It is very hard for them to get to know you and you don't get to build positive relationships.

Some undergraduate volunteers felt that they were making less of an impact because of the online environment; they felt "underutilized." Either because they spent only a short time with students or their group assignments constantly changed, some undergraduate volunteers felt that they were not helping students as much as they could. Volunteer I, explaining that they worked with different groups of students every online session, shared,

To help students learn, it is important to build relationships with them. You have to learn how they learn and what content you need to work on. If we are working with different students, that is not very useful to the student. This is different from having students working with a volunteer regularly because you already have good rapport, you know their areas of improvement, and their strengths.

In addition to issues noted above, there were technical difficulties and restricted access to ZOOM for individuals outside of the school district. This issue limited participation of undergraduate volunteers at School One, where during the fall semester of AY 2020-2021 only two of the six classrooms were accessible for undergraduate volunteers. For those undergraduate volunteers who could access ZOOM classrooms, their interactions with students were typically limited to breakout sessions for brief periods, typically 10-20 minutes. In other online sessions, teachers ran out of time and could not implement breakout groups. In such cases, undergraduate volunteers attended the whole group session but did not interact with students. Thus, the potential of the program for increasing learning opportunities for students was negatively impacted by COVID-19.

Sustained Benefits and Lessons Learned

Despite challenges presented by online instruction, teachers and undergraduate volunteers remained committed to the LFP. Teachers were appreciative of having undergraduate volunteers attending the online classes and for their support during breakout sessions. Undergraduate volunteers adjusted to supporting students' online learning experiences to the best of their ability and remained enthusiastic about building positive relationships with students. Breakout sessions presented opportunities for students to receive learning support in small groups and have direct interactions with undergraduate volunteers that could mimic face-to-face interactions.

In one observation we conducted, two undergraduate volunteers implemented phonics activities with five students in a breakout session to reinforce whole group instruction. As occurred pre-COVID-19, students were excited to work with the undergraduate volunteers (e.g., "We miss you! How are you doing?"), and remained actively engaged in the rhyming tasks when in their breakout rooms. In another observation of a breakout room, the undergraduate volunteers implemented similar activities to the ones that the teacher did with the whole group. They took turns leading the activity, shared their computer screen to show artifacts, and called students by name to make sure they were involved. Three of the five students actively responded. The undergraduate volunteers also used many words of encouragement like "Good job!", "You can do it!" to promote student engagement.

There also were positive changes in the communication between teachers and undergraduate volunteers. Before COVID-19, teachers often told the undergraduate volunteers what to do when they arrived in the classroom. There did not appear to be much discussion or collaborative planning, although the undergraduate volunteer-student interactions appeared smooth and appropriate. However, with the onset of online instruction, teachers emailed the undergraduate volunteers in advance (usually during the weekend or the night before) and sent them instructional materials. This made coordination easier between teachers and undergraduate volunteers and allowed volunteers to prepare ahead of time for the work they were going to do during the online class.

Some teachers and undergraduate volunteers reported that online instruction was generating more positive results than expected for some students. A teacher from School Two explained the results of a three-week benchmark assessment, "Seventy or seventy five percent of my well-below and below kids are on-track, they are on their growth curve. They are actually doing very well." An undergraduate volunteer also recognized that the practice that some students were receiving in the breakout rooms provided the extra-attention that they needed.

Teachers also mentioned that their relations with families and understanding of the students' home environments changed with virtual instruction during COVID-19. A teacher in School One mentioned that parents appeared more involved with their children's education. This teacher noted that "Parents stepped up. I don't think I would have heard from as many parents. I think we have a better relationship. I have parents sitting there all day to make sure kids focus." On the other hand, another teacher noted that not all parents were able to give their children the support they needed. This teacher said she gained new insights to the struggles that some students have at home.

Discussion

School-university partnerships have the potential to improve students' educational experiences, provide teacher support, and enhance service-learning opportunities for students in higher education institutions. This article highlights the successes and challenges of the LFP, a

recently created partnership program between the Sherman Center at UMBC and two Baltimore City schools, before and during COVID-19. In so doing, we expand the limited research that focuses on understanding the processes and dynamics of school-university partnerships (Coburn & Penuel, 2016).

We acknowledge the complexities of establishing sustainable partnerships, especially when organizations have diverse goals and interests (Firestone & Fisler, 2002) or there are power disparities between partners (Sanders, 2003). However, we argue that when the needs of students are placed at the center, equity-oriented partnerships can support the daily functioning of schools. The LFP is a program that exemplifies this commitment. By providing university undergraduate volunteers to assist teachers, students received individualized attention and learning support, and access to positive role models. This was beneficial for students' literacy outcomes and classroom behaviors. Importantly, teachers and undergraduate volunteers also benefited. For teachers, having additional support in the classroom, either during face-to-face or online instruction, facilitated their work and helped relieve stress. For undergraduate volunteers, the LFP provided an opportunity to become members of a community, build positive relationships with students and teachers, and learn more about themselves and their surrounding community. As Epstein's (2010) theory of overlapping spheres contends, when families, schools, and community partners work together, all members of the partnership benefit.

The success of the LFP also highlights the importance of critical elements of collaboration for effective partnerships (Epstein, 2010). In particular, the LFP is characterized by shared goals for students' learning and success, open communication about student and classroom needs, mutual respect among undergraduate volunteers, teachers, and students, and processes and opportunities for adaptations and problem solving (Lefever-Davis et al., 2007; Griffiths et al., 2021; Walsh & Backe, 2013). These program attributes proved essential in responding to COVID-19.

While COVID-19 negatively affected the implementation of the LFP, this school-university partnership may have helped to offset the increased learning disparities between underserved and more affluent students that have resulted from the pandemic (García & Weiss, 2020; Hirsh-Pasek et al., 2020). The challenges to teaching and learning presented by COVID-19 have been significant. Teachers have been forced to learn a new mode of instruction in a short period of time, and teachers and families alike are facing multiple stressors, including economic insecurity, health problems, and changes in family routines. Students are missing classes more often and are struggling to remain focused during online instruction. These current realities highlight the need for school-university partnerships designed to ameliorate growing educational challenges and inequities.

In examining LFP implementation before and during COVID-19, this study uncovered essential lessons about how technology can be used to sustain school-community partnerships. For example, to address students' learning needs, teachers and undergraduate volunteers used technology to communicate more frequently about classroom activities. Before COVID-19, these conversations and opportunities for collaborative planning were less frequent. Moreover, families, who have not been active participants in the LFP to date, had the opportunity to observe teacher and volunteer interactions with their children during online instruction, building an awareness of the program that can potentially strengthen family, school, and community connections. Thus, COVID-19 has shown how technology can be used as one tool to facilitate meaningful communication between home, school, and community partners when face-to-face interactions are limited or difficult. While current limitations are due to social distancing

mandates, strategies that have been implemented during COVID-19 can also be used to address more common challenges such as scheduling conflicts and transportation constraints that can negatively impact school-community partnerships (Sanders, 2005).

Limitations of the Study

Although this paper elevates teachers' and undergraduate volunteers' perspectives and experiences to understand the effectiveness of the LFP, we have not yet examined student data. Empirical evidence demonstrates the reading benefits of having volunteer programs (Ritter et al., 2009) or one-on-one tutors in elementary grade classrooms (Elbaum et al., 2000). Other research emphasizes the importance of this type of program for improving young students' socio-emotional skills, including cooperative skills, attention to tasks, adaptation to social routines, and self-regulation during conflicts (Denham, 2006). Future publications from this study will include student outcome data to triangulate reported learning improvements.

Additionally, the LFP is only in its third year of implementation and the nature of program delivery in AY 2020-2021 changed greatly due to COVID-19. Given the particularities of the contexts in which data were collected, it is unclear whether the features identified are stable attributes of the program. This suggests the need for ongoing LFP evaluation to identify best practices and guide program improvement. Despite these limitations, findings from this study have important implications for the implementation of school-university partnerships.

Conclusion

The LFP is one example of a school-university partnership that has demonstrated a strong potential for improving the educational experiences of underserved students. By recruiting and coordinating undergraduate volunteers to support literacy teaching and learning in the first and second grades at two Baltimore City schools, the program aims to improve students' learning experiences and outcomes, and support teachers' classroom practices. Using Epstein's (2010) theory of overlapping spheres of influence as a theoretical framework, this paper found that the LFP's grounding in key elements of collaboration (i.e., shared goals, open communication, mutual respect, and processes for problem-solving) allowed it to meet unprecedented challenges and identify strategies for future program improvements. As noted by Epstein (2010), "Although the interactions of educators, parents, students, and community members will not always be smooth or successful, partnership programs establish a base of respect and trust on which to build" (p. 84). Indeed, good partnerships withstand challenges, and can be maintained through and even strengthened by them.

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Appendix

Literacy Fellow/Volunteer Interview Protocols (Years 1 and 2 of data collection)

Year 1: AY 2019-20	Year 2: AY 2020-21
1) How did you become involved in the program? Since when have you been involved?	1) How did you become involved in the program? Since when have you been involved? 1) Why did you decide to continue volunteering this year?
2) What are your main responsibilities in the program?	2) If this is your first year involved, what are your main responsibilities in the program?
3) What training, if any, did you receive for the program?	3) If this is not your first year involved, how different are your responsibilities this year from your responsibilities of last year?
4) What activities do you do when working with children in this school?	4) What activities do you do when working with children in the (online) classroom?
5) How would you describe your collaboration with the classroom teacher?	5) How would you describe your collaboration with the classroom teacher?
6) How would you describe your effectiveness as a volunteer? What factors impact your effectiveness the most?	6) What trainings, have you received since you became a volunteer for the program?
7) What do you think about the program? What are the things that work the best? And, what are the things that work the least?	7) How would you describe your effectiveness as a volunteer? What factors impact your effectiveness the most?
9) What benefits, if any, does the program bring to students in the school?	8) What do you think about the program? What are the things that work the best? And, what are the things that work the least?
10) What suggestions do you have to improve the program?	9) If you were involved with the program before, how the program has changed from prior years?
	10) What benefits, if any, does the program bring to students in the school?
	11) What benefits, if any, does the program bring to teachers in the school?
	12) What benefits, if any, does the program bring to volunteers?
	13) How did COVID impact your work with the program?
	14) How is COVID impacting the implementation of the program?
	15) How is COVID impacting the learning experiences of students in the school?
	16) What suggestions do you have to improve the program?

Note: For year 2, the questions asked during the interview depended on whether the volunteer was new.

Teacher Interview Protocols (Years 1 and 2 of data collection)

Year 1: AY 2019-20	Year 2: AY 2020-21
1) How did you decide to become a teacher?	1) How did your teaching responsibilities change due to COVID?
2) How long have you been involved with the program?	2) What happened with the program in the spring of 2020 when COVID started?
3) What do you think about the program? What are the things that work the best? And, what are the things that work the least?	3) How are you adjusting to teaching online? What are the things that work the best? And, what are the things that work the least?
4) What benefits, if any, does the program bring to your work as a teacher in the classroom?	4) What do you think about the implementation of the program? What are the things that work the best? And, what are the things that work the least?
5) What benefits, if any, does the program bring to your students?	5) What benefits, if any, does the program bring to your work as a teacher?
6) What do you think about the volunteer who is assigned to your classroom?	6) What benefits, if any, does the program bring to your students?
7) How would you describe the collaboration with them?	7) Since when have you been involved with the program? What changes, besides, online instruction have you seen in the program?
8) Did you provide any training to the volunteer working in your classroom? If so, what?	8) What do you think about the volunteer who is assigned to your classroom?
9) What suggestions, if any, do you have to improve the program?	9) How would you describe the collaboration with them?
10) Please describe the various activities that you do in the classroom to foster the children's literacy skills.	10) If you were involved with the program before, how different is this collaboration from prior years?
	11) Did you provide any training to the volunteer working in your classroom? If so, what?
	12) What suggestions, if any, do you have to improve the program?

Note: For year 2, the questions asked during the interview depended on whether the teacher was new.

Classroom Observation Protocols for Teachers (Years 1 and 2 of data collection)

Total # of Students:

Describe the arrangement of the classroom:

Observe using the checklist for 20 minutes (Obs 1). Complete a narrative observation for 10.

Observe for 20 minutes (Obs 2). Complete a narrative observation for 10.

1. LEARNING CONTENT	Observation 1		Observation 2	
a. Code-related skills	Yes	No	Yes	No
b. Vocabulary	Yes	No	Yes	No
c. Reading Comprehension	Yes	No	Yes	No
d. Reading fluency	Yes	No	Yes	No
e. Other (specify)	Yes	No	Yes	No

Notes:

2. QUALITY OF INTERACTIONS WITH STUDENTS	Observation 1		Observation 2	
a. Demonstrates regard for student perspectives	Yes	No	Yes	No
b. Quality of feedback NA	Yes	No	Yes	No
c. Interactions are positive social/affective quality	Yes	No	Yes	No
d. Mutual respect is evident during interactions	Yes	No	Yes	No
e. Effectively manages children's behavior	Yes	No	Yes	No
f. Other (specify)	Yes	No	Yes	No

Notes:

If applicable,

3. INTERACTIONS WITH ENGLISH LANGUAGE LEARNERS	Observation 1		Observation 2	
a. Teacher uses gestures, acting out, and/or miming to supplement oral language	Yes	No	Yes	No
b. Teacher uses Spanish in the classroom	Yes	No	Yes	No
c. Teacher uses visual aides	Yes	No	Yes	No
d. Teacher explains/instructs basic words	Yes	No	Yes	No
e. Teacher explains English language idioms	Yes	No	Yes	No
f. Other (specify)	Yes	No	Yes	No
4. TEACHER AND VOLUNTEER INTERACTIONS	Observation 1		Observation 2	
a. Teacher acts in a respectful manner towards	Yes	No	Yes	No
b. Teacher appreciates volunteer ideas	Yes	No	Yes	No
c. Teacher encourages volunteer to actively engage	Yes	No	Yes	No
d. Teacher provides advice/feedback to volunteer	Yes	No	Yes	No
f. Other (specify)	Yes	No	Yes	No

Notes: and NARRATIVE OBSERVATION NOTES

Classroom Observation Protocols for Volunteers (Years 1 and 2 of data collection)

The volunteer needs to be involved in these activities either working 1:1 or with a group of children. Observe using the checklist for 20 minutes (Obs 1). Complete a narrative observation for 10. Observe for 20 minutes (Obs 2). Complete a narrative observation for 10.

1. LEARNING CONTENT	Observation 1		Observation 2	
a. Code-related skills	Yes	No	Yes	No
b. Vocabulary	Yes	No	Yes	No
c. Reading Comprehension	Yes	No	Yes	No
d. Reading fluency	Yes	No	Yes	No
e. Other (specify)	Yes	No	Yes	No

Notes:

2. ACTIVITIES	Observation 1		Observation 2	
a. Reading aloud to students (title of book)	Yes	No	Yes	No
b. Listening to child read aloud	Yes	No	Yes	No
c. Helping students with writing assignments (not handwriting)	Yes	No	Yes	No
d. Helping students with handwriting assignments	Yes	No	Yes	No
e. Prepares literacy activities/materials for teacher	Yes	No	Yes	No
f. Other (specify)	Yes	No	Yes	No

Notes:

3. INTERACTIONS WITH STUDENTS	Observation 1		Observation 2	
a. Interactions are positive social/affective quality	Yes	No	Yes	No
b. Respect is evident during interactions	Yes	No	Yes	No
b. Effectively manages children's behavior*	Yes	No	Yes	No
c. Other (specify)	Yes	No	Yes	No

Notes:

If applicable,

4. INTERACTIONS WITH ENGLISH LEARNERS	Obs 1		Obs 2	
a. Uses gestures, acting out, miming to supplement oral language	Yes	No	Yes	No
b. Volunteer uses Spanish in the classroom	Yes	No	Yes	No
c. Volunteer uses visual aides	Yes	No	Yes	No
d. Volunteer explains/instructs basic words	Yes	No	Yes	No
e. Volunteer explains English language idioms	Yes	No	Yes	No
f. Other (specify)	Yes	No	Yes	No

5. TEACHER AND VOLUNTEER INTERACTIONS	Observation 1		Observation 2	
a. Teacher acts in a respectful manner towards the volunteer	Yes	No	Yes	No
b. Teacher appreciates volunteer ideas	Yes	No	Yes	No
c. Teacher encourages volunteer to actively engage	Yes	No	Yes	No
d. Teacher provides advice/feedback to volunteer	Yes	No	Yes	No
f. Other (specify)	Yes	No	Yes	No

Notes: NARRATIVE OBSERVATION NOTES

Teacher Candidates' Perspectives of Infusing Innovative Pedagogical Methods and Trauma-Informed Practices into a Teacher Education Program During the COVID-19 Pandemic

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Abstract: Emerging scholarship asserts that education during the COVID-19 pandemic should be viewed from the perspective of trauma. To address the complexities and navigate the ongoing challenges of simultaneously revising courses and field experiences during the COVID-19 pandemic, one teacher preparation program purposely embedded trauma-informed practices to ensure the social and emotional needs of teacher candidates were met. This research centers on understanding teacher candidates' perspectives of these changes that coupled mental health strategies with a move to remote instruction during the COVID-19 pandemic. Findings are organized around three themes: (a) engaging in pedagogical problem solving, (b) establishing an online community, and (c) building empathy. Implications and future research questions are also shared. In all, this research has the potential to inform program design efforts as it highlights the benefits of innovative course delivery as well as the persistent challenges of learning to teach during a crisis.

KEYWORDS: teacher preparation during COVID-19, school-university partnerships, trauma-informed practices, social emotional learning.

NAPDS NINE ESSENTIALS ADDRESSED:

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Five: Research and Results. A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets.

Teacher Candidates' Perspectives of Infusing Innovative Pedagogical Methods and Trauma-Informed Practices into a Teacher Education Program During the COVID-19 Pandemic

Over the past few decades, numerous professional associations and accrediting bodies have called upon teacher preparation programs to integrate opportunities to apply teaching strategies in PK-12 classrooms by encouraging design innovations like professional development schools (PDSs), school-university partnerships, and teacher residencies (American Association of Colleges for Teacher Education [AACTE], 2018; Council for the Accreditation of Educator Preparation [CAEP], 2013; Holmes Group, 1986, 1990, 1995; National Association of Professional Development Schools [NAPDS], 2021; National Council of Accreditation of Teacher Education [NCATE], 2010). To accomplish this lofty goal, university and school-based teacher education faculty must foster an environment that supports innovation, creativity, and thinking beyond traditional models of teacher preparation. This work centers on providing multiple opportunities for teacher candidates to engage for extended periods in authentic classroom settings with support from university faculty and school-based mentors. School-university partnerships provide these spaces for teacher candidates to learn their craft.

During the spring of 2020, teacher preparation programs were dramatically impacted by the COVID-19 pandemic as PK-12 schools closed and teacher preparation programs moved to remote instruction. This radical shift not only impacted PK-12 schools but also had implications for teacher preparation programs across the nation (Hylar, 2020; Kidd & Murray, 2020). Programs had to quickly adapt to ensure that teacher candidates could complete their coursework while shifting field experiences to alternative formats. Teacher preparation across the nation had to become innovative as they shifted face to face instruction to a fully remote and distance learning model while maintaining high standards of practice during the pandemic. Colleges and programs across the country with little notice worked to make extensive changes while simultaneously enacting their core values “including equity, humility, compassion, community, and service” (Hylar, 2020, para. 4). These values not only grounded this work but also were enacted to meet the needs of teacher candidates during the pandemic (Borup et al., 2020; Kidd & Murray, 2020).

Emerging scholarship asserts that education during the COVID-19 pandemic “should be viewed from the perspective of trauma” (Horesh & Brown, 2020, p. 334). In the case of school-university partnerships, trauma-informed practices should be developed to meet the emotional needs of PK-12 students, teacher candidates, and mentor teachers (Borup, et al., 2020; Carello & Butler, 2015). However, numerous challenges existed for school-university partnerships wanting to embed well-being and self-care into the curriculum to address the mental health needs of teacher candidates (Borup et al., 2020; Horesh & Brown, 2020; Roman, 2020). Specifically, these challenges included: (a) collaboratively redesigning entire courses that were beneficial for the teacher candidates with limited time and technological expertise, (b) reconfiguring existing course assignments to ensure relevance and ensure teacher candidates were not overloaded with additional work presented in an online format, (c) developing methods to check-in on teacher candidates' mental health during the pandemic, and (d) designing innovative ways for teacher candidates to collaborate with mentor teachers to complete field experiences. As the COVID-19 pandemic unfolded, this study sought to understand how teacher candidates experienced this abrupt shift. To investigate this shift, this study focused on how special education teacher candidates experienced, understood, developed, and socially constructed meanings from the

daily events and interactions over the course of two COVID-19 pandemic semesters, Spring and Fall 2020. The guiding research questions were: (1) What were special education teacher candidate perceptions of using trauma-informed strategies during the shift to remote and distance learning during the COVID-19 pandemic? (2) What were the benefits and challenges of shifting to a remote and distance learning model for the teacher candidates?

Literature Review

Trauma is an emotional response to an event such as the COVID-19 pandemic, natural disaster, or an accident. Epidemics and pandemics specifically related to infectious disease like COVID-19 are often traumatizing to individuals, potentially leading to post-traumatic stress and ongoing psychological distress (Boyras & Legros, 2020; Kanzler & Ogbeide, 2020; Lai et al., 2020; Lee et al., 2007; Salmanian et al., 2020). Scholars also suggest that we will likely see an increased prevalence of trauma both during and after COVID-19, with increased diagnoses of post traumatic stress disorder (PTSD) and post-traumatic stress syndrome (PTSS) burdening systems like healthcare and education, that were already struggling to meet the needs of vulnerable populations (Kanzler & Ogbeide, 2020).

Further, the use of trauma-informed frameworks were challenged by COVID-19, yet front-line workers rapidly adapted the use of traditional and virtual trauma-informed strategies (Bender et al., 2021; Kanzler & Ogbeide, 2020). While health care workers were challenged to address concerns in a health care context, college campuses and PK-12 schools also worked to address COVID-19 related challenges. Forced relocation, as the case of moving instruction from schools to home, has been associated with negative effects on physical and psychological well-being and functioning (Uscher-Pines, 2009; Sahu, 2020; Weaver et al., 2020).

While the COVID-19 pandemic may be a once in century event, evidence suggests that some individuals demonstrate resilience living through the aftermath of traumatic events including infectious disease epidemics, natural disasters, war, violence, and oppression (Di Pietro, 2018; Horesh & Brown, 2020; Ivbijaro et al., 2020; Shigemoto & Robitschek, 2021). Individuals are very capable of thriving despite aversive and traumatic events. Emerging research showcases how dimensions of hardiness, self-enhancement, coping skills, positivity and laughter are crucial to gaining resilience from a traumatic event (Bonanno, 2004; Ivbijaro, et al., 2020; Shigemoto & Robitschek, 2021).

Although resiliency strategies do exist, many college students often turn away from formal professional help and support related to psychological and mental health needs. Contributing factors include financial constraints, as well as fear associated with a lack of experience with seeking mental health services (Liang et al., 2020; Shigemoto & Robitschek, 2021). For example, Liang et al. (2020) shared that “many college students who are plagued by mental illness try their best to hide their illness when the explicit symptoms are not obvious, fearing that they will be labeled with a stigma once they ask for psychological help” (p. 3). On the other hand, this literature base also highlighted the potential benefits of embedding mental health and trauma-informed practices into higher education teaching practice (Liang et al., 2020; Shigemoto & Robitschek, 2021).

Therefore, during the COVID-19 pandemic, building a trauma-informed learning community was central to providing a supportive foundation for teacher candidates as they navigated numerous challenges. Offering mental health support, developing pedagogical problem-solving skills, and implementing an online community fostered that learning environment for teacher candidates to build upon (Aponte, 2020; Liang, et al., 2020).

Mental Health Support

Emerging research suggests that offering mental health support to students after a traumatic event is highly recommended and helps strengthen existing interpersonal connections between peers and faculty (Baran & Alzoubi, 2020; Borup et al., 2020; Carrillo & Flores, 2020; Quezada et al., 2020; Roman, 2020). Carello and Butler (2015) suggested that teacher candidates talk about their feelings regarding trauma as a way to normalize what is going on around them. To do this, they recommended verbal check-ins to check on the emotional status of the candidates. Further, effective trauma-informed teaching may include using flexible technology tools, such as Spiral, Spiral Lite, Quickfire Lite, Webjets and Padlet, as well as other remote teaching practices focused on self-care (e.g., online break out rooms, polling and whiteboard features, discussion boards) (Crompton et al., 2021; Roman, 2020). Sharing available resources with students is also important for college student health and wellness, because psychological safety is critical to learning (Conrad et al., 2021; Rosenthal et al., 2014). Resources needed during crises may include food, supplies, access to healthcare, and counseling. It is important to remember that educators are ethically bound to refer students who may need professional counseling to licensed professionals (American Counseling Association [ACA], 2014). While simple self-care strategies may be suggested to students or built into an online learning platform, any student who indicates they are struggling with PTSD, anxiety, or depression due to the COVID-19 pandemic or any other traumatic event should always be referred to a professional (ACA, 2014; Rosenthal et al., 2014).

While the importance of building relationships for mental health is seen throughout the literature, Joshi et al. (2018) reminded us of the importance of cultural context and how interruptions to daily life by traumatic events in different cultures may lead to different responses. Overall, this research is a stark reminder of how society's response to crisis situations is often determined by the cultural norms and the socioeconomic realities that make up the context of the responses.

Pedagogical Problem Solving

Pedagogical problem solving is a strategy that teachers use to work through complex problems that arise in their practice. Kidd and Murray (2020) referred to this shift as "pedagogic agility." This shift occurs when educators flexibly adjust their practice in quick and meaningful ways (Kidd & Murray, 2020; Ramsay et al., 2019). In essence, problem-solving requires teachers to develop an inquiry stance that allows them to not only raise questions and frame problems using multiple perspectives but also use research-based teaching strategies flexibly (Dana & Yendol-Hoppey, 2020). Often teachers use formative data to inform their decision making and arrive at potential solutions. Pedagogical problem solving is related to classroom management, lesson planning, meeting the needs of individual students, assessing learning outcomes, as well as building relationships with students and parents (De Simone, 2008; Putnam & Borko 2000; Zeichner & Conklin 2005). Without a problem-solving stance, problems can become persistent and often overwhelming (De Simone, 2008; Zeichner & Conklin 2005).

Last, current trends indicate a shortage of teachers entering the field, especially in critical areas like special education (Billingsley & Bettini, 2019; Reeves et al., 2021). Therefore, it is essential that teacher preparation programs provide high-quality field experiences that allow teacher candidates to apply problem-solving skills which have proven to improve teacher retention rates (Ingersoll et al., 2014; Southern Regional Education Board, 2018). These

opportunities have the potential to positively impact candidates as they enter the field of teaching and engage with students during potential future crisis situations.

Creating a Learning Community

Learning communities assist in developing teacher candidates' knowledge and skills (Rigelmann & Ruben, 2012; Shanks, 2018). Typically, teacher candidates engage with faculty, mentors, and peers in face-to-face courses and field experiences. However, with the growth of online instruction and distance-learning methods due to the pandemic, teacher educators who were new to online teaching had to quickly learn best practices for building communities in an online environment. Building an online learning community requires faculty to purposefully design an online space including content, discussions, and assignments (e.g., case studies, group projects, book studies, etc.) that provide authentic learning opportunities (Crompton et al., 2021; Garrison & Cleveland-Innes, 2005). For example, teacher candidates need opportunities to interact online to develop a sense of belonging as they discuss and explore what they are learning in meaningful ways (Friess & Lam, 2018; Picciano, 2002). Developing an online presence is related to the learning community members' perceptions of their interactions as well as their perception of being a member of the group (Crompton et al., 2021; Garrison & Cleveland-Innes, 2005). Therefore, sharing clear expectations, developing manageable content, and structuring appropriate activities are critical design elements to consider when designing online learning communities (Garrison & Cleveland-Innes, 2005).

More importantly, developing cohesive learning communities helps in modeling and building empathy in teacher candidates (Jones et al., 2014). Research suggests that building community by focusing on empathy can also occur in online learning environments (McDonagh & Thomas, 2010; Sevilla, 2019). This work is important as empathy demonstrates care, concern and well-being for students (Bouton, 2016; Leung et al., 2020) which is "the foundation of a safe, caring, and inclusive learning climate" (Borba, 2018, p. 23). A culture of empathy requires a focused and intentional effort to develop relationships (Leung et al., 2020; Zygmunt et al., 2018). Recent research highlighted the potential of providing teacher candidates with community engaged authentic learning opportunities focused on developing caring relationships with mentors and students (Bouton, 2016; Zygmunt et al., 2018). Research further suggested that candidates who engage in authentic work in learning communities have an "empathy advantage" (Borba, 2018, p. 23) as they are prepared to care in more authentic ways for their students when they enter the profession.

Conceptual Framework

Baran and Alzoubi (2020) developed a human-centered design framework to "help generate creative solutions to the pedagogical problems that teacher educators face" (p. 365) during the transition to online learning due to the COVID-19 pandemic. The framework highlights the following three premises: (a) building empathy, (b) engaging in pedagogical problem solving, and (c) establishing an online community of inquiry. Building empathy centered on developing an understanding of the teacher candidates and the issues they were experiencing during the pandemic. Second, pedagogical problem-solving involved reworking field experiences and engaging teacher candidates in alternative applied experiences that focused on relevant course content. Lastly, establishing an online community involved creating online experiences tailored to our learning community's social, cognitive, and teaching presence. For these reasons, Baran and Alzoubi's (2020) conceptual framework was used in this study to

understand teacher candidates' perceptions, benefits, and challenges of using trauma-informed practices during the shift to remote and distance learning during the COVID-19 pandemic.

Context

Program Description

In response to the call from researchers, policy-makers, and accreditation bodies, the University of North Florida (UNF) undergraduate special education teacher preparation program employs a clinically-centered cohort model that tightly couples methods coursework with clinical placements across five semesters (AACTE, 2018; NAPDS, 2021). UNF's College of Education and Human Services (COEHS) has a network of professional development and partner schools across two school districts that partner with the university to host teacher candidates. The special education teacher education program uses a cohort model in which teacher candidates take the same courses and field experiences together as a learning community. Each early field experience and final internship are designed and implemented in coordination with our program's curriculum and in collaboration with school partners. Vertical staffing, where faculty simultaneously teach coursework and supervise the connected field experience (Tom, 1997), is embedded into the special education program to support teacher candidates and the partnership model. UNF's partnership model allows special education faculty and school-based mentor teachers to share oversight and coaching responsibilities of teacher candidates. The model's tenets include: (a) coaching that provides targeted instructional feedback and fosters critical reflection, (b) individual support for teacher candidates wrestling with the application of research based strategies to practice, (c) purposeful professional learning communities that provide opportunities for teacher candidates to support each other, and (d) curriculum support for bridging the research to practice gap by making explicit theory to practice and practice to theory connections (Jacobs et al., 2014).

Each field experience has a particular focus that emphasizes the application of the knowledge and skills learned in the associated coursework during any given semester. For example, during the typical spring semester, special education teacher candidates simultaneously take high leverage practices, mathematics and reading methods coursework coupled with a 10 hour per week field experience. Teacher candidates are expected to participate in weekly professional learning communities outside of those hours and continuously reflect on all aspects of their practice. In addition, teacher candidates complete critical tasks tied to their methods coursework in their field placement under the direction of their mentor teacher and university faculty. Generally speaking, special education program content and field experiences build upon the content of previous semesters. Collaboration is essential with school partners. Curricula and coursework are intentionally co-designed and co-developed with partner schools in mind. The program curriculum is integrated with field experiences to meet school partners' needs while at the same time offering multiple opportunities for teacher candidates to apply their knowledge and skills learned in coursework.

COVID-19 Adjustments

The special education teacher preparation program implemented a number of innovative course revisions due to the pandemic shutdown. As faculty were forced to re-imagine courses, they agreed to adopt '*a less is more approach*' when redesigning coursework with the goal of embedding trauma-informed practices into the curriculum. This included using a variety of

approaches to build social connections and personalize teaching methods. For example, faculty met and collaboratively agreed to provide teacher candidates with the opportunity and space to check-in at the start of each class. During check-ins candidates were encouraged to openly share their reactions, fears, challenges, and feelings of isolation that emerged. In addition to the pandemic shutdown, other societal events occurred simultaneously that added stress to teacher candidates' lives. Teacher candidates mentioned in class discussions how events such as the contested presidential election, the Black Lives Matter protests, economic instability, a world-wide sex-trafficking ring, and the death of an iconic Supreme Court justice impacted their mental health.

Faculty developed self-care modules and activities including videos, reflections, and discussion boards to check the pulse and social emotional state of the teacher candidates each week. One faculty member developed a podcast about mental health strategies for college students to access use during the pandemic (Rowe & Sparks, 2020). Further, faculty checked in weekly with candidates through email, texting, and group chats encouraging candidates to engage in regular self-reflection. The goal was to be supportive and flexible with assignment submissions. To meet this goal instructors used a flipped classroom design in which breakout rooms during synchronous seminars provided more structure to the sessions. In all, a strong emphasis was placed upon working together and supporting one another during this time. Early field experiences and internships were also reconceptualized. Virtual options were employed including: (a) collaborating virtually with mentor teachers to design instruction, (b) delivering synchronous lessons using Microsoft Teams and Zoom platforms, (c) developing asynchronous and synchronous lesson plans including videos of instruction, and (d) completing simulations and critiquing exemplary teaching videos. The purpose of these activities was to modify the real-world application that takes place in practicum experiences with relevant alternative experiences.

A significant shift to the use of a team-teaching approach emerged during this time. The shift allowed faculty to facilitate content instruction, collaboratively address teacher candidates' social emotional needs, and monitor class interactions and assignment mastery while using trauma-informed practices to check-in regularly on the social emotional well-being of the teacher candidates. This model assured teacher candidates spent less time on Zoom and more time in their cohort community. Teacher candidates were able to use breakout rooms to work on assignments and work closely with the instructors in both their content and application of their projects.

Methods

This study employed explanatory sequential mixed-methods. Explanatory sequential mixed-methodology involves collecting and analyzing quantitative data before gathering qualitative data from a subset of participants in order to further understand, explain, or elaborate on the quantitative findings (Ivankova et al., 2006). The research team first developed a survey that included demographic information as well as thirty-three 5 point Likert scale questions and four open ended qualitative questions (see Appendix). The purpose of the survey was to uncover the perspectives of one cohort of special education teacher candidates about the impact the COVID-19 pandemic had on their learning to teach.

During spring 2020, a cohort of 13 special education teacher candidates enrolled in the second semester of their program. This same semester they were enrolled in methods coursework coupled with their first field experience, which consisted of interning 10 hours a week in

classrooms at a local partnership elementary school. All 13 were invited to participate in the study. Surveys were distributed via Google Forms, a web-based survey platform. Eight teacher candidates (63.2%) responded to the survey.

Demographic information, frequency and descriptive statistics were analyzed. Demographic data revealed that all teacher candidates who completed the survey were female and anticipated graduating in the spring of 2021. A majority of the teacher candidates (75%) took at least four online courses prior to the pandemic. The respondents were diverse as three teacher candidates self-identified as White (37.5%), two (25%), as Black, and one each identified as Asian (12.5%), Latinx (12.5%), and Native Hawaiian (12.5%).

The second phase of the study involved purposefully selecting and interviewing participants. Teacher candidates were asked on the survey if they were interested in participating in the focus group interviews. Four candidates, one Black, one Asian, one White, and one Latinx, agreed to participate. To provide depth (Ivankova et al., 2006), two semi-structured focus group interviews were conducted using a video conferencing platform (e.g. Zoom). Each of the initial focus group interviews included two teacher candidates who shared their unique stories and experiences during the pandemic (Patton, 2015). After the initial interviews, a follow-up interview with two participants (one from each initial group) was held to clarify perceptions gleaned from the data and to gather additional information related to their experience. Each interview was recorded and transcribed immediately after the interview.

Interview data analysis began as two members of the research team first independently open coded the focus group interview transcripts labeling excerpts of data to summarize what the researchers saw in the data (Patton, 2015). After engaging in this initial independent open coding process, the researchers met to share, discuss, and begin categorizing the open codes into themes and patterns. Together, the two researchers compared the initial independently identified codes related to the research questions and collaboratively identified a set of shared codes related to the candidates' perceptions of trauma-informed practices and the shift to remote and distance learning (Patton, 2015). During this stage of coding, the researchers shared their codes, jottings, and notes, raised questions, offered suggestions, discussed limitations, insights, and thoughts about the emerging themes. In sum, the constant comparative method of reflecting and exploring the data allowed emerging patterns to collectively come into focus (Strauss & Corbin, 1998).

The analysis resulted in the construction of a portrait of the teacher candidates' collective lived experience using Baran and Alzoubi's (2020) human-centered design conceptual framework. This conceptual framework helped organize the findings around three themes: (a) engaging in pedagogical problem solving, (b) establishing an online community, and (c) building empathy. The framework permitted the research team to highlight the benefits of the innovative program redesign that infused trauma-informed practices into the program and assisted in uncovering the persistent challenges teacher candidates faced during the COVID-19 pandemic. Survey results coupled with the interview thematic analyses provided depth into how the candidates experienced the shift to remote instruction that embedded trauma-informed practices and uncovered their thoughts, insights, feelings, struggles, and stressors.

In order to enhance the quality and trustworthiness of this study, the researchers used multiple techniques. First, source triangulation (Patton, 2015) was evident as this study employed multiple methods of data collection (i.e., surveys, interviews). Further, researcher triangulation, as a result of statistical analysis coupled with independent and collaborative qualitative analysis by a professor and student member of the research team, enhanced the

credibility of the inquiry (Patton, 2015). Finally, member checks of the findings were conducted with the candidates to confirm the study's findings and assertions.

Findings

When asked to share a word that captured their feelings about the situation, teacher candidate responses highlighted the complexity of the situation. For instance, teacher candidates identified some insights that led to resilience which allowed them to remain somewhat positive. However, at the same time, they identified their need to cope with a multitude of challenges. Participants shared that they were “grateful for the support from the professors and cohort”, “happy I can confide in and ask for help from my peers”, “appreciated the efforts to shift coursework on the fly”, and “recognizing everyone is doing the best they can.” On the other hand, they also used words such as “tired”, “sad”, “anxiety provoking”, “stressful”, “messy”, “confused by what to do”, “frustrated with the changes”, and “don't feel like a teacher anymore”. Their experience during this unprecedented instructional shift underscored the complexity of the situation from the candidates' perspectives. It is important to note that this complexity is linked to how teacher candidates experienced numerous contradictory feelings and tensions which are central to the findings shared below.

Engaging in Pedagogical Problem Solving.

Although efforts were made to assure opportunities for pedagogical problem solving, teacher candidates noted struggles. For example, some teacher candidates noted they continued to collaborate with their mentor teachers and helped design and deliver lessons even with issues related to access to the district's instructional platform. Additionally, video-based assignments coupled with writing lesson plans initially were viewed as helpful by the candidates in learning foundational teaching skills. Over time enthusiasm for completing these virtual assignments waned.

When considering the move to remote instruction, survey results suggested that teacher candidates felt less prepared learning course content (62.5%). Specifically, teacher candidates felt less prepared to implement instructional strategies (50%), classroom management strategies (50%), communicate with parents (62.5%), and engage students in instruction (62.5%).

When asked during focus group interviews whether they felt prepared for their final internship or not, overwhelmingly participants responded with a resounding lack of self-confidence for what lies ahead. The primary reason the teacher candidates did not feel ready for their final internship was that they missed two early face-to-face field experiences in schools when instruction shifted to online during the pandemic. Further, they associated their difficulties related to learning how to be pedagogical problem solvers with being a “hands on learner and not getting to practice or fully comprehend materials after COVID,” “getting organized and trouble understanding revised assignments,” “lack of motivation due to feeling isolated which led to my mental and physical health decline,” “struggling to concentrate during online classes,” “not being able to work with my students and complete my field experience,” and “my experience felt less real which made me incredibly unmotivated.”

When teacher candidates were asked about motivation, over half the participants (62.5%) shared they had a decrease in motivation when content was switched from face to face to online instruction thus impacting their engagement in pedagogical problem solving. Many candidates attributed the decrease in motivation to a “lack of personal interaction.” When asked in focus groups how personal interaction correlated with lack of desire to complete work, the answers

varied. One candidate shared that she felt like she was not learning to be a teacher because she did not pass teachers and students in the hallway. Another teacher candidate shared that “not having her professors see her teach demotivated her.” Before the pandemic, coaching observations were embedded throughout the field experience. Before moving to remote instruction, teacher candidates met with their professors and peers to design, discuss, reflect, and refine their lesson plans weekly. Since they were not able to complete their coaching observations and applied assignments in their field placements, one teacher candidate explained she felt “disconnected and lost motivation when they expected her to be completely devoted to school without any connection to her kids.”

One candidate in this study was enrolled in a yearlong residency. This candidate’s experience contrasted with the others as she was able to participate in a face-to-face clinical experience during Fall 2020. Her experience was markedly different from the others as her onsite experience allowed her motivation to remain high as she was able to work side by side with middle school teachers and students. While this teacher candidate’s access was limited in comparison to typical semesters, she was able to work with students each week during the Fall term. As a result of this experience, this teacher candidate stated that the experience, “further increased her motivation to become a special education teacher.” She shared that “having access to kids and receiving in person feedback from my mentor teachers was invaluable.” Further, she mentioned that she understood the contrast between her feelings and those of her peers who only had access to pedagogical problem-solving opportunities associated with online tutoring and one on one math instruction.

An unintended outcome of the shift to remote instruction was that teacher candidates began to raise questions of social justice and equity. They raised a number of concerns related to “inequities associated with providing instruction online to students with disabilities.” These included students with disabilities not having “instruction modified”, “online accommodations were difficult to use”, and “keeping students on task was problematic online.” For example, one student highlighted that “her students were not receiving their small group reading instruction” when instruction moved online. Her mentor teacher struggled to keep ahead of her students and guided reading groups were discontinued.

Further, teacher candidates raised questions related to inequitable access to technology, specifically focused on computers, tablets, or internet access. For instance, candidates shared that many students did not have the proper bandwidth at home to watch the video lessons she developed and “some of my students had to share devices with siblings” even though the district provided them with laptops. One candidate also raised an important issue regarding working in a Title I school, and stated that their students had an “inequitable access to technology as compared to other wealthier schools” in the district. Compounding these concerns was that candidates were extremely frustrated because they did not have access to the school Microsoft Teams account that they were using for online instruction because they were not considered district employees. Many of the teacher candidates felt that they could have assisted their mentors more and helped their elementary students with work if they had access to the district platform.

Establishing an Online Community

The move to remote instruction highlighted the need for faculty to develop an online community of learners with the teacher candidates. This intentional work focused on not only providing avenues for the teacher candidates to share experiences about how they were

experiencing the pandemic but also purposefully designing assignments and tasks for the candidates to engage with the content when field placements were not possible. Survey results indicated that teacher candidates identified some advantages and disadvantages of establishing an online learning community. For example, all the teacher candidates felt like they could trust their professors. In addition, a majority of students (75%) felt supported by faculty during the pandemic. On the other hand, a majority of students responding (75%) were neutral or disagreed about having their learning needs met and getting questions answered effectively by faculty (75%). Further, teacher candidates disagreed with or were neutral when questioned about relationships being maintained using the Zoom and Canvas platforms (62.5%). The majority of respondents (75%) disagreed or were neutral with their ability to stay on task during synchronous Zoom sessions. This aligns with responses that the majority of students (62.5%) struggled to develop a consistent schedule after the implementation of remote learning. In terms of interaction with peers, the majority of teacher candidates (62.5%) recognized a decrease in informal interactions within the cohort during the pandemic. This is similar to the responses (75% disagreed or neutral) about the limited capability of collaborating on assignments with peers during the shift to remote instruction.

Focus group interview data confirmed and provided depth regarding these benefits and challenges. Data revealed that establishing an online community was key to supporting teacher candidates' social, and cognitive growth through various activities, (e.g., instructor videos, online self-care discussions, and live seminar check-ins). For example, teacher candidates pointed out the benefits of participating in Professional Learning Communities (PLCs). The candidates viewed the PLCs as peer support groups where they were encouraged to share and discuss their thoughts and ideas. These methods increased teacher candidates' confidence that the faculty and students "were all in together during these hard times". Although some students indicated on the survey and in focus groups that they wished these PLC assignments and check-ins were optional, the interviewees agreed that they benefited from this structure.

Outcomes of the online learning community were directly related to candidates' mental health. For example, one participant shared that "isolation, depression, anxiety, and an increase in ADHD symptoms" were how she experienced the shift to online learning. However, the trauma-informed strategies and check-ins helped remind her she was not alone in her struggles. The teacher candidates also shared that they fostered a greater community through the usage of group chats and PLCs to facilitate cohort wide discussions. The group chats helped candidates to "sort out misconceptions, share lecture notes, and remind each other of upcoming projects".

Flexibility was noted as key to the transition as due dates were shifted regularly throughout the semester in order for candidates to complete their assignments as they tried to remain optimistic. One student, a full-time mother, enjoyed the flexibility and stated, "I would not have been able to continue [in the program] without the added flexibility." One interviewee shared they "needed gracious timelines due to stress." However, candidates noted that persistent challenges also existed as some peers were disengaged and were regularly absent in spite of these innovative efforts.

Some candidates had contradictory views about the flexibility provided. For instance, some students viewed flexibility as unnecessary as they preferred guide posts like due dates and assigned readings to help them balance their course load. Flexibility also allowed them to "procrastinate and have assignments build up that were then all due at the end of the semester." The ongoing changes led some candidates to be confused "because the due dates and assignments were always changing, we were not always sure what we were expected to do." One

interviewee noted that this flexibility did not make her feel like a teacher and shared how her internal motivation was “different” once flexibility was provided. Historically, she would turn in assignments early to show her dedication to the program. Her motivation to stay engaged came crashing down as she heard a professor extend the project due date to the end of the semester. Another candidate shared how the ever-changing deadlines made her feel “less professional.” She spoke of her perception of other fields, such as “STEM majors have to finish their projects by the deadline and they do not have exceptions.”

One example discussed by candidates illustrates the complexity that existed within a constantly changing and highly fluid situation. During Fall 2020, teacher candidates hoped they were going to have placements in brick and mortar junior high school settings. This changed when the local school system did not allow anyone except final interns to physically enter the schools. Instead, teacher candidates were provided transition-aged students from an on-campus program and expected to teach financial literacy online. The teacher candidates were not pleased with the applied assignment centering on using math and science for elementary standards. They noted that there was not a lot of time to “figure it out” as they have had the privilege of doing in other assignments in the past. It was an additional challenge for some candidates to teach financial literacy, as they themselves did not feel fully confident and comfortable with the topics. Further, the candidates were frustrated with not having access to individual education plans (IEPs) or other documents that outline how to best accommodate these students and modify lessons. One candidate notes, “I do also feel like I got jipped though due to the fact that I didn’t get to work hands on with students. I feel like this was a completely different experience.”

An overarching emergent theme from focus groups interviews was that while teacher candidates recognized the efforts of faculty to build a community and use trauma-informed practices, many needed additional supports to manage stress and emotions during the COVID-19 crisis. Further, candidates appreciated the flexibility afforded but pointed out some persistent challenges associated with flexibility.

Building empathy

Closely tied to establishing and sustaining an online community was the third theme of building empathy. Building empathy became an immediate priority of our program faculty. As previously described, faculty used self-care modules coupled with group and individual check-ins with teacher candidates to gauge candidate health, needs, and well-being. In order to create a forum for empathy, they heightened social presence by incorporating online discussions and peer feedback into the Canvas modules used to support course delivery. Overall, these efforts were viewed favorably by teacher candidates (62.5%). Data from the survey further revealed that the redesigned coursework tailored to the pandemic was viewed favorably by a majority (75%) of the teacher candidates. Data supported that this approach not only helped the classroom community feel less isolated but also demonstrated an ethic of care that was valuable to the teacher candidates’ mindsets.

Focus group discussions uncovered the complexity associated with cultivating contexts that communicate empathy. Participants identified positive and negative factors related to these efforts. First, participants discussed how creating spaces for personal connections was important but challenging. For example, they noted that informal Zoom meetings, discussion boards, and checking in on candidates during Zoom seminars were beneficial. One participant noted:

They [faculty] recognized that we would experience a range of emotions, anxiety, sadness, grief, fear, and uncertainty and made themselves available. They provided us

with cell phone numbers in case they needed anything or wanted to chat. We discussed our feelings at the start of every class. They designed modules about vulnerability and mental health for us to participate in with our peers.

Participants recognized the effort and care program faculty had taken to redesign and change face-to-face courses midstream to remote instruction. Others discussed how the shift to remote teaching and learning had been notably smooth and provided them with opportunities to dive into content like lesson planning and using explicit instruction strategies in more depth. They also recognized that the online modules provided teacher candidates the flexibility to access and complete the course modules at their own pace.

Recognizing the struggles teacher candidates were facing, faculty believed that demonstrating empathy included integrating trauma-informed practices into the experience. Participants favorably viewed faculty efforts to embed trauma-informed practices and mental health resources. For example, the candidates highlighted how faculty used a *TED Talk* by renowned author and researcher Dr. Brene Brown (Brown, 2010) coupled with discussion boards to discuss vulnerability. In addition, teacher candidates found faculty efforts to start each Zoom class session using a cohort wide check-in protocol beneficial. The check-in protocol allowed teacher candidates an opportunity to “be vulnerable and share with each other what was transpiring in their world” before starting class. This time allowed for teacher candidates to “feel heard and validated our feelings”. Teacher candidates also shared that they were able to see first-hand that their professors were also struggling which helped strengthen relationships and build a community of learners.

Participants named a number of challenges impacting their emotions that required empathy during the pandemic. They yearned for a return to any sense of normalcy, as many worried about their families, friends, and PK-12 students' physical and mental health. Many candidates lived away from their parents and families during this time. Some also discussed economic uncertainties related to the pandemic shutdown as they were unable to work. In fact, some relocated, at least temporarily, by returning home to live with their families to help manage the stress and save money. Teacher candidates also were concerned about the well-being of their students. For example, they lamented and described being removed from schools and the lack of interaction and desire to be closer with their PK-12 students.

Even with faculty embedding trauma-informed practices, over time some candidates continued to struggle. They noted that they found themselves not being “as present in coursework as they would have liked to be”. Some participants experienced a “sense of loss” and “anger” during the pandemic. While confined to their homes, they recognized the challenge to find a balance and create boundaries between school and family life. One participant who was a mother shared that juggling school and family impacted her life dramatically as she had to care for her child while balancing school and work. Once again, these struggles raise issues of social justice and equity as many candidates had to work to pay their bills and their jobs were dramatically impacted by the pandemic. Some were laid off from the restaurant industry, while others had to continue working in stressful service-oriented positions. Meanwhile other candidates transitioned to working online.

However, due to the move to remote learning some teacher candidates shared that they were able to actively participate in some of the Black Lives Matter events happening in the region that they probably would not have been able to participate in during the traditional program. The movement to online delivery allowed more flexibility to engage in some activism efforts, like participating in protests, while completing coursework asynchronously.

In sum, by taking time to build opportunities for empathy into the semester, faculty allowed teacher candidates to share emotions during coursework and assisted teacher candidates in unpacking these emotions. Some outcomes of this work included teacher candidates creating icebreakers to share with classmates, writing letters to loved ones that they were not able to see, and putting together care packages for the students that they were not able to work with in person any longer. In all, empathy focused on supporting teacher candidates in seeking ways to find balance in their lives and manage their emotions.

Discussion

The purpose of this research was to understand special education teacher candidates' experiences of learning to teach during an unprecedented pandemic. The COVID-19 pandemic required program faculty to make rapid changes in program design and delivery. The study provides teacher educators insight into teacher candidate experiences and perspectives when they are moved from learning to teach in face-to-face classrooms to learning to teach online. Focusing on these experiences, we sought to uncover what teacher candidates learned as well as what could have been improved. The conclusions and recommendations we share below are meant to be suggestive.

First and foremost, purposely embedded trauma-informed practices and extended opportunities of support for teacher candidates were beneficial. Teacher candidates highlighted that strong relationships with their professors and within their cohort were enhanced by using trauma-informed practices. These relationships and practices nurtured teacher candidates during the initial phase of the pandemic and extended through the Fall 2020 semester. Investing attention and using trauma-informed practices enabled authentic relationships to continue and trust to be developed (Baran & Alzoubi, 2020; Borup, et al., 2020; Carrillo & Flores, 2020; Quezada, et al., 2020). Specific practices including regular check-in time for candidates and group texts supported teacher candidate coping (Crompton, et al., 2021; Roman, 2020). The results of this study suggested that trauma-informed practices led to a variety of professional benefits that support candidate success and provide opportunities for learning how to support PK-12 students' social emotional learning. The infusion of these practices showed promise and future research should investigate their impact even when the program returns to face-to-face instruction.

The program redesign integrated empathy and an online learning community to support candidates (Shanks, 2018), yet candidates reported anxiety, pandemic fatigue, as well as on-going struggles related to the political context (Borup et al., 2020; Carello & Butler, 2015; Hyler, 2020; Roman, 2020). While our nation faced the COVID-19 pandemic, we were simultaneously engaged in a public reckoning focused on ongoing racial tension and socioeconomic inequities. The focus on empathy and the online learning community provided a space for teacher candidates to connect with others and share their struggles (Bouton, 2016; Carrillo & Flores, 2020; Picciano, 2002; Zygmunt et al., 2018). Some candidates actively participated in events that promoted equity and diversity while others engaged in conversation about inequities that their students faced. Teacher candidates recognized the digital inequities facing many students in terms of technology and internet access (Carrillo & Flores, 2020; Kidd & Murray, 2020). Furthermore, candidates raised issues about equity related to special education services as most students with disabilities they were working with in their placements were not receiving the level of service they had received pre-pandemic. All teacher preparation programs should provide opportunities for teacher candidates to wrestle with classroom, school, and district policies that

exacerbate inequity. In particular, special education teacher preparation programs should collaborate with local partners to design applied assignments that allow teacher candidates to learn about and uncover how students with disabilities are taught in a variety of settings and how these students are provided access to the general education curriculum as required under federal law.

Although the infusion of trauma-informed practices supported special education teacher candidates during this difficult period, over time candidates grew tired of the remote instructional model and yearned for the return to face-to-face instruction and re-entering schools. Teacher candidates believed that they needed face-to-face opportunities to “learn how to teach” and voiced concern about their ability to gain pedagogical problem-solving skills within a remote instruction environment (De Simone, 2008; Garrison & Cleveland-Innes, 2005; Zeichner & Conklin 2005). Specifically, candidates shared a list of missed opportunities such as working closely with schools and families to support PK-12 student needs during the crisis (Ingersoll, et al., 2014; Putnam & Borko, 2000).

While the special education teacher preparation program highlighted in this manuscript attempted to create space for alternative authentic learning experiences for candidates, these innovative efforts could be improved. Emerging research strongly suggests that teacher candidates’ roles could have been shifted to assist their mentor teachers deliver instruction during the pandemic (Darling Hammond & Hyler, 2020; Hyler, 2020). Mentors were overwhelmed and struggled with the immensely challenging situation of rapidly shifting to remote teaching. Part of the tension in this study was the result of school district policy that initially did not allow most candidates access to PK-12 students using the district’s remote instructional model. While recognizing the inherent difficulties of moving a large, urban school district fully online, restricting access to only students and school district employees negatively impacted teacher candidates’ experiences.

Innovations implemented by teacher preparation programs during the pandemic have the potential to build stronger partnerships between programs and partner school districts (Hyler, 2020; Van Nuland et al., 2020). Emerging scholarship highlights how teacher programs and school districts can effectively collaborate and use innovations during this time of crisis to support PK-12 students’ basic academic and behavioral needs (Ellis et al., 2020; Hyler, 2020). Our teacher candidates yearned for opportunities to learn to teach in classrooms while working closely with their mentor teachers (Darling Hammond & Hyler, 2020; Van Nuland et al., 2020). Given that just a few decades ago, teacher preparation programs typically relied on internships placed at the end of a teacher preparation program, candidates clearly identified the importance of multiple and scaffolded field experiences in learning to teach. Therefore, programs should continue to work with school-based partners to collaboratively design relevant field experiences for their teacher candidates.

One benefit of learning to teach during the pandemic may be that as programs quickly pivoted to operating in emergency/crisis teaching mode, teacher candidates gained experiences of working through crisis situations (Hyler, 2020). As faculty made shifts, so did teacher candidates. This “pedagogic agility” (Kidd & Murray 2020) is critical for candidates to develop so they can adjust their practice quickly to meet the ever-changing needs of the classroom. These experiences have the potential to positively impact the candidates as they enter the teaching force and engage with students during any future crisis situations.

Future Research

Future research efforts should include a larger survey of teacher candidates across programs and universities. Specifically, the research should take a deeper dive into how teacher candidates report their experiences within each of the three areas: building empathy, establishing an online community, and opportunities for pedagogical problem solving. In addition, longitudinal studies should explore the impact that a move to remote instruction has had on current teacher candidates. Ideally, comparisons of the perceptions of teacher candidates who completed face-to-face field experiences with others who moved to a remote instructional model might shed light on the assets of each approach. Additionally, studies of faculty perceptions about the shift to remote instruction and impact on their job responsibilities and mental health should also be conducted. Lastly, the authors are curious about how this group of teacher candidates will perform during their induction years given the reconfiguration of field work to online learning. Therefore, conducting a follow-up study with this cohort could inform the literature on teacher retention particularly about learning to teach during a crisis. The concern about attrition is real, recognizing the shortage of special education teachers that exists across the nation (Billingsley & Bettini, 2019). Moreover, this research will potentially inform the field about the influence high quality field experiences have on retaining teachers in the profession (Ingersoll et al., 2014).

Conclusion

The authors recognize the limited scope of our study of one cohort of special education teacher candidates but believe there are some relevant lessons to be learned that can better support teacher candidates and help teacher educators strengthen programs. This research highlights the importance of teacher preparation programs rapidly responding to shifts in the learning to teach environment. Programs need to be agile and able to respond with the use of best online teaching practices. In the case of the pandemic, support for teacher candidate learning required coupling pedagogical instruction with social emotional learning as well as building an online and social presence that connected and communicated with the teacher candidates on a regular basis. Other lessons learned included purposely designing activities to allow students to wrestle with emerging issues related to social justice and equity. These activities have the potential to positively impact candidates as they use their knowledge and skills to address these persistent dilemmas and ideally improve outcomes for PK-12 students.

Historically, teacher preparation programs have not prepared teacher candidates for or through online instruction (Borup, et al., 2020). Similar to the research of Dyment and Downing (2020) and Roman (2020), our investigation confirms an emerging pattern that candidates may have persistent doubts, questions, and uneasiness during the move to online learning. The shift to online and remote instruction necessitated by the pandemic highlights the need for teacher educators to think outside the box. We need to embrace innovative instructional technology to support pedagogical problem solving while simultaneously considering candidates' mental health needs. This ultimately will prepare candidates to enter the profession with the knowledge, skills, and dispositions needed to meet the demands of our ever-evolving school contexts. This will require open honest dialogue, collaboration with school partners, as well as willingness to engage in the difficult work of program redesign.

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Appendix

Survey

Demographic/Background Questions included

1. Gender
2. Ethnicity
3. Anticipated graduation year
4. Number of online classes taken prior to pandemic.
5. Technology access available during pandemic.

Likert Scale Questions – Responses - 1 Not at all, 5 Very much or completely

6. With the move to remote learning, how much were you able to stay on task during zoom classes?
7. With the move to remote learning, how much were you able to stay motivated to learn via online classes?
8. With the move to remote learning, how much were you able to have your questions answered effectively?
9. With the move to remote learning, how much were you able to learn with the technology embedded in the revised remote courses?
10. With the move to remote learning, how much were you able to collaborate with colleagues on an assignment.
11. With the move to remote learning, how much were you able to be creative in classes that shifted online
12. With the move to remote learning, how much were you able to access the content in Canvas.

13. With the move to remote learning, how much were you able to obtain authentic examples to enhance your learning?
14. With the move to remote learning, how much were you able to receive the necessary feedback on your progress in the class.
15. With the move to remote learning, how much were you able to access students in your field experience to complete your applied assignments?

Likert Scale 1-5 – Prompt - How much do you agree with the following statements: 1 strongly disagree, 5 Strongly agree

16. I felt prepared to take courses online before the pandemic crisis.
17. I feel prepared to take courses online after the pandemic crisis.
18. The restrictions due to the remote learning COVID-19 pandemic have caused a decrease in learning course content.
19. The restrictions due to the COVID-19 pandemic have caused a decrease in the informal interactions in the cohort.
20. The support (e.g. resources, communication) from the program faculty has decreased after the implementation of the new COVID-19 remote learning.
21. My motivation for learning has decreased after the implementation of the COVID-19 course changes.
22. I was able to develop a schedule after the implementation of the new COVID-19 changes.
23. I am able to complete my semester or course(s) on time after the implementation of the new COVID-19 changes.
24. I trust my professors(s)
25. My learning needs were met.

26. My peers in the cohort support me.
27. I prefer learning at my own pace and schedule, so distance learning is perfect for me.
28. During the pandemic, I learned more for my courses from texts and written sources, rather than from class sessions or field experiences.
29. During this pandemic, I learned more about life and people than content from my courses.
30. During this pandemic, remote education was a good alternative to traditional classroom learning.
31. The course content was relevant and tailored to issues that are important during this pandemic.
32. I feel less prepared to implement instructional strategies because COVID-19 disrupted my experiences in coursework and/or fieldwork during my preparation.
33. I feel less prepared to implement assessment strategies because COVID-19 disrupted my experiences in coursework and/or fieldwork during my preparation.
34. I feel less prepared to implement classroom management strategies because COVID-19 disrupted my experiences in coursework and/or fieldwork during my preparation.
35. I feel less prepared to engage students in lessons because COVID-19 disrupted my experiences in coursework and/or fieldwork during my preparation.
36. I feel less prepared to communicate with parents and families because COVID-19 disrupted my experiences in coursework and/or fieldwork during my preparation.
37. The online platforms (Zoom and Canvas) allowed for intern and student relationships to be maintained.

Open Ended Questions

38. As a pre service intern during the Global Pandemic of 2020, what are some of the positives of the transition to online learning that you experienced?
39. As a pre service intern during the Global Pandemic of 2020, what are some of the challenges of the transition to online learning that you experienced?
40. What are some of the hardships you faced when learning became remote?
41. How was your mental health impacted during the pandemic and the shift to online learning?
42. Do you have any additional comments about the transition to online learning?
43. We are conducting focus groups. If you are interested in participating, please leave Name, Number and Email below.

An Investigation of Mentor Teachers' and Student Teacher Candidates' Perceptions of Co-Teaching during the COVID-19 Pandemic

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Abstract: Educators saw an instant shift from face-to-face to online or hybrid co-teaching and learning during the COVID-19 pandemic. Mentor teachers and student teacher candidates working together during the spring 2020 semester grappled to discover the most effective tools, resources, and strategies to provide quality instruction to P-12 students. The purpose of this study was to investigate mentor teachers' and student teacher candidates' perceptions of co-teaching during the COVID-19 pandemic through the lenses of Charlotte Danielson's (1996) Professional Framework for Teaching, Models of Co-teaching (Friend et al., 2010), and Tuckman's (1965) Model of Small Group Development. Results illustrate the benefits and challenges of co-teaching during the pandemic, technology utilized, and the fluid movement of the co-teachers through the stages of development. This study aligns with the question of how teacher education programs, grounded in school-university partnerships, responded to the need for quality clinical experiences during the shift to virtual learning.

KEYWORDS: co-teaching, COVID-19, online learning, student teacher candidate, mentor teacher

NAPDS NINE ESSENTIALS ADDRESSED:

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

An Investigation of Mentor Teachers' and Student Teacher Candidates' Perceptions of Co-Teaching during the COVID-19 Pandemic

In-service teachers and pre-service teacher educators around the globe were forced to shift the way they provided instruction to their students due to the COVID-19 pandemic. Traditionally, cooperating mentor teachers and teacher candidates worked together, face-to-face, using a co-teaching model. Abruptly, they had to respond to the crisis and change to co-teaching virtually in order to continue to provide quality instruction to P-12 students and effectively prepare teacher candidates for their future classrooms. In this dramatically changed context, educators were expected to be flexible and willing to change to an online format (Quezada et al., 2020). The purpose of this study was to investigate classroom mentor teachers' and student teacher candidates' perceptions of co-teaching virtually during the COVID-19 pandemic. Specifically, the study investigated the benefits and challenges of co-teaching through the lenses of Charlotte Danielson's (1996) Professional Framework for Teaching, Models of Co-teaching (Friend et al., 2010), and Tuckman's (1965) Model of Small Group Development.

In this study, the researchers investigated the virtual co-teaching relationship between classroom mentor teachers and student teacher candidates. Historically, co-teaching was used by special education teachers who partnered with general educators. Co-teaching was defined as "a coordinated instructional delivery practice in which two or more educators simultaneously work with a heterogeneous group of students in a general education classroom" (Beninghof, 2012, p.7). More recently, the term has been associated with student teacher candidates and mentor teachers (Thompson & Schademan, 2019). Traditional face-to-face co-teaching is often compared to a marriage. Murawski (2010) suggested, "A partnership that works is like a marriage made in heaven" (p. 193). In Spring 2020, educators saw an instant transformation from face-to-face co-teaching to online teaching and learning due to COVID-19. With this change to online learning, co-teaching morphed from a marriage to an online dating relationship and school-university partnerships adapted accordingly.

Literature Review

Historical Context

The need for co-teaching in the general education classroom increased with the reauthorization of Individuals with Disabilities Education Act (IDEA) in 1990, 1997, and 2004 as well as expectations associated with full inclusion and the No Child Left Behind Act (NCLB) of 2001 (Polloway et al., 2008). As mainstreaming emerged, co-teaching between a special educator and regular educator working together in the regular education classroom became more common. The goal of this co-teaching relationship was to meet the needs of their students with disabilities in the general education setting (Beninghof, 2015). NCLB (2001) set a high standard for all students which increased the need for co-teaching as more students with disabilities were being educated in the regular classroom. The reauthorization of the IDEA (2004) enhanced the need for inclusion as all students were to be educated in their least restrictive environment.

Charlotte Danielson's Framework for Professional Practice

Since 1996, the Charlotte Danielson Framework for enhancing professional practice has supported the evaluation of teacher performance. The framework is divided into four domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities

(Danielson, 1996). The framework for teaching has been used widely in multiple settings including teacher preparation, supervision of student teachers, and teacher assessment (Danielson, 2008; Morris-Mathews et al., 2021; Sandilos et al., 2019).

Co-Teaching Partnerships

Co-teaching is not just the pairing of a special education teacher with a general education teacher. Collaborative partnerships bring together two teachers or specialists with a variety of expertise in teaching, remediation, and behavior management (Beninghof, 2015). Additional unique co-teaching partnerships include same subject teachers, a general education teacher with an English Language Learner (ELL) Specialist, mathematics coach, reading coach, or a Speech and Language Pathologist. Students benefit from the blending of multiple professional backgrounds in one classroom (Murray, 2004). Field experiences for student teacher candidates have been restructured to use a co-teaching format of collaborative planning and instructing in contrast to the traditional model of one-teach and one-observe from the past (Guise et al., 2017).

Mentor Teachers and Student Teacher Candidate Partnerships

The implementation of co-teaching within innovative teacher preparation programs continues to grow and assist students with and without disabilities as well as enhance the student teacher candidate's learning experience (Darling-Hammond et al., 2019). Mentor and student teacher co-teaching partnerships enhance professional development in the areas of collaboration, instruction, inclusion, and assessment (Guise et al., 2017). Ricci et al. (2019) found that in the beginning both mentors and student teachers felt they had strong collaboration skills that continued to grow and improve throughout their co-teaching partnerships, with flexibility being the most significant area of growth.

Stages of Co-Teaching Partnerships

Throughout the collaboration process of co-teaching, partner teachers go through stages as time progresses. Gately and Gately (2001) explained the foundation stage as "taking the lead." During this first developmental stage, teachers discuss, review, and choose the models of co-teaching that would work best with their group of students. Teachers also take time during this stage to find common interests and move past the uncomfortable awkwardness of working with someone new. For many years in education teachers were alone in the classroom; adding a co-teacher can be an adjustment for all involved. Teachers who volunteer to co-teach are more likely to have a successful partnership, than those who are forced into a partnership by administrators (Murawski, 2010). Co-teachers work together during the second stage, compromising, to set up classroom rules, behavior management protocols, and implementation of behavior plans (Friend, 2007; Gately & Gately, 2001). Both teachers need to state their preferences early to avoid personality conflicts during or after issues arise. In this stage both teachers share their strengths and weaknesses. The compromising stage can often be difficult, because teachers have different views on behavior management. This stage is often met more quickly when a schoolwide behavior and discipline model is followed by all classrooms. The last stage of co-teaching is identified by Gately and Gately (2001) as the collaborative stage. This stage is often not met because teachers feel they do not have enough time in their schedules set aside for planning and communication to make curricular decisions for their shared students. An essential part of co-teaching is allowing enough planning time (Murawski, 2010).

Co-Teaching Models

Co-teaching allows for implementation of innovative teaching techniques using differentiated instruction, scaffolded learning strategies, equal access to curriculum, and progress monitoring that may not have been introduced within a classroom with only one teacher (Ricci et al., 2019). St. Cloud State University’s Quality Enhancement Initiative in partnership with The Department of Education in 2006 developed an alternative to the traditional model of student teaching by taking the literature based definitions of co-teaching from Cook and Friend (1995) and modified them to fit the partnership between a mentor teacher and student teacher candidate (Bacharach et al., 2010). For the purpose of this study, classroom mentor teachers and student teacher candidates are both considered “teachers” in the co-teaching models of Friend and Cook. Friend et al. (2010) models of co-teaching are described in Table 1.

Table 1
Co-Teaching Models

Co-teaching Model	Description
One Teach, One Assist	whole group teaching where there is one lead teacher and the other teacher assists
Parallel	two mixed-ability groups where both teachers are teaching the same content
Alternative	two same-ability groups where the two teachers are teaching different content
Station	both teachers are monitoring all stations or teaching one station and monitoring another station
Team Teaching	whole group teaching where both teachers teach together
One Teach, One Observe	one teacher is teaching the large group while the other teacher observes and collects data

Theoretical Framework

The theoretical paradigm used to guide this study is Tuckman’s Model of Small Group Development (Tuckman, 1965). According to Tuckman (1965), effective teams, large and small, go through four stages of team development. A fifth stage was added in 1977 (Tuckman & Jensen, 1977). This theory of team development can be applied seamlessly to co-teaching partnerships in all grade levels (P-12). In Tuckman’s model, high-performing teams go through five stages in their team development: forming, storming, norming, performing, and adjourning. According to Tuckman, it is essential that teams work through all stages so they may grow, face and respond to challenges (such as virtual co-teaching during COVID-19), research solutions, develop plans, and produce results. This model can be applied to virtual teams. During the pandemic, traditional co-teaching partner teams morphed into virtual teams. In 1997, Lipnack and Stamps applied and extended Tuckman’s work to develop a virtual team model. In summary, this framework is helpful in examining the development of the co-teaching mentor teacher and

student teacher candidate teams and additionally how the teams functioned virtually regarding flexibility, roles, openness, cooperation, trust, and self-evaluation.

Purpose of the Study

The purpose of this study was to investigate classroom mentor teachers' and student teacher candidates' perceptions of co-teaching during the COVID-19 pandemic. The researchers explored, through case studies of nine participants, the types of alternative instructional activities used to teach students after physical school buildings were closed, and how the pairs of classroom mentor teachers and student teacher candidates collaborated to provide quality instruction. The Danielson Framework for Professional Practice (1996) and models of co-teaching (Friend et. al, 2010) were the lenses through which investigation occurred. Additionally, participants were asked to identify the benefits and challenges of co-teaching, as well as how their methods of collaboration and instructional delivery changed, during the COVID-19 pandemic.

Research Questions

The following research questions guided this study:

1. Which components of the Danielson Framework did mentor teachers and student teacher candidates utilize during virtual learning required by the COVID-19 pandemic?
2. Which models of co-teaching were utilized during virtual learning required by the COVID-19 pandemic and how were they implemented by mentor teachers and student teacher candidates?
3. What do mentor teachers and student teacher candidates perceive as the benefits to co-teaching during the COVID-19 pandemic?
4. What do mentor teachers and student teacher candidates perceive as the challenges to co-teaching during the COVID-19 pandemic?

Methods

A case study design was used to investigate mentor teachers' and student teacher candidates' perceptions of co-teaching during the COVID-19 pandemic. An electronic instrument was constructed and validated by the researchers to explore answers to the research questions (see Appendix). Once validity was established, the researchers surveyed five pairs of student teacher candidates and their mentor teachers.

Participant Selection

Purposive homogeneous sampling was used to identify the participants with similar co-teaching experiences (Etikan et al., 2016). The researchers selected five pairs of student teacher candidates and mentor teachers from two institutions of higher education in the Eastern United States who they knew co-taught during the COVID-19 pandemic. Participants were invited to participate through initial phone calls and email messages and if interested, received the formal email letter of invitation. The 10 participants (five student teacher candidates and five of their mentor teachers) co-taught in both regular education and special education classrooms at various grade levels. Nine of the 10 participants who were invited chose to participate in the survey (Appendix). Participant demographics are listed in Table 2.

Table 2

Participant Demographics

	Mentor 1	Mentor 2	Mentor 3	Mentor 4	Mentor 5
# years teaching	19	11	13	14	12
Mentor positions	Secondary Social Studies	Learning Support	First Grade	Kindergarten	Life Skills
# years as mentor teacher	7	6	9	11	6
Student teacher candidate disciplines	Secondary Social Studies	Early Childhood Special Ed.	Early Childhood Special Ed.	Early Childhood Education	Special Education 7-12
Total # students	161	20	18	20	13
% Active P-12 students during COVID-19	95%	100%	95%	100%	100%

Data Collection

The research instrument was constructed by the researchers (Appendix); thus, a pilot study was conducted. The Lawshe (1975) Method was used to validate the instrument. The instrument was sent to nine “experts” on co-teaching including university supervisors, student teacher candidates, and mentor teachers who were not used as subjects in the actual study. They were asked to review each question to determine if the questions addressed the overarching research questions and if the questions were “essential,” “useful but not essential,” or “not necessary.” Substantive changes were not necessary; participants agreed the questions were essential and useful to the study.

Consent to participate was obtained and surveys were sent via email to 10 participants; nine people completed the survey. After analyzing the surveys, follow-up questions regarding demographics and celebration activities were emailed to the participants.

Data Analysis and Results

Danielson Framework

Question 1 of this study asked, “Which components of the Danielson Framework did mentor teachers and student teacher candidates utilize during virtual learning required by COVID-19?” For each domain and component, participants were asked to rate how frequently

they were able to work with their co-teachers. Descriptive statistics and participants’ responses to interview questions were used to analyze Research Question 1. Tables 3-6 illustrate the results as they pertain to each of the four domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. Each table is followed by a narrative description of the findings.

Table 3
Planning and Preparation

Component	Frequently (%)	Sometimes (%)	Never (%)
Selecting professional outcomes, goals, and objectives	77.8	22.2	0
Selecting appropriate resources	77.8	22.2	0
Knowledge of students	55.6	44.4	0
Designing coherent instruction	77.8	22.2	0
Designing student assessment	44.4	44.4	11.1

N=9

In the Planning and Preparation Domain, 100% of participants frequently or sometimes collaborated to Select Professional Outcomes, Goals, and Objectives; Select Appropriate Resources; Discuss Knowledge of Students; Design Coherent Instruction; and Design Student Assessment. One co-teacher never collaborated on Design Student Assessment.

Participants were also asked approximately how many hours per week they spent collaborating in the Planning and Preparation Domain. Almost half of the participants (44.4%) perceived spending more than five hours per week collaborating with their co-teachers, 33.3% spent two-three hours collaborating, and 11.1% spent between four-five or zero-one hours collaborating in the Planning and Preparation components.

Finally, participants were asked to give specific examples of co-planning or co-teaching within the Planning and Preparation Domain. Several participants referred to the online tools they used to collaborate including Google Meet, Schoology, Google Docs, and videoconferencing. One mentor teacher shared, “My student teacher and I met weekly if not daily via Google Meet to plan the Science/Social Studies curriculum materials we would be pushing out for our students. We would research ideas and work together on a Google Doc to link videos, songs, ideas, etc.” Another mentor teacher explained, “My student teacher and I were able to communicate via email, phone calls, Google Meet, etc. to plan instruction. She worked with other student teachers to plan online activities for all first graders in the district. She also selected appropriate read aloud stories to share with students on a weekly basis via Google Meet.”

Two teacher candidates noted challenges faced in the Planning and Preparation Domain. One candidate said:

This domain was difficult for my second placement, since I had not been in person with these students since October. I had not made connections with these students, since I mostly observed. When I was planning, I did not know the strengths and weaknesses of the students. The lessons I planned went to all of the classes, regardless of the level (College Bound or Academic). I was concerned the material was too challenging for some, but not enough for others. Many of the students were unmotivated for virtual working, while others were working full time during the pandemic. My mentor teacher knew the students like the back of his hand. They would often reach out to him, rather than myself if they had issues or concerns. He often gave me information on students that might help motivate or challenge the students.

Another teacher candidate noted the challenges faced while planning and uploading documents. Specifically, the candidate said:

While student teaching online, the most time-consuming part was planning the daily/weekly lessons online and uploading the work to a platform called Schoology. It took a lot of time to upload documents and find the proper documents that were at each student's level based on spelling, reading, math, and vocabulary. It was very important to gain knowledge of my students and try to figure out what would keep them interested when working online. I had to find fun and exciting daily activities that would relate to each student to keep them engaged when completing the assignments...It would take me two to three hours just to plan and upload all the documents for one day's plan.

Table 4
The Classroom Environment

Component	Frequently (%)	Sometimes (%)	Never (%)
Creating an environment of respect and rapport	88.9	11.1	0
Establishing a culture for learning	66.7	33.3	0
Managing classroom procedures	55.6	33.3	11.1
Managing student behavior	44.4	44.4	11.1
Organizing space and managing online classroom	55.6	33.3	11.1

N=9

All participants frequently or sometimes collaborated in two components, Creating an Environment of Respect and Rapport and Establishing a Culture for Learning, of the Classroom Environment Domain. One participant (11.1%) did not collaborate with the co-teacher in the components of Managing Classroom Procedures, Managing Student Behavior, or Organizing Space/Managing Online Classroom.

Participants were invited to share specific examples of how they co-taught within the Classroom Environment Domain. One teacher candidate noted the importance of establishing a culture of online learning stating:

It was very important to continue to establish a culture of learning online. At times students were becoming comfortable and not working to the best of their abilities because they were at home in a relaxed setting. I was sure to establish high expectations and keep my attitude positive and keep the excitement in the students. The students were always given time to discuss and answer questions to stay engaged and have the chance to voice their opinions.

One teacher candidate shared:

When managing classroom procedures and managing student behavior, we quickly learned how differently that would look like online for us. I worked together with my mentor teacher during live meetings with my students to manage behavior such as unmuting their mic and talking while the teacher is talking or avoiding off topic conversations that were not school-related. We did this in a flexible way, noticing when students needed a break and needed time to socialize with the peers they abruptly couldn't see anymore.

One mentor teacher commented about the advantage of having the teacher candidate in the classroom prior to the pandemic as a year-long resident participant in a Professional Development School (PDS). The mentor wrote:

Many of the areas listed above were translatable to the online environment because my student teacher had spent time in my classroom prior to the pandemic. We were able to collaborate on managing behavior when needed; she was able to establish some respect and rapport, and a culture of learning, before we went online and was able to carry that forward. She was also able to easily manage the online classroom through Google Classroom as well as transfer grades into our PowerTeacher gradebook.

Table 5
Instruction

Component	Frequently (%)	Sometimes (%)	Never (%)
Communicating with students	77.8	22.2	0
Using questioning and discussion techniques	55.6	44.4	0
Engaging Students in Learning	88.9	11.1	0
Using Assessment in Instruction	55.6	44.4	0
Demonstrating Flexibility and Responsiveness	100	0	0

N=9

Table 5 shows 100% of participants perceived they frequently or sometimes collaborated in all of the selected components of the Instruction Domain: Communicating with Students, Using Questioning and Discussion Techniques, Engaging Students in Learning, Using Assessment in Instruction, and Demonstrating Flexibility and Responsiveness. All participants collaborated frequently to Demonstrate Flexibility and Responsiveness.

Participants were asked to provide specific examples of utilizing co-teaching in the Instruction Domain. Four of the nine participants noted the importance, and gave examples of, Demonstrating Flexibility and Responsiveness. One mentor shared:

During the time online it was very important to be flexible. At times students were not able to log in to their computers for days at a time. I was sure to contact these students and make sure they were able to keep up with the work. I was also sure to have backup assignments ready for each student or modifications based on the level of the student. It was very important to communicate with the students and be sure to keep them engaged in discussion.

A student teacher candidate stated:

Overall, I think COVID-19 showcased how flexible teachers can be. When I first started virtual, I was required to do 30 minutes of material a day. The following week it was 3, 30-minute lessons. Then towards the end of student teaching it was 3, 15-minute lessons. The work was overwhelming for all involved. My mentor teacher and I were in frequent contact about student concerns. I often answered my emails or comments in Google Classroom within the hour. Students could be working on the lessons whenever they wanted to, so this became somewhat difficult. My mentor teacher often gave me feedback throughout the week on my lessons.

Communication was also mentioned frequently (77.9%) by the participants. One teacher candidate said:

We were always in touch with our families whether it was via Remind, email, or Google Meet. We sent out updates to families via email and our daily calendar video. Parents submitted samples of work through Remind or email. We could track the work students completed via Clever. We also prepared three mailings for students with letters, checking in on them and a flat teacher activity to help keep them engaged in their assignments and have fun. At the end of our year, we did in-person porch or doorway visits to let them know how proud we were of their hard work!

A student teacher candidate remarked, "Each day my mentor classroom teacher and I would communicate with students via Google Hangouts. We had a signup sheet and students would sign up for a half hour period to talk with us and get help with work." Participants mentioned meeting with students as well as communicating with families, with sessions lasting from 15 minutes to more than an hour.

Table 6
Professional Responsibilities

Component	Frequently (%)	Sometimes (%)	Never (%)
Reflecting on teaching	66.7	33.3	0
Maintaining accurate records	88.9	0	11.1
Communicating with families	55.6	22.2	22.2
Participating in a professional community	55.6	22.2	22.2
Growing and developing professionally	88.9	11.1	0
Demonstrating professionalism	100	0	0

N=9

Data from Table 6 suggest that co-teachers perceived spending the least amount of time collaborating in the Professional Responsibility Domain. While 100% of the participants frequently or sometimes collaborated in the components Reflecting on Teaching, Growing and Developing Professionally, and Demonstrating Professionalism, 22.2% of participants never collaborated in the components of Communicating with Families and Participating in a Professional Community, and 11.1% (one participant) perceived never collaborating in the component Maintaining Accurate Records.

When asked what co-teaching in the area of professional responsibilities looked like during the pandemic, one teacher candidate shared, “In the life skills classroom it is very important to maintain accurate records. I recorded students' attendance daily based on morning and afternoon Google Meet times. I recorded grades on Schoology and kept all assignments and assessments of each student in their own folder.” A couple other participants also mentioned the importance of careful record keeping.

Working as a professional team was also addressed by some participants. One co-teacher stated, “We worked together as a Kindergarten team across our district. There were 12 teachers working together to prepare instruction.” A second participant wrote, “I was able to participate in a professional community by joining weekly meetings with the first-grade teams from both [my school] and [the other P-3 school] planning instruction for the coming weeks.”

Unfortunately, one teacher candidate was not given the opportunity to participate in the professional community stating:

Throughout my student teaching, I was not a part of the professional community at the high school. I did not attend Zoom or phone meetings. Occasionally, my mentor teacher would send me an email with updates about the school. During my time as a student teacher before COVID-19, I attended team meetings, parent teacher conferences, and faculty meetings. I felt more isolated during this time, while I was extremely grateful to be allowed by the school district to continue my student teaching through the COVID-19 pandemic.

Models of Co-Teaching

Research Question 2 asked, “Which models of co-teaching were utilized during virtual learning required by the COVID-19 pandemic and how were they implemented by mentor teachers and student teacher candidates?” Participants were first asked to identify whether they co-taught prior to the pandemic; a small majority (55.6%) of participants had co-taught before the COVID-19 pandemic. The next question asked which models of co-teaching were used prior to the pandemic. Table 7 summarizes those results.

Table 7
Co-Teaching Models Prior to the Pandemic

Co-Teaching Model	Percent
One Teach – One Assist	33.3
Parallel	22.2
Alternative	11.1
Station	33.3
Team	22.2
One Teach – One Observe	44.4

Data from Table 7 suggest that nearly half of the pairs (44.4%) practiced the One Teach – One Observe model of co-teaching prior to the pandemic. Participants (33.35%) selected One Teach – One Assist and Station Teaching. Two participants (22.2%) utilized Parallel and Team Teaching prior to the COVID-19 pandemic. One participant (11.1%) used the Alternative model of co-teaching.

Participants were then asked how their co-teaching experience changed due to the pandemic. Responses included, “Co-teaching was very different online... basically just helping each other in any way possible...” and co-teaching changed “In every possible way... We had to rethink everything in order to meet students’ needs.” One person remarked that online teaching was more one-teach, one observe; another participant shared it became more one-teach, one-assist. No other models of co-teaching were mentioned as being used during the online experience.

A classroom mentor teacher commented on the value of having the teacher candidate as a year-long resident student in a PDS for the entire year and how the teacher candidate assisted with technology:

[Teacher Candidate] was my PDS student teacher for the 2019-2020 school year. We had an incredible relationship and ability to work together from the beginning. We continued our bond and strength of working together as a team over into our distance learning...[Teacher Candidate] carried much of the tech knowledge which was so critical in our distance learning experience. I learned a great deal from her in that area. I had such a strong bond with my PDS student teacher which made going into distance learning not

an issue. We had been working together since August and she was very well established with the students and families. It was incredible and I am forever grateful!

In contrast, a teacher candidate described a challenge of not being in the classroom for the full year:

Co-teaching was still able to be used but the mentor teacher was often the bigger part of my experience. It was the One Teach, One Assist model more often because I came into the first grade class toward the end of the year and right at the beginning of a pandemic. The class had a routine already and knew my mentor teacher so that's who they were more comfortable with when they were having to learn how to do school online the first few weeks. It took a couple weeks for them to become comfortable and engaged with me.

Benefits of Co-Teaching

Research Question 3 asked, "What do mentor teachers and student teacher candidates perceive as the benefits to co-teaching during the COVID-19 pandemic?" In order to answer this question, participants were asked three open-ended questions about the benefits of co-teaching during the COVID-19 pandemic. The first question asked, "How did your co-teaching experience(s) change due to the pandemic?" Eight out of the nine participants spoke of the benefits and challenges of technology when addressing this question. One mentor teacher shared that her student teacher, "... carried much of the tech knowledge which was so critical in our distance learning experience. I learned a great deal from her in that area." One student teacher described the changes she felt:

It took a couple weeks for them to become comfortable and engaged with me, but when that happened, they were more trusting, more willing to participate and more active learners. We were all learning how to do this process of online school together, so I believe we will always share that memory of getting through it together, the humor of technical difficulties and how we made it as positive and fun as we could.

The next question asked, "Besides the obvious safety factor, did you see any benefits to the alternative/on-line/HyFlex method of instruction during the COVID-19 pandemic?" Sixty-seven percent of the participants said yes, and thirty-three percent said no. Six of the participants shared their reasoning for selecting yes and spoke positively about the benefits of becoming more fluent with technology, learning new teaching tools, having access to resources, and becoming more flexible. One student teacher shared:

The environment students learn in is important and during a pandemic or not, I believe they have a sense of comfort at home which puts their mind at ease when they are learning. Technology is a very prominent factor in today's world and our daily life. As a millennial, I thought of myself as comfortable with technology and its uses in the classroom. I quickly found out I was quite wrong! However, because of the need for certain technologies during virtual learning, I gained new skills and training with technology I may not have ever thought to get before and for that I am grateful. The new knowledge I gained of technology is something not only teachers, but students all acquired during this time. I see this as a benefit because technology will only continue to grow and become more complex, so if we grow with it, we can only expand our knowledge more and further facilitate our students learning in universal ways.

One mentor teacher who selected yes, felt remote learning was less effective, but shared, "...the one documented 'advantage' was the obvious decrease in classroom discipline and behavioral referrals."

The third question asked, “What were the advantages of having a co-teacher or co-teachers during the COVID-19 pandemic?” Each of the nine responses to this question referred to the ability to provide additional support to each other and the students. One mentor teacher shared, “Asking her advice with all of the new technology that has changed in the last few years. I’m starting to feel my age and experience the generation gap, but she was so helpful and patient with me in regard to the technology I had to learn to teach students online.”

In summary, student teachers and mentor teachers concluded that their overall experience co-teaching during the COVID-19 pandemic was beneficial. Mentor teachers and student teachers learned to use technologies they may not have investigated prior to the pandemic. They utilized more online teaching tools, resources, and learned the valuable lesson of being flexible.

Challenges of Co-Teaching

Research Question 4 asked, “What do mentor teachers and student teacher candidates perceive as the challenges to co-teaching during the COVID-19 pandemic?” In order to answer this question, participants were asked three open-ended questions where they shared the challenges of co-teaching during the COVID-19 pandemic. The first question asked, “How did your co-teaching experience(s) change due to the pandemic?” Each of the participants spoke of the transition from hands-on learning to online learning, listing technology as a benefit and a challenge in terms of planning and time. One mentor teacher shared:

We had to find times to meet online, send each other digital versions of materials, and pretty much rethink everything in order to meet students' needs while they were home on computers. For children who are only six years old this was challenging, but my student teacher made the best of it and was there to offer her support and advice for two whole months.

The next question asked, “What were the biggest differences in your co-teaching experience from in-person to alternate, online, or HyFlex teaching?” Six of the nine participants mentioned interaction as being the biggest difference in their co-teaching experience. The student teachers described challenges with interacting online. One student teacher shared, “It is much harder to grab the students’ attention at times because you are not face-to-face.” A second candidate said, “The biggest difference was the challenge of trying to make personal bonds with my teacher and students and the environment we were communicating in.” One mentor teacher shared concerns about interaction:

Not being able to communicate face-to-face and share our experiences in person. I so wished I could have seen my student teacher in action in front of our students. I know in my heart she would've been amazing, because she was online, but I still wish she could've been with our students physically. Not being able to work side-by-side with students, help them with their math, writing, reading, etc. was the biggest difference.

The last question posed was, “What were the challenges of having a co-teacher or co-teachers during the COVID-19 pandemic?” Six of the nine participants stated they did not have any challenges and spoke positively about co-teaching during the pandemic. Three participants shared challenges related to time, engagement, socialization, and progress monitoring. One mentor teacher shared:

Although technology can be used effectively to support instruction, full remote online learning proved inferior to face-to-face, in-person educational programming. The Spring 2020 COVID-19 programming was "ungraded" and largely asynchronous (with the exception of live video tutorial/support sessions), and this contributed to some students

being less engaged. A few students were almost non-participatory during the final quarter. Furthermore, working from basements, bedrooms, kitchens, etc. proved often to be more distracting than a structured school environment. A few students seemed to love the personalized, 1:1 video conferences and completed their work with some measure of success. However, many struggled, especially those with significant deficits. It was also difficult to provide meaningful progress monitoring for students' IEP goals. Assessment integrity was compromised in remote learning environments. The current synchronous/hybrid model being used in Fall 2020 is proving to be more effective than the ungraded, asynchronous model used in Spring 2020.

In summary, challenges were noted by student teachers and mentor teachers related to time, planning, and ever-changing technology. Although challenges were expressed, a positive outcome was noted in each participant's response. Student teachers and mentor teachers learned from each other and supported each other through this new wave of learning.

Discussion

Tuckman's Model of Small Group Development

Tuckman (1965) and Tuckman and Jensen's (1977) sequential model of team development was utilized to connect the survey results back to a theoretical framework as applied to the co-teaching teams of mentor teachers and student teachers. The flexibility of Tuckman's stages of team development made it easily applicable to virtual teams who use technology to function across time and space (Nestor, 2013). Just as in-person teams go through stages in their development and performance, these high-performing virtual teams moved through the same stages: forming, storming, norming, performing, and adjourning (Tuckman & Jensen, 1977). However, the stages in this study may not have occurred in sequential order.

The forming stage is a time marked by uncertainty. It is a time for getting acquainted and organized, creating clear goals and expectations, and detailing tasks, rules, and work distribution. Team members are highly motivated and enthusiastic at this time but can also be anxious about future work. Maqtary et al. (2019) added that the group leader (in this case the mentor teacher) should clarify goals, roles, and responsibilities at this time. In a virtual setting, examples could include the following: group members establishing connections via technology, creating ground rules for netiquette, actively brainstorming in an online workspace such as a shared drive or shared document, and utilizing asynchronous and synchronous virtual collaboration methods (Crites et al., 2020). The results of this study indicated 100% of the participants frequently or sometimes collaborated to select outcomes, goals, objectives, and appropriate resources for teaching using online collaborative tools such as the Google Meet, Google Docs, Google Drive, Google Classroom, Google Slides, Schoology, Power Teacher, email, and other video conferencing software.

Crites et al., (2020) described the storming stage as a time for groups to solidify goals but conflicts may arise and need to be resolved through negotiations. Different working styles and personalities become obvious. The team's limitations become evident and the team should start to focus on the most critical problems (virtually this would encompass accessibility/internet issues and computer access). It is also a time for dividing bigger goals into small tasks, so members are not overwhelmed. The storming stage is especially essential for student teacher candidates who are moving from an in-person experience to a virtual experience. In transitioning to a virtual environment, the following questions could be posed: Has a virtual moderator role

been defined and assigned? Do teams engage regularly online? Have struggles with virtual technology been discussed and have resources been shared? (Crites et al., 2020). Struggles that were apparent in the data included a student teacher who had not been able to make a lot of connections with the students. She felt like she did not know the strengths and weaknesses of the students so the mentor teacher often shared information about the students that helped her to challenge and motivate them. Student teachers additionally mentioned the enormous workload associated with teaching online and how their mentor teachers assisted them in managing the workload related to creating lessons, uploading content, managing students, and assessing work.

In the norming stage of group development, Tuckman (1965) stated there is an open exchange of views by members and members become more accepting of one another. Mutual trust is established, cooperation is evident and new, and stable roles have been formed (Nestor, 2013). Group members are comfortable giving and receiving constructive feedback as they work towards larger goals. The team becomes more productive and a sense of unity and cohesion emerges. In a virtual environment, norming could look like teams celebrating small, short term victories and assuring each member has his/her virtual “moment” during discourse. Lastly, frequent check-ins are seen at this stage to assure virtual messages are received and understood. Text-based apps can be used for basic communication and real-time technologies can be used for deeper discourse (Crites et al., 2020). Mentor teachers and student teachers discussed numerous ways in which they were productive at this stage including taking time to collaborate over Google Meet and Google Hangouts. All participants (100%) perceived they frequently or sometimes collaborated on communicating with students, used questioning and discussion techniques, engaged students in learning, and used assessment in instruction. Additionally, 100% of participants collaborated frequently to demonstrate flexibility and responsiveness. Flexibility was a term repeated frequently in the qualitative results. Mentors and student teachers used communication tools such as Google Classroom and Clever. Student teachers had the opportunity to work on Individual Educational Plan (IEP) goals and plan virtual field trips with the mentor teacher.

The performing stage showcases an effective team characterized by successful performance, openness, informality, close, and supportive collaboration. This stage is the core of where the real work is accomplished and a time when members are satisfied with the teams’ performance. The team is well-functioning with the mission and goals in mind. Team members have deepened their knowledge and skills and have a shared responsibility and feeling of pride. As shown in one experienced mentor teacher’s response quoted in research question three above, student teacher candidates were invaluable resources in regard to innovative practices in technology integration. According to Bonebright (2010), at the performing stage “the group is a ‘problem-solving instrument’ as members adapt and play roles that will enhance the task activities. Structure is supportive of task performance. Roles become flexible and functional, and group energy is channeled into the task” (p.114). In an online, collaborative environment this stage is characterized by group members maintaining virtual tools and repositories that can be shared and utilized by all members. Virtual meetings discussed outcomes which were valued by each member and their institution/organization (Crites et al., 2020). In this study, participant responses indicated all teams reached this stage evidenced by responses regarding mentors and student teachers being able to provide additional support to the students and each other. The teams engaged with families via the Remind app and attended parent-teacher conferences together. One student teacher was able to participate in a Kindergarten team across the district that worked together to provide instruction for students. An additional participant noted trust was

built between the mentor and student teacher as they both learned about navigating the online learning environment simultaneously.

In 1977, Tuckman and Jensen “revisited the original model and reviewed the subsequent literature on team development” (Bonebright, 2010, p. 114) and identified a fifth stage called the adjourning stage. During this time of disbanding, there may be sadness but there are positive characteristics such as a time for self-evaluation, positive feelings towards the team’s accomplishments, satisfaction with the work completed, and reviews of the outcomes of the team. This stage is also referred to as the “mourning stage” in the literature (Natvig & Stark, 2016). Tuckman and Jensen (1977) reviewed literature which included terms such as separation and termination and summarized by stating “the Tuckman model is hereby amended to include a fifth stage: adjourning” (p. 423). In the virtual team environment, adjourning could include a virtual celebration like a virtual classroom goodbye with students and the mentor teacher’s attendance at virtual graduations or department award ceremonies. Mentor teacher and student teacher participants in this study shared a plethora of activities they engaged in at the end of the semester. These “adjourning” activities included: Zoom calls between student and mentor teacher, a goodbye post created by the student teacher for all classes, a goodbye video by the student teacher for the students, time during a live video conference for the student teacher and students to say goodbye to each other, mentor and student teacher exchanging gift cards virtually, mentor teacher offering to serve as a reference, student and mentor teacher attending an end of the school year parade together where parents and students drove through the driveway loop of the school and waved to their teachers who were holding signs, and candidates and mentor teachers completing home (porch) visits together where they dropped off end of the school year treats to the students. One mentor teacher collected special thank you messages from students for the student teacher, wrote them on the inside cover of her favorite book, and gifted the book to the student teacher at the end of the experience. Another mentor teacher set up a Google Meet on the last day of school where the entire class joined, read a story together, distributed class awards, and shared memories. Finally, one mentor teacher delivered dinner to her student teacher who was graduating.

In conclusion, the Tuckman model served as an effective framework for analyzing the survey results from cooperating teachers and student teachers in this study. Reflecting on Tuckman’s model of team development in relation to virtual team development can serve as a model of best practices for virtual student teaching experiences in the future.

Conclusion

For over a quarter of a century, educators have been using the Charlotte Danielson Framework for Teaching (1996) as a model for best practices in classrooms. This study used the framework as a backdrop for survey questions and open-ended responses related to the transition to teaching and learning in the virtual world during the COVID-19 pandemic. Additionally, research on co-teaching (Friend et al. 2010) was utilized to explore the nature of the co-teaching relationship between mentor teacher and student teacher. Lastly, Tuckman’s Model of Small Group Development (1977) framed the results and was applied to the development of the co-teaching teams and the process of transitioning from in-person teams to virtual teams. Although this research was grounded in those three main conceptual frameworks, limitations emerged including a small sample size and starting the research later in the academic year.

The results of this study provide several implications for professional practice. First, it was clear that the pairs of teacher candidates and mentors who worked together in year-long

residencies in PDS partnerships prior to the pandemic had smoother transitions to the virtual format. One mentor noted her student teacher candidate had already established respect and built rapport with the students because she spent a prior semester in her classroom; thus, the transition was easier. Whereas one teacher candidate who had just entered the placement in the spring semester noted how difficult it was to build respect and rapport, and keep students engaged, due to not knowing the students.

A second implication from this study is that educator preparation programs should prepare student teacher candidates in the areas of technology and provide virtual learning experiences particularly when co-teaching. Candidates noted the exorbitant amount of time it took for them to learn the technologies and upload documents/materials appropriately. Additionally, school districts need to provide professional development experiences for classroom teachers in the area of technology, specifically online teaching and learning. Results of this study illustrated that teacher candidates were more proficient with the technology tools and taught their classroom mentor teachers how to utilize technology effectively. It is also imperative for partnerships to discuss including teacher candidates as part of the district's professional learning community even in an online, co-teaching learning environment. One teacher candidate voiced frustration that he was included prior to the pandemic during an in-person format but was not included in the virtual community. Finally, this study revealed the need for additional research in the following areas: co-teaching in a virtual environment, technology and infrastructure needs of public school districts, additional training in the use of instructional technology, and student engagement in the virtual classroom.

Hopefully, school-university partnerships will never again experience the crisis of a deadly, global pandemic; however, it is our contention that the way teachers teach, and the way children learn, have changed forever. Our responsibility as teacher educators lies in preparing future teachers for the flexibility and adaptability educators will need to be impactful throughout their professional careers. Strong partnerships utilizing co-teaching strategies may serve as catalysts for preparing teachers to serve every child.

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Appendix

Co-Teaching Survey for Mentor Teachers and Student Teacher Candidates

Consent

1. As per the email, do you give your consent to participate in this survey?
Yes
No. If you select no, please exit the survey.

Survey

In this survey, the research investigators are using Charlotte Danielson's (1996) Framework for Teaching (Planning and Preparation, Instruction, Classroom Environment, Professional Responsibilities) and Friend, Cook, Hurley-Chamberlain, and Shamberger's (2010) models of co-teaching. For the purpose of this study, classroom mentor teachers and student teachers are both considered "teachers" in the co-teaching models. The co-teaching models are defined as follows:

- One Teach, One Assist – whole group teaching where there is one lead teacher and the other teacher assists.
- Parallel – two mixed-ability groups where both teachers are teaching the same content
- Alternative – two same-ability groups where the two teachers are teaching different content
- Station – both teachers are monitoring all stations or teaching one station and monitoring another station
- Team Teaching – whole group teaching where both teachers teach together
- One Teach, One Observe – one teacher is teaching the large group while the other teacher observes and collects data

For each Domain and Component, please rate how frequently you were able to work with your co-teacher(s) to address the components of the Danielson Framework during the COVID-19 pandemic: (Never, Sometimes, Frequently)

2. Planning and Preparation: Selecting Professional Outcomes, Goals, Objectives
3. Planning and Preparation: Selecting Appropriate Resources
4. Planning and Preparation: Knowledge of Students
5. Planning and Preparation: Designing Coherent Instruction
6. Planning and Preparation: Designing Student Assessment
7. Select at least one of the Planning and Preparation Components above and describe, specifically (with at least one example), what co-planning and/or co-preparation looked like for you and your co-teacher(s) (student teacher candidate, classroom mentor teacher, and support personnel, if appropriate).
8. Approximately how much time each week did you spend co-planning or in co-preparation activities?
 1. hour/week
 - 2-3 hours/week
 - 4-5 hours/week
 - more than 5 hours/week

For each Domain and Component, please rate how frequently you were able to work with your co-teacher(s) to address the components of the Danielson Framework during the COVID-19 pandemic: (Never, Sometimes, Frequently)

9. The Classroom Environment: Creating an Environment of Respect and Rapport

10. The Classroom Environment: Establishing a Culture for Learning

11. The Classroom Environment: Managing Classroom Procedures

12. The Classroom Environment: Managing Student Behavior

13. The Classroom Environment: Organizing Space/Managing Online Classroom

14. Select at least one of the Classroom Environment Components above and describe, specifically (with at least one example), what co-teaching in regards to the classroom environment looked like for you and your co-teacher(s) (student teacher candidate, classroom mentor teacher, and support personnel, if appropriate).

For each Domain and Component, please rate how frequently you were able to work with your co-teacher(s) to address the components of the Danielson Framework during the COVID-19 pandemic: (Never, Sometimes, Frequently)

15. Instruction: Communicating with Students

16. Instruction: Using Questioning and Discussion Techniques

17. Instruction: Engaging Students in Learning

18. Instruction: Using Assessment in Instruction

19. Instruction: Demonstrating Flexibility and Responsiveness

20. Select at least one of the Instruction Components above and describe, specifically (with at least one example), what co-teaching in regards to instruction looked like for you and your co-teacher(s) (student teacher candidate, classroom mentor teacher, and support personnel, if appropriate).

For each Domain and Component, please rate how frequently you were able to work with your co-teacher(s) to address the components of the Danielson Framework during the COVID-19 pandemic: (Never, Sometimes, Frequently)

21. Professional Responsibilities: Reflecting on Teaching

22. Professional Responsibilities: Maintaining Accurate Records

23. Professional Responsibilities: Communicating with Families

24. Professional Responsibilities: Participating in a Professional Community

25. Professional Responsibilities: Growing and Developing Professionally

26. Professional Responsibilities: Showing Professionalism

27. Select at least one of the Professional Responsibilities above and describe, specifically (with at least one example), what co-teaching in regards to professional responsibilities looked like for you and your co-teacher(s) (student teacher candidate, classroom mentor teacher, and support personnel, if appropriate).

28. Did you and your co-teacher(s) work together prior to the COVID-19 pandemic?

Yes

No

29. If yes, select which model(s) of co-teaching you used prior to the pandemic. Check all that apply.

One Teach, One Assist – whole group teaching where there is one lead teacher and the other teacher assists.

Parallel – two mixed-ability groups where both teachers are teaching the same content

Alternative – two same-ability groups where the two teachers are teaching different content

Station – both teachers are monitoring all stations or teaching one station and monitoring another station

Team Teaching – whole group teaching where both teachers teach together

One Teach, One Observe – one teacher is teaching the large group while the other teacher observes and collects data

Other:

30. Please provide at least one example of what co-teaching (student teacher candidate, classroom mentor teacher, and support personnel if appropriate) looked like in your classroom prior to the COVID-19 pandemic.
31. How did your co-teaching change due to the pandemic?
32. What were the biggest difference in your co-teaching experience from in-person to alternate, on-line, or HyFlex teaching?
33. Besides the obvious safety factor, did you see any benefits to the alternate/on-line/HyFlex method of instruction during the COVID-19 pandemic?
Yes
No
34. If yes, what benefit(s) did you see?
35. What were the advantages of having a co-teacher or co-teachers during the COVID-19 pandemic?
36. What were the challenges of having a co-teacher or co-teachers during the COVID-19 pandemic?
37. Please use this space to provide any other information you would like the researchers to know about co-teaching during the COVID-19 pandemic.

Thank you for your participation!

Preparing Preservice Teachers in the Midst of a Pandemic

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Abstract: The COVID-19 Pandemic brought unprecedented challenges to education systems in the spring of 2020. This study evaluated the effects of the sudden, widespread school closures on participants of a yearlong elementary and early childhood teacher education internship program. This study included current program students, graduates of the program, and school partners of the program. Results showed the role of the intern changed as the priorities of the mentor teacher changed in response to the changing educational environment. Inequities in technology and resources were magnified, and schools took diverse approaches in their response to the school closures as a result.

KEYWORDS: Student teaching, COVID-19, teacher preparation, field experience, school partnership

NAPDS NINE ESSENTIALS ADDRESSED:

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Six: Articulated Agreements. A PDS requires intentionally evolving written articulated agreement(s) that delineate the commitments, expectations, roles, and responsibilities of all involved.

Essential Nine: Resources and Recognition. A PDS provides dedicated and shared resources and establishes traditions to recognize, enhance, celebrate, and sustain the work of partners and the partnership.

Preparing Preservice Teachers in the Midst of a Pandemic

Field experience through student teaching is a well-established, core component of teacher education (Anderson & Stillman, 2013). Practice teaching in a classroom allows preservice teachers the opportunity to connect theories they have learned with practical application in the classroom. Studies indicated teacher preparation that occurred exclusively at the university had a slight positive impact on teacher preparation while school-based preparation has been recognized as having a significant positive impact on teacher preparation resulting in it being a critical element of teacher preparation (Ingersoll et al., 2014; Knight et al., 2015; Leeferink et al., 2015; Sadler & Klosterman, 2009). Studies have also connected field experience placements with the confidence and success of teachers (Gurvitch & Metzler, 2009; Ronfeldt, 2015), and practice teaching with retention in the teaching profession (Ronfeldt et al., 2014; Whipp & Geronime, 2015). As evidence of the critical role student teaching plays in teacher preparation, most state departments require preservice teachers to spend a designated number of hours or days in a field placement in a partner school classroom to obtain initial state licensure (Thompson et al., 2020).

During field experience placements, mentor teachers, also termed cooperating teachers (Cornbleth & Ellsworth, 1994), facilitate classroom-based learning opportunities for student teachers by guiding them through authentic experiences teaching PK-12 students in the classroom (Ambrosetti, 2014). Student teachers gain experience cultivating a classroom community, organizing the physical space of the classroom, managing the behavior of students, and implementing instructional strategies. Prior to the spring of 2020, field experience placements occurred in physical classrooms within school buildings. These schools had walls, desks, and tables. Throughout the day, students interacted with each other. Many schools had dedicated space for elementary students to collaborate in groups, face-to-face (Thompson et al., 2020).

During the spring of 2020, student teaching was abruptly interrupted by the COVID-19 Pandemic and the associated wide-spread school closures. This unprecedented disruption occurred almost overnight, leaving educational systems at all levels struggling to determine what schooling might look like for the remainder of the school year (Thompson et al., 2020). Students, educators, and preservice teachers were left feeling disoriented as their familiar educational environment was gone (Fagell, 2020). In-person schooling was not an option due to shelter-at-home orders, forcing school districts to scramble to determine how to approach teaching and learning (Kaden & Martin, 2020).

The school closures caused by the COVID-19 Pandemic surfaced existing technological and economic inequities among students. Educators have been aware of these disparities for many years as school funding is not equitable. Schools with the highest rates of poverty and the highest populations of students of color often receive less funding. Schools with high populations of White students often receive high rates of funding (Augenblick et al., 1997; Ladson-Billings, 2006). Researchers and educators have called for school reform to address inequities, but the system continues to increase the educational debt (Ladson-Billings, 2006).

In the Spring of 2020, the transition to remote learning meant these inequities could no longer be ignored. As schools determined how to approach remote learning with their students and faculty confined at home, inequities among students were at the center of their decision-making process (Danese et al., 2020; Laster Pirtle, 2020). As many public schools worked to provide technology such as computers and internet hotspots so their students could transition to

online learning, this was not possible for all districts. Some districts, such as rural districts, did not have the physical infrastructure in place for students to engage in online learning. Bandwidth limitations, unreliable connectivity, and a lack of high-speed internet availability were factors preventing some students from being able to engage in online learning (Hannum et al., 2009; Kaden & Martin, 2020; Muilenburg & Burge, 2005). In other districts, technology resources were lacking, limiting the availability of district hotspots and devices. In these cases, districts prepared printed materials to provide to students (Kaden & Martin, 2020; Muilenburg & Burge, 2005). School closures affected students in urban and rural schools, and it affected students from high socioeconomic families and students from low socioeconomic families. However, not all students were facing the same challenges.

As communities transitioned to remote learning, schools met the non-academic critical needs of their PK-12 students, such as nutrition, childcare, and mental health, in new ways. Food insecurity was intensified by the school closures as students on free and reduced lunch programs were not at school to receive their meals (Borkowski et al., 2021; Kinsey et al., 2020; Van Lancker & Parolin, 2020). Some schools established processes to provide food to children and families in their communities and care for young children while parents were out of the home for work (Kinsey et al., 2020; Starr, 2020). Further, the mental health of students became a concern. For some children, schools were the only places they felt safe, and school closures resulted in increased anxiety (Power et al., 2020; Van Lancker & Parolin, 2020). To address the mental health needs of PK-12 students, many teachers communicated with their students to provide a sense of connection and consistency (Delamarter & Ewart, 2020).

With educational systems in a state of upheaval due to the school closures mid-semester, teacher preparation programs were tasked with determining how to approach field experience placements for the remainder of the semester (Kaden & Martin, 2020). The research-grounded student teaching model commonly implemented by teacher preparation programs was based on experienced mentor teachers guiding preservice teachers through learning experiences in a classroom with students present (Anderson & Stillman, 2013; Thompson et al., 2020). However, these experienced mentor teachers suddenly found themselves struggling to adapt to a new, unfamiliar educational environment. They became responsible for mentoring preservice teachers on virtual platforms and with instructional techniques they might not have used before. Many were performing a job under significant stress for which they were unprepared (Delamarter & Ewart, 2020). At times, preservice teachers were more comfortable with technology-based learning environments than the mentor teachers, ultimately reversing the roles for certain segments of the teaching and learning process (Thompson et al., 2020).

As student teachers navigated their changing roles, many felt uncertain about how to proceed because the structure of their placement had changed (Kaden & Martin, 2020). Some student teachers transitioned from planning and instructing critical lessons to preparing activities lacking academic rigor (Alford, 2020). Others took on more responsibility as they were more comfortable with the online learning platforms than their mentor teachers (Thompson et al., 2020).

In addition, teacher preparation programs were navigating changing expectations and constraints regarding state-required field experience hours and certification requirements (Piccolo et al., 2020). Teacher candidates worried about the effect of the school closures on their graduation and certification (Delamarter & Ewart, 2020). Ultimately, licensure and graduation requirements in many states were modified or waived (Kaden & Martin, 2020).

Purpose of the Study

The COVID-19 Pandemic provided a lens for evaluating the components of our yearlong internship program we had not previously considered. The purpose of this study was to investigate areas for program improvement specific to needs that emerged as a result of the spring 2020 school closures for an elementary and early childhood yearlong student teaching experience, also known as yearlong internship program, at a four-year university in the Midwest. This two-semester internship program encompassed the final two semesters for early childhood and elementary education students. Students placed in this yearlong internship program were known as interns. Interns were placed in a classroom with a mentor teacher identified by the building administration and were supervised by a teacher in residence. A teacher in residence was a district teacher who also worked as per course faculty for the university and served as an on-site supervisor for interns. During the yearlong experience, interns co-taught daily while integrating university coursework into the classroom experience. There was a gradual release of responsibility for planning and instructing throughout the two semesters. Co-teaching continued throughout both semesters, ensuring scaffolding and support throughout the placement.

The co-constructed yearlong internship program was guided by a stakeholder team that met monthly. The stakeholder team consisted of representatives from all partner schools hosting interns and included teachers in residence, as well as university faculty. This team was critical in the development of the program as it was co-constructed with university faculty and partner schools and continued to inform and influence the decision-making system. The stakeholder team meetings served as the structure for systematic two-way communication and was key in building trust with the partner schools as their voices and input were a valued part of the program (Tipton & Schmitt, 2020).

In the spring of 2020 interns enrolled in the internship program, internship program graduates who were currently teaching, and internship program school partners were suddenly faced with difficulties due to the COVID-19 Pandemic school closures (Thompson et al., 2020). This study examined the experience of participants and identified areas for improvement in the preparation program of preservice teachers. The research team sought to examine the effect of the COVID-19 Pandemic school closures on interns in an attempt to improve future response to sudden changes to the student teaching placement.

This study explores three research questions:

- How did the extended school closure during the COVID-19 Pandemic affect interns, internship program graduates, teachers in residence, and teachers?
- What role did technology play in the impact of extended school closure on teachers, mentor teachers, interns, and P-12 students?
- How can the yearlong internship program better prepare teacher candidates for extended school closings or other unforeseen challenges?

Methods

Research Design

Researchers employed a mixed-methods design with a two-stage data collection effort. The research team consisted of the authors of this paper who fill the roles of the Director of Academic Services from one of the partner schools and the coordinator of the internship program at the University. Data collection included a survey (see Appendix A) and three semi-structured

focus group interviews (see Appendix B). Surveys were emailed to interns who had participated in the program from 2015-2016 through 2019-2020, the first five years of program implementation, and included interns affected by the COVID-19 school closures. Three focus group interviews were conducted with mentor teachers and teachers in residence who were involved with the yearlong teacher internship program in its first five years. The research protocols were developed by the research team in order to evaluate the effect of the COVID-19 Pandemic on the yearlong internship program participants by examining multiple perspectives.

The data collection instruments were designed to elicit different information from participants. Surveys were designed to gain the perception of individuals in isolation, while focus group interviews were designed to collect experiential data through discussion and group interaction (Krueger & Casey, 2000). The focus group interviews were facilitated by one of the researchers, recorded, and transcribed for analysis.

Data were analyzed and descriptive statistics are presented based on the responses to the survey (i.e. frequencies and measures of central tendency). Focus group interviews were analyzed using a constant-comparative method in an effort to identify themes across participant responses (Krueger & Casey, 2000). The research team coded the responses by theme and tabulated the frequency of occurrence.

Participants

This study utilized a convenience sample of yearlong internship program participants (Salkind, 2005). Research participants included public school teachers involved in the implementation of the yearlong internship program, either as mentors or as teachers in residence, undergraduate students who completed the yearlong internship experience, known as interns, during the 2019-2020 school year, and graduates of the program from 2015-2016 through 2018-2019 academic years. The 12 elementary partner schools were located within a 20-mile radius of the main campus or in an off-campus urban region 200 miles from the main university campus. Overall, a total of 51 interns and 11 mentor teachers and teachers in residence participated (N=62), representing the first five years of implementation of the yearlong internship program focused on elementary and early childhood certification.

Research participants were individuals who held a variety of roles in the yearlong internship program, including teachers in residence, mentor teachers, and interns. Teachers in residence were school district employees who also served as university per course faculty and acted as university supervisors for the interns. Teachers in residence maintained their district teaching position in a classroom or instructional coaching position while also supervising a cohort of interns. A teacher in residence was carefully selected for each school by the principal in collaboration with the university. Teachers in residence served on an internship program stakeholder team, meeting monthly with university faculty to develop and guide decisions of the program. Teachers in residence also provided support to interns onsite in the partner schools integrating coursework, providing professional development, conducting teacher observations, and providing feedback. Teachers in residence guided interns through reflective practices regularly throughout the internship program year.

Mentor teachers were school district employees teaching in an elementary or early childhood classroom. Mentor teachers each supported one intern in their classroom by co-teaching daily with the intern. Mentor teachers guided interns through lesson planning, building relationships, collaborative work, instruction, classroom management, data collection and analysis, and all other aspects of teaching. Mentor teachers were identified by principals and

teachers in residence as teachers who were strong communicators, had an interest in preparing preservice teachers, implemented research-based strategies in their classrooms, and were open to interns taking risks, trying new strategies, and growing in their classrooms.

All graduate participants were teaching during the Spring 2020 semester and experienced the effects of the COVID-19 Pandemic firsthand. As participants in this research, they were able to give an experienced perspective for our program evaluation. The intention of the research team was program improvement, so the input of graduates currently in the workforce included real-world application of the program’s preparation of students. Additionally, they were teaching independently during the spring semester of 2020, meaning they were dealing with the difficulties of the school closures and pandemic personally in their own classrooms.

Table 1

Yearlong internship program graduate survey respondents sorted by participation year

Participation year	n
2015-2016	8
2016-2017	9
2017-2018	7
2018-2019	19
2019-2020	8

In May 2020 surveys were sent by email to 153 of the 168 internship graduates of the undergraduate program who participated in one of the first five years of the program. Emails were sent to all graduates for whom the program had working email addresses. The program was unable to send survey questionnaires to 15 graduates due to invalid email addresses. Fifty-one graduates of the internship program responded to the survey resulting in a response rate of 33%.

In addition to surveys, focus group interviews were conducted in May 2020 with teachers in residence and mentor teachers from partner schools in both regions of the state. Eleven mentor teachers and teachers in residence participated in focus group interviews. Eight of the participants were from the original region near the campus, and three were from the urban region away from the campus. Seven participants had served only in the mentor teacher or teacher in residence role, and four participants had served in both roles. In total, 62 people participated in the study.

Setting

This study was conducted at the conclusion of the Spring 2020 semester during the COVID-19 Pandemic that caused unprecedented school closures and impacted teacher preparation. In March of 2020, educators throughout the state were surprised by the sudden school closure. All partner schools in the internship program prepared for spring break assuming they would be face-to-face with their students after the scheduled week-long break. Interns were in the eighth month of co-teaching with their mentor teacher as they said goodbye to their

students and classrooms for what would ultimately be much longer than the scheduled week. Students would not return to school at all that school year. In some instances, it would be months into the following school year before students would return to their schools.

During the week of spring break for the internship program, the COVID-19 virus reached the state resulting in the waiving of clinical placement requirements and certification requirements for teacher candidates, school closures throughout the state, and a shift to remote learning for educators and students throughout the state. During this time, information changed rapidly, and uncertainty was common. Because the governor waived clinical placement requirements for teacher candidates and the State Department of Education waived certification requirements, current interns had the option to immediately conclude their internship or to continue as schools shifted to remote learning (Saenz-Armstrong, 2020). All interns in the program chose to continue their internship knowing their role would be changing as schools navigated uncharted waters.

Findings

Quantitative

The data in Table 2 were collected from interns participating in the yearlong internship program from 2015-2020. Eight respondents were concluding their internship program year, while the other 46 respondents were in their first through fourth years of teaching. These questions pertained to the effect of the yearlong internship program preparation on their confidence during the extended school closures in the Spring 2020 semester.

Table 2

Areas of Perceived Confidence during COVID-19 Pandemic

	M	sd	n
Continued connection to students and families	3.4	0.88	52
Academic supports for students	3.16	0.85	51
Collaboration with colleagues	3.45	0.8	51

Participants rated their preparation on a Likert scale of 1-4 with 1 indicating “Not at all,” 2 indicating “Somewhat, 3 indicating “Adequately,” and 4 indicating “Extensively.” Participants were also given the option of “I don’t know” if they were unsure of their response. Interns and program graduates in schools during the COVID 19 Pandemic responded that collaboration with

colleagues and continued connection to students and families were the areas in which they felt most confident during the Covid-19 Pandemic and related school closures. Additionally, the mean response regarding providing academic supports to students was 3.16, indicating students felt slightly more than adequately prepared in this area. It should be noted that one participant responded to the first question twice, resulting in a higher number of responses than the other items.

Qualitative

Data in Table 3 were collected from interns participating in the yearlong internship program from 2015-2020. Eight of the respondents concluded their internship program year in the spring of 2020, while the other 46 respondents were in their first, second, third, or fourth years of teaching. The researcher manually coded and themed the responses using a constant comparative method (Hewitt-Taylor, 2001; Salkind, 2005). The themes were tabulated for frequency.

Table 3

Areas for program improvement for extenuating circumstances

Theme	Frequency	N
Technology	30	51
Communication	12	51
Clear expectations	4	51

Technology

When considering what could be included in the yearlong internship program to better prepare for extenuating circumstances such as school closures, the theme that overwhelmingly surfaced was technology. As instruction largely shifted to technology platforms, teachers were learning online video conferencing platforms such as Zoom or Google Meets while also working to support student engagement in an online setting. They were creating virtual classrooms and relying on communication programs such as SeeSaw as their primary platform for communication with students. Some teachers relied on Google Classroom or Canvas for communication. Rather than using technology as an instructional tool, technology became necessary for every aspect of teaching. Communication, management, instruction delivery, student engagement, and personal connection were all dependent on technology. Teachers and students used technology in ways they had not used it before. One research participant expressed that she used technology for collaboration as well as instruction, noting she was not prepared for the complete shift to the digital educational world. Many respondents mentioned they created online classrooms and the time it took to create online lessons. One participant stated she had experience with Google Classroom at the high school level when she was a student but implementing it as a teacher at the elementary level was completely different.

In contrast, some teachers struggled with the lack of technology resources. One mentor teacher noted students in grades K-2 at her school did not have technology devices at home. Another mentor teacher noted that while her classroom had access to technology, the technology

was often unusable because it lacked current updates. She felt unprepared to begin teaching using Google Classroom when her school closed.

Communication

The second most common theme that occurred was communication. Communication was a struggle in rural districts that lacked internet infrastructure and technology resources. One mentor teacher said,

The biggest impact of the COVID-19 school closure was trying to stay connected with my students. I work at a small rural school district where not everyone has internet access. I think it would benefit future interns to be able to learn strategies that they could use to stay connected with students using both technology and also non-technology options.

Maintaining parent relationships was the focus of another mentor teacher who expressed the need for strategies to engage reluctant parents in communication.

Clear Expectations

The third theme that emerged was the need for clear expectations. Respondents noted the sudden nature of the closures and the uncertainty surrounding the situations made it difficult to navigate their role without clear expectations as responses to school closures differed drastically from school to school. One teacher in residence suggested having established expectations for all interns to maintain, understanding that each situation was quite different for each intern. This respondent noted that it was impossible to plan for the Spring 2020 closures, but having experienced it, this might be valuable for future emergency situations. Another teacher in residence noted the differences from school to school and noted there needs to be individualization in the expectations and support for each intern.

Data in Table 4 were collected through focus group interviews with mentor teachers and teachers in residence who participated in the yearlong internship program in its first five years of implementation. Four themes occurred: support role, relationships, uncertainty, and changes in priorities.

Table 4
COVID-19 Pandemic Impact on Interns’ Roles

Theme	Frequency	N
Support Role	30	11
Relationships	11	11
Uncertainty	6	11
Change in mentor teacher priorities	4	11

Support

When evaluating how the COVID-19 Pandemic and resulting school closures affected the role of interns, the theme that emerged most notably was that interns took on more of a support

role than that of a co-teacher. Although interns had been co-teaching in this classroom for eight months, the shift to remote learning resulted in their primary duties being that of a supporter rather than a co-teacher. Many interns reported they worked on SeeSaw, Class Dojo, or other non-instructional online platforms, recorded read alouds to post online, or created non-essential activities to give students a chance to interact with each other online. They attended meetings but did not play an active role in the collaborative planning process with team members. Interns distributed food, school supplies, and technology devices to students. While the majority of interns maintained high levels of motivation and initiative, others were greatly impacted by the additional stress of COVID-19 in their personal lives, resulting in the need to pull back from responsibilities. One intern's fiancé was suddenly deployed, resulting in a quick marriage immediately before he left. Another was preparing to move to another state and was struggling with family pressures at home.

Relationships

The next theme that appeared when studying changes to the interns' role was relationships. One mentor teacher stated, "In the beginning, the governor says everybody passes. Nobody has to do anything. Then, the intern – mentor teacher relationship came into play. The interns felt ownership. They didn't want to be done." Because the governor had waived the field placement requirement, interns did not have to finish their year. They could have ended their internship immediately in March. However, they were connected with their students, mentor teachers, and schools. One teacher in residence said,

We had two interns come back in person to help deliver school supplies to cars. They wanted to be there in person to do those things. They said goodbye to the kids. Several parents posted pictures of their child, MT and intern from the car. They wanted to maintain those relationships.

Another teacher in residence said, "One of our interns drove back three hours to the school supply pick up at the end of the year. She wanted to give her kids a book and have closure with the students. This was her class, too."

Uncertainty

Uncertainty was another theme that emerged from the responses of the participants. Mentor teachers were uncertain about what was expected of them and how they were going to achieve it. Mentor teachers went from face-to-face teaching immediately into remote learning, either through digital or paper formats. One mentor teacher said, "It was a wonky feeling. I didn't know how to help my intern. Everyone had a unique situation. It was very challenging, and I didn't know what to tell her at times."

Mentor Teachers' Priorities

The final theme that appeared when evaluating how the intern's role changed was a change in mentor teacher priorities. One teacher in residence explained it this way,

Our mentor teachers were all of the sudden completely digital. Mentor teachers had an extreme sense of not knowing what they were doing. It made it difficult to communicate with the interns because they had this massive thing put on their plates. Interns were moved to the back burner because the mentor teacher had to figure out their expectations and how to do it.

A mentor teacher commented, “There was pressure on the mentor teacher to get it right, and I didn’t want my intern to feel that stress, too.”

Data in Table 5 were collected through focus group interviews with mentor teachers and teachers in residence who participated in the yearlong internship program in its first five years of implementation. Two clear themes appeared as districts responded to student needs with technology or non-technology resources.

Table 5
District responses to student needs

Theme	Frequency	N
Technology resources	17	11
Non-technology resources	7	11

When investigating how districts met the needs of their students, the theme that emerged most frequently was through technology resources. Many districts identified student technology needs and provided necessary devices to meet these needs. Chromebooks were provided for students to use at home. Internet hotspots were provided for families lacking adequate internet. Some districts partnered with internet providers who offered increased data usage to students who received free or reduced lunch. Work packets were provided online, and online platforms were used to interact, instruct, connect, communicate, and engage.

Along with technology resources came some difficulties in their usage. Participants indicated hotspots and Chromebooks were unreliable at times. Some students never joined their class online. Video conferencing was also a challenge with children. Students in the class were able to see and hear what happened in the background in their peers’ homes. One mentor teacher said,

We never knew what kids were going to say or show us. Students think of their computer like a one-way tv rather than a two-way camera broadcasting what we could see and hear to all other meeting participants. We had to remind them we could see the background and hear what was being said.

In other districts, technology resources were not an option. Non-technology resources were also mentioned, largely from rural districts lacking internet infrastructure or funding. One teacher in residence said,

Our district is smaller and rural so our internet is spotty – sometimes even at the school. Hotspots were not an option for us. Accessibility isn’t here yet. Even in town it isn’t great. We created packets weekly and families could access them online at home, or they could pick them up. Parents had too much on their plates, so we tried to keep stress on parents at a minimum by keeping a consistent format, content that was reviewed, and materials they would have access to.

Further highlighting the inequities in technology and resources, a teacher in residence from another district said,

Our interns did not see online learning. My district wanted to make the most equitable choice for our elementary student population. Our students don’t have take-home

devices. Through the end of March and all of April, our responsibility as teachers was to love our students well and make sure they were safe and had meals.

Conclusions

The extended school closure due to the COVID-19 Pandemic changed the educational environment for interns enrolled in the internship program, internship program graduates who were teaching, and teachers in partner schools. Educators could no longer go to school and teach their children. They could not simply employ the instructional strategies with which they were experienced, but rather they had to convert to online teaching if they were to engage in instruction at all. Teachers could not simply speak to a student when needed but were required to navigate communication methods through the computer or phone. Partnering with parents was a challenge as parents were also faced with immense changes and high levels of stress. In spite of these difficulties, interns and program graduates felt prepared to collaborate with colleagues and remain connected with students and families.

As a result of these changes for schools, the role of interns changed significantly. Interns moved from co-teachers to a support role. They were no longer engaging in essential lesson design, collaboration, instruction, and assessment. Rather, interns were commenting on student work via social platforms, observing meetings, and preparing non-essential activities designed to help students feel connected to each other. Some interns did not engage with students instructionally at all. They provided food and a sense of connection through methods that did not use technology such as phone calls. Interns and program graduates stated they would have benefitted from better preparation in using technology to teach remotely and as a means of communication.

The responses of partner schools to the extended school closure due to the COVID-19 Pandemic were diverse due to technology and resource inequities. In districts with strong infrastructure and technology resources, technology was used to connect with students and provide instruction. By stark contrast, other districts focused on providing food and checking on the mental well-being of their students.

Given the lived experiences during the onset of the COVID-19 Pandemic in the spring of 2020, the yearlong internship program can better prepare teacher candidates for extended school closings and other dramatic changes by being more intentional about the use of technology for and in instruction. A deliberate plan for two-way communication and individualized support for participants is necessary. Moreover, flexibility is mandatory as participants are likely to be in a wide variety of situations.

Implications

Implications for Research

The most effective way to prepare preservice teachers for an elementary online learning environment is not well-established. Additional research is needed to ensure teachers can achieve adequate active student engagement of elementary students through online platforms. Additionally, research is needed to determine how teachers can assess elementary students effectively, and how they should provide responsive instruction.

In addition to this, future research should investigate what effect a shift to online learning might have on the mental, social, and emotional development of elementary students. In addition to decreased social interaction, resource scarcity can have a negative impact on the mental health

of children (Van Lancker & Parolin, 2020). As schools fulfill needs for students beyond academics, further research might explore how a shift by some students to online learning might affect the feasibility for schools to provide nutrition, dental health, health services, and intervention supports for under-resourced families when students are not on campus.

Implications for Practice

When considering the significance of the changes schools encountered almost overnight, it is understandable responses were varied resulting in varied experiences for interns. The responses of partner schools ranged on a continuum from prioritizing only the health and mental well-being of students and families at one end to having all students provided with devices and internet access so they could participate in synchronous, daily online learning at the other end. Moreover, partner schools were scattered throughout the continuum between these two extremes. As the purpose of this study was for program improvement, it is important to note when a program such as the yearlong internship program faces momentous, sudden changes and diverse responses, it is necessary to be flexible with expectations and abundant with communication. It is not reasonable to expect all program participants to have similar experiences in the face of so much sudden change and uncertainty. A one size fits all approach is not reasonable in such a severe situation. However, a deliberate approach to communication and support are reasonable and necessary. A system for ongoing two-way communication with participants, both interns and school partners, is critical. The current situation for each participant needs to be considered, and a tailored approach to support participants should be developed and implemented.

When partner schools, mentor teachers, and teachers in residence are grappling with how to meet the needs of students and prepare instruction for the day, the energy typically dedicated to co-teaching, supporting, and guiding interns is directed to the students in the class. This results in a change of role for the intern. Not every mentor teacher will have the extra time or capacity to continue to support interns in co-teaching during dramatic changes to the educational environment. In this event, interns must accept their change in role. Their new role should be to actively engage in learning through the situation. Interns must be proactive about noting the process in which their mentor teachers and teachers in residence are engaging. They should note the priorities established and the non-negotiables. They should identify the critical thinking process that is occurring as these experienced educators adapt to the changes. It is unknown if these interns will face another global pandemic in their education career, but it is certain they will face significant changes to education. Interns will face conditions when they must establish priorities and non-negotiables. They will face circumstances where they need to think critically as they adapt to changes around them. In the future, interns may or may not face the same challenge educators faced in the spring of 2020, but they will face challenges that require the skills they witnessed in the spring of 2020.

This research is consistent with previous accounts of inequities of technology and resources, magnifying these inequities in light of the extended school closures due to the COVID-19 Pandemic (Delamarter & Ewart, 2020; Kaden & Martin, 2020; Ladson-Billings, 2006; Van Lancker & Parolin, 2020). The widespread shelter at home orders brought on by the COVID-19 Pandemic rushed schools in the state onto an online platform for learning. However, researchers feel it is likely this online platform will continue to be a part of education moving forward, even when the nation moves past the pandemic (Kaden & Martin, 2020). The inequities in internet infrastructure and technology availability are an issue that must be addressed. Further, teacher preparation programs must increase their technology integration in order to prepare

preservice teachers to be ready for an elementary online learning environment complete with active student engagement, assessment, responsive instruction, and effective communication.

Implications for Policy

Inequities in internet access not only have implications for educators but also for policy makers. Resource and funding inequity is not a new issue (Adamson & Darling-Hammond, 2012; Augenblich et al., 1997; Ladson-Billings, 2006), but the COVID-19 Pandemic has shined a spotlight on it. Students in the state are measured against the same standard, but they are not all working with the same opportunities and resources. In this study, one district did not instruct students during the second half of March through May 2020. Another district provided all students with hotspots and devices and provided instruction every day of the closure. The educational experiences of these sets of students are vastly different, but the students will be evaluated using the same assessment.

As the internet becomes increasingly necessary for education, policy makers should examine the systems in place for providing this service. Policy makers should look for ways to make reliable, high-speed internet access a public utility available to all homes. Equity should be a top priority as the infrastructure and price for the internet as a utility are established. All students should have equitable opportunities to engage in educational experiences through technology.

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Appendix A

Missouri State Teacher Internship Academy: Measure of Preparation as Perceived by Interns

What year did you participate in the Internship Academy?

- 2015-2016
- 2016-2017
- 2017-2018
- 2018-2019
- 2019-2020

The following questions pertain to the extended school closure in the spring of 2020 due to the COVID-19 Pandemic.

I believe my participation in the Missouri State Teacher Internship Academy prepared me to remain confident during 2020 state-wide school closures in the following ways...

	1 - Not at all	2 - Somewhat	3 - Adequately	4 - Extensively	I don't know.
Continued connection to students and families	•	•	1)	•	•
Academic support for students	•	•	•	•	•
Collaboration with colleagues	•	•	•	•	•

Given your experience with the COVID-19 Pandemic, what could be included in the Internship Academy better prepare for extenuating circumstances such as lengthy school closures?

Appendix B

Missouri State Teacher Internship Academy Focus Group Interview Protocol

Date of Interview:

Location:

Number of Participants: _____ Total

Participant Profile: (Narrative describing participant group, per completed forms)

Part 1 Introduction (Script)

Thank you for attending this focus group and giving me the opportunity to talk with you about the Missouri State Teacher Internship Academy you have participated in this school year. Before we begin, I would like to take a few minutes to introduce myself and members of our research and evaluation team. (Introductions)

The purpose of this particular focus group is to collect information regarding your perceptions of the Missouri State Teacher Internship Academy, and its impact on the preparation of interns. Your participation is important to help us determine the impact the Missouri State Teacher Internship Academy is having on teacher preparation.

A focus group is a data collection method that allows for group interaction in an interview format. This method is preferred over individual interviews when the intent is to encourage discussion and exchange of ideas. Therefore, I want you to respond not only to the questions I pose but also to what others say in the group. My job as the facilitator is to “focus” the group on the task at hand, to provide a few questions for your consideration, and to collect the essence of our discussion by recording the information.

Our discussion will last no more than 45 minutes. It will be recorded, and I will be taking field notes throughout our discussion.

All comments are confidential, and no one will be identified by name. If at some point you would like for us to turn the recording off, we will do so. By agreeing to participate, you are giving your consent for your responses to be included as a part of this study. Do you have any questions before we begin? (*If no questions, proceed to leading questions.*)

Part 2 Leading Questions

1. How did you become aware of the Internship Academy being offered through Missouri State University?
2. What are some strengths of the yearlong internship approach as implemented by the Internship Academy this school year?
3. What are some challenges of the yearlong internship approach as implemented by the Internship Academy this school year?
4. How has the Internship Academy affected you or your interns in regards to being prepared in the area of:
 - a. the beginning of the school year
 - b. building relationships in the classroom
 - c. classroom management
 - d. lesson design
 - e. high quality instruction
 - f. student differentiation
 - g. encouraging critical thinking in students
 - h. student engagement
 - i. formative and summative assessments
2. What are the best and worst parts of the yearlong internship approach?
3. Based on your experiences this year, how can the Missouri State Teacher Internship Academy be improved going forward?
4. Is there anything else you would like to share regarding the internship program?

Impact of COVID-19 School Closure

1. How has the role of the intern changed during the extended school closure?
2. What impact do you believe the “timing” of this school closure will have on students moving forward? What is your level of confidence in meeting student needs moving forward?
3. What approach has your district taken to assist students during the closure? How did your district arrive at this decision?
4. What inequities in technology exist in your district? How do these inequities impact planning for “learning from home” strategies?
5. What steps has your district taken to plan for learning gaps during the next school year?
6. Will summer school options help address these learning gaps?

**Dismantling Barriers to the Demographic Imperative:
Illuminating and Addressing Hurdles Experienced by
Global-Majority Teacher Residents in School-University Partnerships**

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Abstract: Calls for a culturally competent teaching force prepared to support equitable education for every child and to address the demographic imperative may be achieved through coordinated efforts between Professional Development Schools (PDSs) and community partners (P-12 schools, communities, and universities). This qualitative interview study was initiated to identify, understand, and mitigate challenges experienced by three global-majority multilingual/multicultural teacher residents who matriculated in a teacher preparation program at an urban research institution that collaborated with PDSs. Findings illuminated structures of support such as social, language, emotional, navigational, and academic are necessary for organizations partnering to facilitate multilingual/multicultural global-majority teacher residents to negotiate challenges during coursework and fieldwork. These authors offer teacher educators, P-12 partners, and PDS networks recommendations for culturally and personally supportive practices that embody articulated commitments to equity, and diversity.

KEYWORDS: global-majority teacher residents, holistic support

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission. A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within

and among schools, colleges/universities, and their respective community and professional partners.

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Three: Professional Learning and Leading. A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Five: Research and Results. A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets.

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**Dismantling Barriers to the Demographic Imperative:
Illuminating and Addressing Hurdles Experienced by
Global-Majority Teacher Residents in School-University Partnerships**

Teachers in public school settings are approximately 80% White whereas the students they serve represent more diverse backgrounds and are 48% people of color (National Center for Education Statistics [NCES], 2017). White teachers are overrepresented by almost a third compared to the population of U.S. schools (NCES, 2017; U.S. Department of Education, 2016). There is a demographic imperative to increase teacher diversity in the U.S. (McDonald, 2007) as well as a pressing need to address the opportunity gaps that persist for low-income students and students of color (Egalite et al., 2015; Grissom et al., 2020; Ladson-Billings, 2006, 2013). Diversifying the teaching force shows promise for positively impacting the educational outcomes of all students (Villegas & Irvine, 2010). Along with changing the demographics of the workforce, there must be a shift in beliefs and practices that moves individuals and systems toward dismantling long-standing systems of racial and structural oppression (Kendi, 2019). The current climate of “wokeness” leads us to practices that examine dysconscious racism (King, 2004), privilege (Leonardo, 2013), and white fragility (DiAngelo, 2018). However, these practices alone will not lead to change. Changes in beliefs and understanding must become systematized and leveraged to reshape our organizational cultures and practices (Kendi, 2019).

In tandem with cultural, individual, and organizational transformations, it is also imperative that teacher education programs recruit, support, develop, and retain teachers who are institutionally underrepresented (Childs et al., 2011). Those committed to justice and educational equity must work collectively to increase and support the presence of global-majority teachers, specifically Black, Indigenous, People of Color (BIPOC) who are heritage speakers of languages other than English.

The purpose of this study was to better understand the experiences of three global-majority, multilingual, and multicultural teacher residents navigating a PDS teacher residency program and university-offered supports embedded in the PDS network at an urban research institution. The study was initiated to identify, understand, and consider strategies to mitigate challenges experienced by three global-majority teacher residents.

Literature Review

Professional Development School (PDS) networks were created to bridge the theory to practice gap and address pertinent issues of educational equity through collaborative inquiry and mutual professional development of educators (Abdal-Haqq, 1998; Darling-Hammond, 1993, 2005; Goodlad, 1994; Holmes Group, 1986, 1990, 1995; Wiseman & Cooner., 1996). PDSs hold promise for realizing a more representative teaching force reflective of the global-majority. One approach to meet this need is evident through the implementation of teacher residency models of teacher preparation (Sparks, 2017).

Teacher residency programs, highly supported, year-long student teaching experiences, often serve to mitigate traditional barriers to recruitment (e. g., financial support, length of program, institutional structures during the application process etc.) for those who represent historically underrepresented learners in instructional environments (Fisher-Ari et al., 2020). Further, teacher residencies serve as a mechanism to prepare teacher candidates in the context of the schools or districts where they might ultimately serve as teachers, providing them with up to ten times more hours of practice in a year than many alternative teacher certification programs

and as much as three times the amount of school-based experience as those matriculating from a traditional teacher certification program (Sparks, 2017).

While various models for teacher residencies exist, residency programs may serve as pathways to recruit BIPOC and global-majority teachers to the field. Specifically, a study found that in 2015-16, only 19% of teachers in the field were non-white, while approximately 45% of residents represented the global-majority and BIPOC communities (Guha et al., 2017). This means that residency programs are particularly well-positioned to mitigate the underrepresentation of the global-majority in teaching. They are more targeted in recruitment efforts, provide resources that make program entry and completion feasible for nontraditional and/or global-majority candidates (Fisher-Ari et al., 2020), and provide a variety of supports, including extended and intentional matching with mentors (Fisher-Ari et al., 2019a) that go beyond the capacity of traditional teacher preparation experiences.

One primary goal of PDS partnerships, and the focus of the sixth essential element of a PDS, is the ongoing development of educators across their professional trajectory, (NAPDS, 2021). High quality mentoring has been cited as a critical supportive component of teacher retention, particularly in high needs content areas (Callahan, 2016; Ingersoll & Strong, 2011). Intentional mentoring is a foundational component of teacher residency models and enables teacher candidates to learn through long-term collaboration and co-teaching (Bryant Davis et al., 2012) with highly qualified, experienced mentor teachers. Additionally, collaborative partnerships with other novice teachers can address some of the social, emotional, and cognitive learning tasks (Fisher, 2009) which are significant upon entry into teaching and throughout the initial years of induction and socialization into the field of teaching. Hargreaves and Fullan (2012) argued for intentional networks of support to foster the development of professional capital across the vocational trajectory of educators. Taken together, the effect of these supports, like high quality mentoring, hold promise for supporting teacher candidates (Berry et al., 2008; Guha et al., 2017), specifically those who might experience structural barriers to institutional representation in the field of teaching.

Theoretical Perspectives

This study is grounded in the theory of organizational cultural competence, which is distinct from individual cultural competence (Olavarria et al., 2009). Individual cultural competence focuses on an individual's ability to positively engage across cultures (Alizadeh & Chavan, 2015). Organizational cultural competence focuses on the policies, practices, procedures, and norms of institutions, including the academy (Olavarria et al., 2009). Both organizational and individual cultural competencies must be developed in order to create more just and responsive educational opportunities for all learners, specifically those from under-represented, historically and currently marginalized communities. Balcazar et al. (2009) found that individual cultural competencies, such as cultural knowledge (Alizadeh & Chavan, 2015), might be augmented by working in institutions which carefully attend to organizational cultural competence.

Institutions working towards increased organizational cultural competence must consider their policies, norms, and principles, including careful attention to the role of language diversity (Olavarria et al., 2009). If institutions are to mitigate barriers that limit the potential of those from currently marginalized communities, institutions must seek increased understanding of global-majority students and their needs. Efforts to ensure that staff and faculty are representative of the community (Delphin-Rittmon et al., 2013) and culturally aware are also

necessary. Central to these efforts must be a commitment by organizations--specifically education-oriented systems-- to community outreach and engagement aimed at fostering authentic partnerships (Fisher-Ari et al., 2019b). This perspective calls for critiquing the non-neutral, socially, historically, linguistically, culturally, and racially charged contexts of schooling through the framework of cultural competence.

Teacher education programs as well as the policies, practices, and structures in many higher education institutions are rarely rooted in organizational cultural competencies (Fisher-Ari et al., 2020) that intentionally and authentically support global-majority teacher residents. The lens of organizational cultural competency can help faculty increase capacity for teachers working for equity and justice for the global- majority and support administrators and staff in creating institutional policies, practices, and structures reflective of these aims (Fisher-Ari et al., 2020).

Context: Our PDS Teacher Residency Model

This teacher residency model utilized targeted recruitment efforts that sought candidates in high-need content certification areas, prepared residents to teach in under-resourced schools, provided resources that make program completion feasible for nontraditional and/or global-majority candidates by providing a stipend to teacher residents, and a variety of other supports that extended beyond the capacity of traditional preparation experiences. Residency supports included teacher-mentor matching, Cross Career Learning Communities (CCLC), and coaching. The residency, structured as a year-long student teaching experience, consisted of classroom training in a PK-12 public school in conjunction with university coursework. The classroom experience occurred during the course of a typical 180-day academic school year, and the educator preparation program coursework was designed to be completed within 18 months (five semesters). While this timeline reflects the typical rate of completion for residents enrolled in these preparation programs, the pace of the program is rigorous, particularly with the full-time nature of the teacher residency which takes place alongside experienced teacher mentors. Teacher mentors were selected specifically for their excellence and expertise in their subject/content area. Within the PDS partnership the teacher residents were also supported in reviewing their needs and development, problem-solving, and exploring ways to develop collegial relationships with constructive feedback.

In addition to school-based mentors with whom teacher residents partnered, a critical component of this residency model was participation in a cohort-based CCLC. CCLCs are professional learning communities that provide a nurturing and supportive professional environment in which teacher residents and school-based mentors work together to reflect on their own practice, their students' work, and their beliefs about teaching and learning. CCLCs served as a mechanism for the participants to develop professionally and to use their human and material resources effectively. The sustaining nature of the CCLC created a space for critical friendship, mutual challenge, and support in a long-term community of practice alongside others in their teacher residency program. Through the cohort structure, the teacher residents had opportunities to share their successes, concerns, and questions with peers, alumni, and mentor teachers.

Each of these components, individually, is a critical component of our teacher residency model and intended to support new teachers as they refine their practices. The structures embedded into this teacher residency model were designed to reduce isolation and the silo-effect that is often experienced by teacher candidates. This PDS teacher residency program centers justice-oriented,

anti-racist, and inclusive teaching practices. Examining ways that this residency model holds promise for equity is important since PDS teacher residency models can be structured to address systemic structures that are the by-product of centuries long racialized violence within our collective history.

Methods

We initiated a qualitative study in the context of our PDS teacher residency program. We interviewed three global-majority teacher residents to better understand their experiences navigating the PDS teacher residency program at our urban research institution. The research question was: What experiences do global-majority students have while navigating the institutional systems required to participate in a PDS teacher residency program?

Participant-Authors

The three participant-authors Haimi, Elizabeth, and Huan, were global-majority teacher residents in our university's PDS-sponsored teacher residency program and were invited to join this inquiry. Specifically, they were included because of their unique perspectives as global-majority teacher candidates and for their identities as immigrants or refugees whose heritage languages were not English. The participant-authors provided biographical sketches that included personal experiences and identity markers (see Appendix). Each had English proficiency which enabled their acceptance into graduate programs at the university and were becoming certified to teach P-12 English language learners (ELLs) while enrolled in an 18-month Master's in Arts in Teaching program. In an effort to be consistent with their recollections and honor their contributions, we use terms that they offered to describe themselves or their experiences, both in their biographical sketches and in their quotes, even when those terms are inconsistent with the language used within the body of the manuscript. For example, where we would use the term global-majority teacher residents, the participant-authors might use non-native English speakers.

Data Sources and Collection

At the close of their time as a teacher-resident, Haimi, Huan, and Elizabeth were interviewed for 30-60 minutes using a semi-structured interview. The questions were:

- What barriers, if any, did you encounter during the application process leading to your acceptance into the university?
- What additional resources, if any, could [the university] provide to English language learners who are seeking entry into a university program?
- What additional resources, if any, could be provided to English language learners who are seeking entry into a teacher education program?
- What additional resources, if any, could be provided to English language learners as they work to become teachers?
- What additional resources, if any, could support English language learners once they begin teaching?
- Is there anything else you want to add?
- Interviews were audio recorded and transcribed through rev.com, a transcription resource, and then transcripts were cleaned up with a line-by-line examination, listening to the audio and cleaning up the transcripts.

Data Analysis

First, transcribed interviews were chronologically coded, mapping experiences that Haimi, Huan, and Elizabeth spoke about as they considered their experiences before and during the teacher residency. Next, data capturing residents’ experiences with supports during the residency were extracted and open coded. We utilized both NVivo coding, which takes words directly from the data to serve as initial codes (Saldana, 2008), and content-coding to summarize the ideas in chunks of data, usually 2-3 sentences in length. Using a constant-comparative approach, open codes were grouped and categorized representing clusters of codes (Charmaz, 2006). For example, the NVivo code “stressed” (taken directly from the language of the participants) and content code “nurturing relationships” were clustered within the category Emotional Support. During this stage, five categories became salient and representative of participant author experiences with university-offered supports, or lack thereof, during their teacher residency (see Table 1 for coding manual).

Table 1
Coding Manual

Category	Definition	Example quote
Social Supports	References to experiences (or lack of) with social needs or supports from staff, faculty, or peers.	“Community would be number of things for ELLs, for instance, as space for exchange of ideas, a space to share current research based finding pertinent to teaching, classroom management, and cultural responsiveness. And it's a place where ELLs can let out talk about their frustration.”
Language	References to experiences (or lack of) with language needs or supports from staff, faculty, or peers.	“My intentions could be very good, but they are not seen, they could be merely interpreted according to each one’s perspective, and ...I could fall out of grace, or get in trouble, because I'm saying or doing something in a way that is not really the norm or socially accepted, or the best way to present myself.”
Emotional support	References to experiences (or lack of) with emotional needs or supports from staff, faculty, or peers.	“Affirm who we are-It makes us want to succeed...”
Resources to navigate infrastructure	References to experiences with support (or lack of) navigating infrastructure from staff, faculty, or peers.	“I think the main barrier would be just being able to navigate the system because international students come from a different background.”
Supporting academics	References to experiences with support (or lack of) with academics from staff, faculty, or peers.	“I suggest a little more time to analyze what is being learned- there's so much to learn, so much to investigate.”

Research Team Roles and Positionality

Members of the research team were Terry, Anne, and Day, long-term collaborators within this PDS system. The research team created the questions for the interview and then conducted the interviews with Haimi, Huan, and Elizabeth. We (Terry, Day, and Anne) co-analyzed and interpreted the findings together and worked to develop implications of the data for the partnership. Haimi, Huan, and Elizabeth engaged in ongoing participant-author corroboration and provided significant insights across the development of this manuscript.

As a research team, we worked to enact increasingly culturally competent practices, processes, and structures to support teacher residents and others within our institution and partnership networks. The participant-authors are committed to strengthening equity in our university programming and in P-12 schools by offering insights which hold promise for transforming organizational cultural competence within and beyond our partnership and organizations.

Results

Findings indicated that Haimi, Huan, and Elizabeth experienced several types of support and noted a range of potential initiatives to aid them and other students who were multilingual, multicultural, global-majority teacher residents studying in an American university. Specifically, they reported their experiences with these types of supports (a) social, (b) language, (c) emotional, (d) navigating institutional infrastructures, and (e) academic. It is notable that Haimi, Huan, and Elizabeth not only described experiences that they found to be beneficial supports, but also noted opportunities and recommendations for future programming to increase both organizational and individual cultural competence. This means that within each theme, data quotes represent both experiences within the teacher residency that were supportive and suggestions for ways to augment our teacher residency program to become more robustly supportive of global-majority candidates.

Social Supports

The first type of support noted was social support. One theme shared by the participant-authors was that they valued being embraced within the community as multilingual and multicultural individuals with unique gifts. Haimi summed this up as “Being understood and valued.” It was important to the participant-authors that the PDS teacher residency program intentionally welcomed them. Haimi shared “Personally, I think the greatest resource that I can be provided as an ELL, would be when a person wants to know me, who I am and when what I can bring to the table matters.” Here, Haimi described the significance of relationships that acknowledged and celebrated each individual.

One of the common sources for this social support was within the CCLC. Haimi, Huan, and Elizabeth each found this space meaningful for their continued development and professionalization. Haimi explained that in CCLC, “We discuss our challenges and victories. We learn from each other and that provides us a space to belong to.” She further described the collaborative community,

As residents. I love it, we really help each other. When we get together we discuss our challenges and victories. We learn from each other and that provides us a space to belong to. Many of us might be the first to join college or not have the family network to support us in the area of education.

Haimi pointed out the significant need for global-majority teacher residents to engage as active members of social communities that validate their own identities. Haimi noted that global-majority teacher residents and teachers likely bring along with them “multitudes of challenges that come along with resettling in a country other than one’s home country- emotional, psychological and family separation.” Access to communities that are understanding and include social supports is critical in managing these challenges. She further explained that merely considering the years one has lived in the U.S. does not necessarily imply that global-majority teacher residents have been engaged in communities of support with individuals whose stories and perspectives are different from their own. Haimi noted,

I think when you are in higher education, we tend to think that the person has been acclimated to the system and the social setting here. But, I think based on the duration and our social interaction here our experiences with the larger community will be nonexistent to limited. Therefore, it is [necessary that] ELL teacher candidates gain the support that can empower them to become well equipped teachers.

Haimi stated one thing that was especially important to her and others was the collaborative, and growth-based focus of CCLCs. The problem-solving and explicit support CCLC provided gave the global-majority teacher residents affirmation as well as improved their pedagogy and helped them to align theory and practice in their schools. In particular, she valued a sense of “affirmation” and the importance of a social circle as a support for her and for other global-majority teacher residents who are heritage speakers of languages other than English. The global-majority teacher residents valued these communities for support and professional development and were committed to building and sustaining communities of mutuality and connection with others. All three resident-authors noted that creating and participating in a supportive space was meaningful for them as novice teachers who identified as heritage speakers of languages other than English and who also supported learners who were ELLs. Haimi hoped to co-create a networked social community of teachers which could support them linguistically and would serve as a space of mutual professional development and personal support. Haimi shared,

That community could be a number of things for ELLs. For instance, as space for exchange of ideas, a space to share current research based finding pertinent to teaching, classroom management, and cultural responsiveness. And it's a place where ELLs can... talk about their frustration. So, maybe if we're intentional to create that circle for ELLs, where they can come together maybe once a month, or twice a month, and articulate what their needs are, if they have one. Or what their strengths are and to just kind of have that space to communicate their challenges and frustrations would be great.

Elizabeth similarly hoped for a continuation of this type of community, and stated,

I know there are not many non-native English speakers in the program, if we could form a support group to connect with other students...join forces so we don't become a burden on the university, on the program, and we can start helping ourselves, it would be very positive in our growth as teachers.

Huan shared this hope as well,

We need to have a club, a learning center or a support group where all the ELL teachers can meet. We need someone who can support, and can explain the lesson plans explain the ideal ways you teach a lesson effectively. We really need that. We can say that we started together, and then we can help each other.

Since there are few members of the global-majority who engage in teacher preparation,

Huan shared that no one in his peer group shared his ideas and concerns, “I don't have any friends who want to become a teacher.” Haimi noted the critical role the relationships in the CCLCs played in her growth as a teacher and considered them essential for her continued development. She was open to a variety of different social and community formats. She said, “Anything that could help us stay connected, stay growing, learning would be good.”

Taken together, these global-majority teacher residents valued the social space that was created and nurtured in the residency model that made room for their concerns, made visible each individual, and built relationships where they could find and offer support and encouragement. When they thought about what they would want and need as beginning teachers, they shared that they hoped they would be in a mutual community of practice and support “Pretty much like we have here at [the university] now.”

Language Support

The second type of support noted was language support. Participant-authors frequently discussed their identity as multilingual speakers and the implications it had for both their pragmatic/social uses of English and the academic language of schools and education. Elizabeth noted that even when English proficiency is high, the experience of being global-majority and multilingual remains significant in the lives of global-majority teachers. She suggested that “we could form a support group to connect with other students...join forces so we don't become a burden on the university, on the program, and we can start helping ourselves.”

Similarly, Huan cited the importance of intentional interactions using English. He stated, “I wish I could find English-speaking friends so they can help me to understand the vocabulary. Then, I can ask questions and they can help me to answer the questions.”

Since language, cultural, and communicative competencies are often challenged in the pragmatic spaces of interpersonal exchanges, global-majority teachers, particularly those who have limited engagement with social interactions in English, would benefit significantly from frequent pragmatic practice and collaborations with monolingual English-speaking, U.S.-centric peers. Elizabeth further shared,

I think in terms of practical and pragmatic situations...When we lack exposure, when we are not aware of pragmatic practices, sometimes we do something that might not be well seen. We not only have to be aware of the language differences but the culture as well. In our teacher preparation, it is very important to become acclimated to practices that are acceptable in the dominant culture. I could be doing something... that is not okay, but I am not aware of it because it's part of cultural differences. I'm wondering how much of my cultural identity might make someone uncomfortable because I'm accustomed to certain things... Good intentions are not enough, my intentions could be very good, but if they are not interpreted well, I could ... fall out of grace, or even get in trouble, and cause rejection due to unawareness of the best ways to present myself.

Elizabeth noted that cultural and linguistic pragmatic competencies are complex. In the quote above she explained the challenges of pragmatic interactions wherein the intent and the outcome of word choice, tone, or expressions might have a very different outcome than the speaker intended. She noted the possibility of individuals being inadvertently offensive as they strive to navigate social interactions in languages they are still developing. They may miss some of the more nuanced expressions or implicit meanings while communicating and interacting. She shared,

I have, for instance, colleagues who are speaking Spanish... but they are not native Spanish speakers. Sometimes they joke or they say something that they think is cute, is funny, they heard on that movie and it was really nice and everybody was laughing and they will say something, it might be offensive. Of course, I don't say, you're offending me, I don't say it, but I see myself in there and that makes me be more cautious because I don't want to be doing that. They are really proper when it comes to English, but they might say something that was not as proper in a language that is not their own.

Elizabeth argued that creating spaces for authentic pragmatic interaction and discussions about interlocutory power and deconstructing social engagements is helpful for teacher candidates who are developing their English proficiency. Social spaces that were authentically humanizing and supportive, such as the CCLC, hold promise for global-majority teacher residents as they foster ongoing collaboration and mutual, reciprocal relationships.

Finally, in addition to peer support, global-majority teacher residents highlighted the importance of language support in the areas of oral and written English language competency development embedded throughout the program. Haimi shared, "I think resources that could just help us focus on improving ourselves in whether in language proficiency, maybe pronunciation, maybe writing skills would be beneficial." Since language learning and English proficiency are an ongoing endeavor for teacher candidates, CCLCs were meaningful.

It became clear from insights of Haimi, Huan, and Elizabeth, that communities and systems of support that provide intentional language supports through reciprocal collaborations between global-majority teacher candidates who are heritage speakers of languages other than English and monolingual English-speaking teacher candidates offer opportunities to prioritize and foster partnerships among people with different linguistic and cultural backgrounds.

Emotional Support

The third type of support experienced and appreciated by participant-authors was emotional support. The experience of being a global-majority teacher resident participating in a PDS program required emotional supports unique to each participant-author. For Haimi, this meant reaching out to PDS staff throughout the application process. Her personal relationships with PDS facilitators was ongoing and important for her as she worked to overcome barriers caused by institutional structures during the application process (Fisher-Ari et al., 2020). She explained, "I was going through some tough times, and it was hard to keep pushing through the application process." The difficulties unique to global-majority teacher candidate applicants included application and acceptance hurdles resulting from international schooling experiences, entrance exams, and program requirements.

Additionally, the experience of participating in a PDS teacher residency as a multilingual individual evoked challenging emotions. Elizabeth explained that she often felt stress related to her experiences communicating in English. She said,

I don't know what could I do to minimize that because we also know that [if my] affective filter is high then I will not be able to perform well when I'm nervous. I cannot do a job that I could have done if I would have not been as stressed [or] feeling as conscientious about pronouncing a word or expressing ideas correctly. This stress is created because I want to meet expectations. I am performing in an English spoken environment and must perform to meet deadlines, communicate and teach effectively, and project a positive professional image as well.

Haimi noted that while the experiences of global-majority teacher residents are not monolithic, some of the traumas and abuses endured by immigrant and refugee teacher candidates could be supported by counseling and therapy. Haimi shared that the frequent disappointments she experienced as she sought entry to the teacher certification program had been deflating. She explained,

I was going through some tough times and it was hard to keeping to push through the application process. Getting into the program was a dream come true, but because of where I was emotionally, I almost stumbled [and might have] if it was not for [teacher residency and grant supported facilitators], like Miss V. who stood along with me and helped me keep push through and Dr. S who walked along with me and helped me push through this. So that's the emotional aspect of the challenges. In fact, I tell this to Miss V. every single day. I make sure that I tell her how she has supported me and how she has changed my life. Just by being open to understand who I am.

For Haimi, relationships with PDS staff offered critically important emotional assistance across time. Haimi particularly valued her relationships with key PDS partners and stakeholders who built authentic relationships, saw and understood her, valued her gifts, and had high expectations for her. These personal relationships were important for her as she navigated and overcame hurdles caused by institutional barriers specifically during the application and admissions process (Fisher-Ari et al., 2020) From the resident-authors' insights, it became clear that programs and initiatives supporting teacher candidates must simultaneously center the social and emotional needs of teachers alongside cognitive learning tasks (Fisher, 2009) and provide support for global-majority teacher candidates to navigate the infrastructures of higher education and public schools. This type of personal and individual relationship was a mediating factor for Haimi and her colleagues. The individual mutual relationships were found to offer social and emotional supports, and enabled teacher residents to navigate complex structures and politics within and beyond the university and public-school settings.

Infrastructure Navigation Supports

The fourth type of support noted was help with infrastructure and systems. This type of support was necessary in navigating structures within and between the university, PDS network, teacher residency, and public school contexts. Huan noted two specific components of the residency that assisted his navigation of academic systems and structures. As he reflected on his residency experiences, he shared that the “mock interview” activity was critical as it prepared him in meaningful ways. From this experience he gained insights in the need for an increased knowledge of the community and the culture of those within it. This is an insight that he might not have accessed otherwise.

He particularly appreciated the navigational opportunities afforded through his year-long field-based experiences as a teacher resident. “[The] opportunity to shadow the best mentor... My mentor taught how to plan the lesson and how to teach effectively using the technology. I had a chance to teach straight in two weeks. That was the best experience I would not forget.” The residency socialized Huan into teaching through a year-long school-embedded model. Huan particularly found that his field-based residency helped him navigate systems and structures of schooling and teaching. For example, he reflected that his monthly collaborative meetings fostered connections with administration and the math team. These experiences were tangible examples of support at the high school where he completed his residency.

Hami shared that navigational supports were some of the most critical components of the residency program. He also made recommendations for additional navigational supports for upcoming global-majority teacher residents. She reflected,

I think the main barrier would be just being able to navigate the system because international students come from a different background. So, being able to understand the system and to be understood as an individual with a different set of values and experience will help.

Participant-authors discussed the role of advising in their journey through teacher residency. One-on-one advising had an especially positive impact. Haimi said,

I'm pretty big on the one-on-one advisement to narrow the background and experience gap. I think it's safe to say many of us tend to open up in a smaller circle than in a larger group. So one-on-one communication would really benefit me.

She suggested that these advising sessions should not just be occasional, but rather should have "frequent follow-up." She explained that navigational supports for global-majority teacher residents position them as "learners as well. Learners of the culture, perhaps the language" and that they might need "support in content learning, and the social dynamics [both] in school and in general social settings." She explained that one on one navigational advising would be supportive and "creating that space for an ELL to just say what they are struggling with or what they're not getting, understanding, or find out what their strengths are would be a good thing." She explained that, in her experience, "many of us tend to open up [more] in a smaller circle than in a larger group. So one-on-one communication would really benefit me."

Haimi shared that global-majority teachers must develop cultural and communicative competence in order to negotiate systems and structures that center perspectives and narratives differently than their own lived experiences. She stated, We need to be cognizant of our surroundings, the culture and value system of the country we live in. We need to be aware of what's going on in the news. We need to know about favored sports, colloquial and the food and all that. We need to know to some extent what children grow with (playing). We need to be knowledgeable of different social settings so that we can make the connection between the country and the outside world.

Haimi noted the importance of opportunities for global-majority teacher candidates to develop awareness of U.S.-centric perspectives. She called for structures of support that include relational advising to facilitate individuals as they navigate institutional spaces in P-20. These supports should promote authentic, affirming, and sustainable environments that allow for growth and risk-taking necessary to prepare teachers, especially those in the global majority.

Leveraging partnerships within and between organizations is key to fostering relationships that support global-majority teacher residents in the PDS community and is necessary to mitigate historical and current barriers.

Academic Support

The fifth type of support noted was academic support. While advising helped students navigate program requirements, global-majority teacher residents also shared examples of intentional strategies offered by PDS programming to support academic work. Elizabeth noted the writing support offered by the university that she used throughout the program including Grammarly, peer readers, and the university writing center.

In addition to acknowledging the supports she utilized, Elizabeth offered many suggestions for academic supports that were not available during her program but that she

recommended for others moving forward. She shared, “it would be wonderful to have a study guide, video tapes, or access to a counselor... to get in addition to the program preparation.” She also recommended that the program work to support multilingual students with counselors/advisors who can prepare them for success with resources that include readings, courses, forms etc. before being put on the spot in public spaces. Elizabeth recommended previewing content and course and field-based ideas as helpful and an intentional strategy to support multilingual teacher residents of the global-majority. She recommended “assigning a counselor, someone neutral (university staff outside the program) so they can learn more about the required forms, expectations, and provide feedback.” She explained that these would ensure that the global-majority teacher candidates still developing English would not be “caught off guard where native speaking students may be accustomed to it.” These academic and navigational supports would also serve as emotional support, since they simultaneously “address the fear factor of being judged.”

The global-majority teacher residents also recommended the creation of formal systems for academic peer supports with specific and ongoing feedback. They felt that these practices could be situated as a part of the priorities and practices of the program in an effort to encourage and uplift global-majority teacher candidates. One suggestion for more explicit feedback and support came directly from their collaborations with monolingual English-speaking colleagues in the residency program. Elizabeth shared,

If we have native peers interested in participating in peer-review, we could collaborate. They are familiar with discourse and could quickly identify “weird grammar” mistakes. We, non-native, could see how things are properly written and also provide feedback from a non-native perspective. I think that could be very supportive without creating anxiety, [and feelings of] overwhelm.

All three author-residents pointed to extended time and additional academic supports as useful strategies to support the academic success of global-majority teacher residents. Elizabeth explained,

For people who are not English speakers, we could have an opportunity to preview the material to get an additional time....I might not be able to realize that I'm not understanding completely, until I face either the assignment, interview, application, or any other expected performance. Initially, I might feel that I understood what to do. I think I can do it, and then when I'm actually attempting to perform the task, I realize that I have questions. As a result, I am embarrassed to ask something that it is supposed to be very simple, but I am encountering some difficulties with...I do fear that I would be judged and my ability would be questioned, supervisors would be wondering if I should've been accepted into the program or able to be in the program, or if I'm able to perform. It is a struggle because it's not everyday discourse but it is a competitive professional arena where a misunderstanding or interference of my native language, might lead to lower evaluations and acceptance. I must succeed in completing a task in English while my brain processes content in my native language and back to English again. That is why I think that additional time, peer support (who are facing similar tasks and challenges), and access to native proofreaders would be extremely supportive.

Haimi viewed the ten-month timeline of residencies as very compressed. She felt a need for more time, not only on the assessments, but throughout the duration of the e program. She shared, “Time was against us. I think everybody loved the [PDS residency and the certification and masters MAT] program. [It was] well-designed! But time was limited.” In thinking about

how to support teacher residents, she suggested that the pace of the programming was challenging and she, and others, would likely benefit from

a little more time to analyze what is being learned- there's so much to learn, so much to investigate... I needed more time. The theories are very good. We learn those things in the classrooms, then I am in the class teaching or observing, so there was just not enough time to make sense of the learning in the way we wanted to. So, if it was stretched a little bit, it might give us the freedom to say, "Okay. We were able to process what we have learned."

The residents explained that the requirements of our specific program for completion of the teacher residency within 18 months may be a challenge. They indicated that the academic supports above helped them navigate these time constraints, but noted that those supports did not always account for the additional time required for learners navigating multiple languages in academic contexts. The challenge expressed about the pace of the program provides an opportunity to explore possibilities that might support teacher candidates, and especially global-majority teacher residents.

Significance

Each participant-author represented their own unique perspectives as a global-majority teacher resident. Therefore, considering their perspectives both individually and collectively offered significant implications that can be harnessed to create systems and structures framed to encourage a greater focus on equity. Taken together, the insights of Haimi, Elizabeth, and Huan called us to critique and consider the holistic and humanizing structures that global-majority residents appreciated, benefited from, and recommended. Centering their perspectives and voices can help us make decisions that authentically and intentionally respond to the challenges of alternative certification paths while working daily in classrooms as global-majority teacher residents. These suggestions offer an opportunity to rethink how programs are traditionally structured around time and pacing. The perspectives of these global-majority multilingual teacher residents indicated that many of the supports they suggest are emotional and social in nature, and provide implications for our programming to increase organizational cultural competency.

Results indicated that intentional and codified systems are necessary to support global-majority teachers in their matriculation throughout teacher-residencies. Findings indicated that all three participant-authors found and requested several categories of supports and initiatives to aid them and other multilingual, multicultural, global-majority teacher candidates. Specifically, they recommended the following supports: social, language, emotional, academic and supports to navigate institutional infrastructures. These findings illuminated structures of support necessary for organizations to facilitate multilingual/multicultural global-majority teacher candidates negotiating challenges during teacher residencies. We learned that many of the structures in place in our current PDS teacher residency model were particularly useful, such as one-on-one advising, cohort models fostering peer-relationships, and cross-career learning communities. Other structures such as wrap-around services and extended time for degree completion seem to hold promise and merit further consideration. These components of many PDS teacher residency models are especially important now, as we respond to the urgency of supporting teachers well-positioned to increase educational equity and channel our collective resources and vision to make equity a reality in our schools and communities.

The results also pointed to several areas that could strengthen the cultural competency of organizations and increase equitable access. While there is increasing attention to “wokeness” at an individual level, organizations themselves perpetuate mores that are often rooted in white supremacist culture (Okun, 2000). Individual and organizational cultural competence are both critical and mutually supportive as individuals with cultural competence can collaborate with others to intentionally shift the cultural systems and mores of institutions, while organizations that are culturally competent may support the development of cultural competence of individuals within the organization or system (Alizadeh & Chavan, 2015; Balcazar et al., 2009).

Support to global-majority teacher candidates in authentic and responsive ways mitigates systemic barriers (Ahmad & Boser, 2014), increases organizational cultural competence, and addresses the demographic imperative of preparing underrepresented students for careers as educators.

Implications for Practice

The climate in which these resident-authors were developing as teachers was rife with challenges related to centuries-long racialized violence, a global viral pandemic, and financial strain and recession caused by the pandemic. Therefore, finding avenues to offer intentional and responsive supports was and remains vital, particularly for teacher candidates whose lives and families are placed at the intersection of these contexts. While racialized and euro-centric barriers proliferate in our society and institutions, they often appear neutral or hidden as they are embedded within problematic and hegemonic structures in our institutions. Therefore, we must create new paths forward that are aligned with racial justice and equity, especially in our educator preparation contexts.

Based on the insights of participant-authors in this study, there are several implications and recommendations for policies, procedures, or norms that networks of Educational Preparation Programs (EPPs) and PDSs can implement to increase their organizational cultural competence. EPPs can support global-majority teacher candidates through one-on-one advisement policies coupled with advisement procedures that provide support for self-advocating, articulating, and negotiating needs with faculty. Academic supports can include university faculty scheduling/office hours that allow for key class topics, resources, or structures to be previewed before coursework. EPPs can create roles for counselor/advocate positions who can provide study guides, video tapes to promote background information and foundational concepts, and partner global-majority teacher residents with peer readers to support their success with shared course content.

Networks and partnerships can support the language needs of global-majority teacher residents by offering workshops on occupational language and acronyms for teachers. They can also integrate programmatic structures prioritizing authentic relationships by creating heterogeneous cohorts of teachers who meet regularly. Finally, communities of support can construct norms focused on rejecting perfectionism while fostering social engagements and opportunities for interpersonal, mutual, and safe peer relationships.

In order to support the social needs of global-majority teacher residents, EPPs and their PDS partners can create staff positions that prioritize cultivating authentic relationships with individual candidates. They can also codify their programmatic commitment to embracing global-majority candidates and viewing them as assets to their programs.

While Haimi, Elizabeth, and Haun demonstrated the value of codified, intentional, collaborative space for mutual learning for global-majority candidates, we hope in future

inquiries to examine whether and how CCLCs also provide meaningful support for monolingual English-speaking teacher candidates in developing their own individual cultural competencies and capacity to teach their students whose languages are not well supported in schools.

Calls for a culturally competent teaching force prepared to support equitable education for every child may be addressed through coordinated efforts such as those described above between PDS network partners from P-12 schools, communities, and universities. Networks and partnerships hold promise – if they so choose - to address and redress structures, procedures, and mores of teacher education programs and PDS network organizations that thwart equitable access and opportunities. Teacher recruitment and development are embedded in organizational practices and should be interrogated to ensure they are inclusive, representational, and equitable.

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Appendix

Participant-Author Biographical Sketches

Haimanot (Haimi) Getahun Haile, a native of Ethiopia, is a graduate of the University of Addis Ababa, where she was awarded a degree in Foreign Languages (English) and Literature. Haimi began her career in international service as an administrator at the U.S. Embassy in Addis. She has a rich and diverse career in working for the International Rescue committee (IRC) as an education specialist and advised various youth organizations. She is a co-founder of the Clarkston Community Project (CCP) that focuses on fostering diversity and cultural exchange among refugee/immigrant and American born students through the arts and community service. Haimi recognized the need to provide enhanced opportunities to the global-majority community to entrench themselves in their new home culture.

Doris “Elizabeth” Tennes is a first-generation college student, native Spanish speaker, naturalized citizen, and a single mother. Prior to her enrollment in the teacher residency at the university, she had limited opportunities for and access to experiences rooted in the academic discourses of English. She navigated a range of complex systems and structures as she negotiated schooling and academic English while simultaneously being a single parent.

Huan Ngo’s heritage language is Vietnamese. Before entering the teacher residency program, he did not have significant opportunities to practice and use English pragmatically or socially. Throughout the program he particularly appreciated opportunities for discussions and the connections with other students which provided him with opportunities for authentic learning and engagement with both content and meaningful English language use.

**Intentional Improvising: An Extreme Pacific Region School-University
Self-Study in Response to the COVID-19 Crisis**

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Abstract: This article shares how an established partnership between the University of Hawai'i (UH) at Mānoa and American Samoa enabled a rapid launch to online learning during the COVID-19 pandemic. As UH graduate teacher candidates living and teaching in American Samoa pivoted to online learning in their own K12 classrooms, UH faculty engaged in intentional improvisation to support them in their teaching and learning. This qualitative self-study of extreme phenomena tells the mo'olelo [narrative] of these improvisational shifts and highlights the strengths and potential areas of growth for this long-standing partnership.

KEYWORDS: teacher education, place-based learning, culturally responsive teaching, COVID-19 pandemic

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission. A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Three: Professional Learning and Leading. A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Five: Research and Results. A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets.

Intentional Improvising: An Extreme Pacific Region School-University Self-Study in Response to the COVID-19 Crisis

Acts of improvisation mark the highest levels of performance, demanding great creativity and concentration (Ashley, 2009). Without a doubt, the COVID-19 crisis forced educators into improvisation mode. The rapid and unprecedented transition to online learning in the spring and fall of 2020 not only necessitated creativity from educators, but also magnified digital disparities in communities across the U.S. Students, teachers, and teacher candidates in the U.S. Territory of American Samoa, in particular, were disproportionately impacted by the shift to online learning and the closing of borders that left them economically and geographically isolated.

Research conducted in the early months of the pandemic suggested that it would exacerbate such disparities and gaps in opportunity (Dorn et al., 2020; Kuhfeld & Tarasawa, 2020). Preliminary estimates of learning loss due to school closures in the spring of 2020 predicted that students would return to school in the fall of 2020 with learning gains of 70% relative to the normal gains made during a school year (Kuhfeld & Tarasawa, 2020). For underserved students, these effects were predicted to be even more profound. Although educators may not yet know the full impact of the pandemic on educational communities, this mo'olelo [narrative] begins to weave together lessons learned during this time of challenge and improvisation.

This paper presents a qualitative autoethnographic self-study (Seawright & Gerring, 2008) of the how an established partnership between the University of Hawai'i (UH) at Mānoa and American Samoa enabled a rapid launch to online learning within a unique Pacific context of distinct language, culture, and pedagogy. Our self-study notes both strengths and weaknesses revealed by this transition and how the COVID-19 pandemic exacerbated inequities for indigenous learners, many of them already underserved as English Learners (ELs) on the short side of the digital divide. Our mo'olelo notes that, among the many benefits of a strong school-university partnership, awareness of the challenges that may arise, particularly during times of crisis, is instrumental in the success of these collaborations (Gómez & Wepner, 2018).

Context

American Samoa

American Samoa, consisting of islands located in the South Pacific, is a U.S. Territory with a population of about 55,000 people who, on the whole, have embraced Western values while maintaining a deeply rooted culture grounded in the Fa'a Samoa, the Samoan way of life (Yeung, 2016). As a territory, American Samoa has a unique political status in which American Samoans are considered U.S. nationals but are not permitted to vote in U.S. elections and have no representation in legislation passed by Congress. American Samoans can, however, participate in unrestricted travel to and from the U.S. and receive protections from the government of American Samoa that may include "legislation to protect the lands, customs, culture, and traditional Samoan family organization of persons of Samoan ancestry" (American Samoa Code Annotated 1960, Article 1, Section 3).

Although American Samoa has its own unique language, culture, and political organization, its history of public education is intertwined with a history of American colonization and intervention. The missionary and military American influence on their system

of public education has, at many junctures, neglected to recognize fundamental elements of Samoan culture and social structure such as Samoan language, aiga [family], and the collective governance that family and village provide over community problem solving and resolution (Serna & Zuercher, 2019). In response, the partnership between UH Mānoa and American Samoa has been one of intentional collaboration that honors the cultural practices and expertise of educators across participating institutions.

American Samoa's territorial status provides the governor with relative autonomy. During the COVID-19 pandemic, American Samoa remained mostly free of the COVID-19 virus, mainly due to Governor Lolo Moliga's executive order to close borders from any travel. This proactive protective shut-down resulted in extraordinary isolation for educators, which highlighted a need for intentional improvisation to build and sustain community and connection (Croft et al., 2010).

Partnership with UH Mānoa

Presently, UH Mānoa and American Samoa have a multicultural teacher education partnership, the Pacific MEd Program (PACMED) that was initiated in 1979 through a Teacher Corps Program grant that provided funds for American Samoa Community College (ASCC) to offer four-year education degrees. Although the grant allowed the American Samoan government freedom to choose its partner institution, for over 40 years they have elected to partner with UH Mānoa. One reason for this sustained partnership is UH Mānoa's familiarity with Pacific island contexts and issues. Founded in 1907 as a land-grant college, UH Mānoa is one of 10 campuses in a UH system operated across four islands. Though the professional development school (PDS) partnership between UH, ASCC, and the Department of Education in American Samoa has shifted over time, its foundation is one of cultural responsiveness grounded in a collaborative non-hegemonic approach (Serna & Zuercher, 2019) and a cohort model that reflects the Fa'a Samoa.

The partnership has benefited from the experience of faculty in UH Mānoa's College of Education (COE) in operating educational degree programs using hybrid and online formats to provide equitable access for teachers across islands. Within this partnership that has successfully expanded classrooms past borders (Zuercher & Yoshioka, 2012), our teacher candidates come from multicultural and multilingual backgrounds and a range of professional experience as educators, administrators, government officials, and national park rangers. These teacher candidates, many of whom became leaders in their schools post-graduation, come together with shared curiosity and the desire to not only learn, but to engage with one another in creating place-based and culturally responsive experiences that positively impact their Pacific communities.

Literature Review

We situate our mo'olelo of lessons learned during the COVID-19 pandemic first within a frame of culturally responsive and placed-based approaches to teaching and learning and then, more specifically, within the literature on the art of improvisation, both musical and organizational. Foundational to the 40-year partnership between UH Mānoa, the ASCC, and the Department of Education in American Samoa has been the collaborative and culturally responsive nature of the program (Serna & Zuercher, 2019) and the ability to shift and improvise in response to changing pedagogical, cultural, and social contexts. The call for responsive,

inclusive, and flexible approaches to teaching and learning (Darling-Hammond, 2006) resounds in the Pacific context, a region inclusive of myriad languages, cultures, and practices.

Culturally Responsive Approaches to Online Teaching and Learning

Gay (2002) defines culturally responsive teaching as “using characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively” (p. 106). Culturally relevant pedagogy (Ladson-Billings, 1995), equity pedagogy (Banks, C., & Banks, J., 1995), culturally responsive teaching (Gay 2002; Rhodes 2013), culturally revitalizing pedagogy (McCarty & Lee, 2014), and culturally sustaining pedagogy (Ladson-Billings, 2014; Paris, 2012; Paris & Alim, 2017) comprise a dynamic and evolving field of scholarship that seeks to address societal inequities and meet the needs of all students (Ladson-Billings, 2014).

These theories extend an ongoing conversation around asset-based approaches for building continuity between students’ experiences in home, community, and school settings (Banks, 1993; Jordan, 1985; Ladson-Billings, 1992; Trueba et al., 1981). Research conducted within the PACMED partnership has highlighted how culturally responsive approaches to teacher candidates and their communities are necessary to the success of partnership programs (Serna & Zuercher, 2019).

Studies have also considered culturally responsive approaches within online settings (Henderson, 1996; Lawrence, 2020; McLoughlin, 1999; 2000; Smith & Ayers, 2006; Zuercher & Yoshioka; 2012). Henderson (1996) recognized that web-based instructional design lacked the ability to fully contextualize learning experiences and address the needs, learning styles, and preferences of learners representing diverse cultures. Building from this work, McLoughlin (2000) incorporated a community of practice model (Lave, 1991) to develop a culturally responsive web-based unit for Indigenous Australian students. Scholars (Henderson, 1996; McLoughlin, 2000; Smith & Ayers, 2006) have also developed a model for culturally responsive online pedagogy (CROP) — also known as “teaching as dialog” (Lawrence, 2020) — that centers the importance of communication and relationship building amongst teachers and students.

The literature on culturally responsive online teaching and learning suggests that while multiple learning theories and instructional tools can be employed in the design of online instruction, pedagogical considerations such as students’ interests, practices, and cultural contexts must be considered (Smith & Ayers, 2006). While the literature sheds light on design models and methods for communication in online settings, specifics into *how* educators cultivate indigenous place-based relations and facilitate experiential learning in the virtual setting have not been fully explored. This study seeks to contribute to that conversation.

Cultural Perspectives of Place and Place-based Education

The partnership between UH Mānoa and American Samoa is one that strives for culturally responsive and place-based learning. American Samoa’s status as a U.S. Territory and the history of American influence on the education system warrants a critical exploration not just of culturally responsive approaches, but also understanding of place-based teaching, learning, and partnership grounded in the contexts of the partner institutions. Lilomaiva-Doktor (2020) describes the Samoan epistemology of fanua (place):

The land we walk on and the tulagavae/footprints we leave in the soil of our birth link us to the tupu’aga/ancestors whose bones are interred in there, just as their spirits remain grounded in the place-names and proverbs of our tala le vavau. (p. 122)

Like other Pacific and Indigenous communities, Samoan people connect with their environment in ways that are contextual, familial, spiritual, and therefore sacred (Kealiikanakaoleohaililani & Giardina; 2016; Oliveira, 2014). Samoan scholars articulate being connected with place as dwelling in fa'a Samoa, a "worldview that privileges not just the perspective of humans, but of other living beings: of trees, animals, birds, oceans, and stars [and] demands humility, sacrifice and respect for our sacred origins" (Tuiatua Tupua Tamasese Ta'isi Efi in Lilomaiva-Doktor, 2020, p. 139).

Scholars describe place-based education as a long-standing educational tradition embedded in indigenous epistemologies and models of education (Penetito, 2009; Seawright, 2014). Gruenewald and Smith (2014) add that understanding of place-based education presents a process of decolonization or "coming to understand and resist the ideas and forces that allow for the privileging of some people and the oppression of others, human and other-than-human and rehabilitation, the "relearning how to inhabit places in more sustainable and just ways" (p. viii). In this way, place-based education can work to centralize indigenous education sovereignty and the importance of reclaiming and restoring the languages and cultures of indigenous students in the learning process (McCarty & Lee, 2014).

Improvisation: Definitions and Background

Culturally responsive and place-based educational approaches frame the partnership between educators in Hawai'i and American Samoa. Perspectives on improvisation, however, provided a more specific lens through which we viewed the institutions' responses to the shifts brought on by the COVID-19 pandemic. Our exploration of improvisation literature begins with definitions and then focuses on improvisation in organizations and educational institutions.

Improvisation is commonly understood as acting extemporaneously, without plan or structure. It is an adaptive behavior/process and although it is usually associated with artistic performance, it can be applied to multiple facets of human activity. Higgins and Mantie (2013) argued that "the act of living is largely improvisatory" (p. 38). They included under the umbrella of improvisation domain-specific manifestations like creative musical abilities or cultural forms (i.e., jazz) that involved "qualities such as risk-taking, reflexivity, spontaneity, exploration, participation, and play" (p.39).

Improvisation has been most closely examined in relation to the performative disciplines, especially theatre (Magerko et al., 2009; Nisula & Kianto, 2018) and music (Bailey, 1982; Berliner, 2009). The cultivation of improvisational skill has been associated with desirable qualities such as divergent thinking, self-efficacy, collaboration, uncertainty tolerance, and affective well-being (Felsman et al., 2020; Mourey, 2019). Improvisation is also a core feature in the study and practice of oratory in multiple ancient and contemporary cultures (Cross & Fujioka, 2019; Hamlet, 1998; Obadare, 2010; Rumsey, 2006).

Improvisation in Organizations

Research has focused on improvisation in organizations precisely because of their complexity and "limitations on flexibility and speed of response" (Hannan & Freeman, 1989, p. xii). Organizations are often not rational and speedy adapters in the face of changing environmental circumstances (Hannan & Freeman, 1989), and instead often rely on "routine, reliability, repetition, automatic processing, and memory" to hold their structure in place (Weick, 1998). As a result, organizational theorists have spent the last few decades exploring

improvisation. These studies draw heavily from metaphors of improvisation as it occurs in creative disciplines, particularly jazz improvisation, for their theoretical insights (Weick, 1998).

Improvisation has been seen as the last stage along a continuum of increased demands on imagination and concentration, which starts with “interpretation,” progresses through “embellishment,” and “variation,” and ends at “improvisation” (Weick, 2007). Applying this continuum to organizational dynamics, scholars associate activities at the interpretation end of the spectrum with rigid organizational dynamics with structured, predefined, and linear communication and dependence on established models and routines (Weick, 1998; Zack, 2000). At the other end of this spectrum, maximal improvisation allows for mutually constructed communication that is emergent, spontaneous, and interactive.

Some of the literature on organizations focuses specifically on improvisation during disasters (eCunha et al., 2003), such as forest fires (Weick, 1993), nuclear accidents (Malešič et al., 2014), or the current COVID-19 pandemic (Janssen & van der Voort, 2020; Lee & Trimi, 2021; Paganini et al., 2020) as such scenarios require people to quickly apply knowledge and skills they may not normally use, to situations with which they are unfamiliar (Tint et al., 2015).

Borrowing from jazz improvisation, Mendonça and Wallace (2007) proposed a model for organizations’ improvisational response to situations that prohibit the execution of planned procedure. They argued that decision logic can be applied to an emergency response context in which organization members create a strategic plan of actions and goals, consider alternatives to the strategic plan, then engage in improvisation to monitor and adjust the implementation of the strategic plan.

Improvisation in Education

Like other types of organizations, educational institutions are challenged by an adherence to routine that restricts the reflection and reflexivity required in unexpected circumstances. Accountability policies that demand that certain student outcomes be achieved through business model approaches present a particular challenge to organizational improvisation in education (Berliner, 2011). As a result, some education researchers are now focusing on understanding improvisation and action research to study its effects as beneficial and necessary professional skills for teachers (Holdhus et al., 2016).

School-university partnerships are a particular type of educational organization designed on the assumption that better student outcomes come from better teachers, better teachers come from better teacher preparation, and better teacher preparation comes from better university-school collaboration (Darling-Hammond, 2006; Burton & Greher, 2007). The pursuit of these outcomes has been examined in school-university partnerships and professional development schools nationally and internationally (Bates, 2008; Kiliçkaya & Krajka, 2013; Ralaingita, 2008), in urban (Bazemore-Bertrand et al., 2019; Dahir, 2020; Parker et al., 2020; Stone & Eggleston, 2020), rural (Bargerhuff et al., 2007; Hoppey, 2016; Schultz et al., 2020; Warren & Peel, 2005) and oceanic (Fa’avae, 2018; Sewell et al., 2018; Thaman, 2009) contexts, each contributing to a broader understanding of what encourages or prohibits successful university-school collaboration and ultimately impacts teacher recruitment, performance, and retention, and (most importantly) student outcomes.

The major challenge to successful university partnerships is that there are different cultures, experiences, and knowledge systems that impact how each participating party

strategizes and acts, formulates and prioritizes goals, and allocates resources and evaluates progress towards the accomplishment of those goals (Knight et al., 1992). Balancing the values of university culture, professional school culture, and school culture relies on a reflexivity that might be better informed by attending and adhering to principles of quality improvisation. According to Klein and Dunlap (1993), successful partnerships have four main characteristics: a) mutuality of concern; b) reciprocity of services; c) an ongoingness; and d) a belief in partnership parity. Essentially, partners must be engaged in ongoing “nonhierarchical interplay” (Zeichner, 2010) in which there is stability of resources, commitment, and joint decision-making with regards to goals, implementation and evaluation. Such characteristics are compatible with the five components of improvisation proposed by Magerko et al. (2009) and, arguably, can only be achieved via non-linear organizational dynamics with mutually constructed communication that is emergent, spontaneous, and interactive (Zack, 2000).

Clifford and Miller (2007) described a school-university partnership as “intended to accomplish mutual benefits that the partners, alone, could not accomplish” (p. 11). Indeed, a diverse Pacific university and school system such as that in American Samoa, geographically isolated by closed borders to protect a vulnerable population, benefited from an intentional exchange of online instructional pedagogy that was perceived by participants to be relevant to place and culturally-engaging. “The purpose of a PDS is to facilitate exemplary teacher education by serving as a space in which theory and practice not only meet, but where each way of knowing and understanding the world enriches the other” (Dresden et al., 2016, p. 68). In addition to sharing concrete instructional strategies, participants in this site-based and culturally-responsive Pacific partnership were challenged to adopt a reflective and reflexive inquiry approach to teaching and learning in response to being thrust into a new and challenging online teaching environment.

Methods

Qualitative Team Self-Study of Extreme Phenomena

The National Association of Professional Development School (NAPDS) Essential Five states, “A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets” (National Association of Professional Development Schools [NAPDS], 2021). This study was a collaborative self-study between university and K-12 educators. As a team of university researchers, it was our experience that self-study methodology, within a unique cultural case, emerged like jazz improvisation in that active and continuous “listening and adjusting” guided our actions and thus, the composition of our work. An autoethnographic self-study employs intentional self-reflection to deepen personal perspective on a shared cultural experience (Ellis, 2004). Further, self-study uses personal conflicts and perceptual turning points experienced in the researcher’s life to address issues of larger social consequence (Jones et al., 2016), by “research[ing] themselves in relation to others” (Boylorn & Orbe, 2014, p. 17). In this self-study, an interdisciplinary research team of five UH Department of Curriculum Studies teacher educators engaged in intentional reflection to inform their instructional decisions with inservice graduate teacher candidates concurrently teaching in online K-12 classrooms in American Samoa. In order to better understand the immediate needs and experiences of graduate candidates and their

students, the graduate candidates were asked to respond to feedback surveys during their semester rather than at the end via traditional course evaluations.

Academic Setting

UH Mānoa offers a 30-credit Master of Education Program (PACMED) with Pacific Science, Technology, Engineering, and Mathematics (STEM) Problem-Based Focus. Graduate candidates from across the Hawaiian Islands, American Samoa, and the Republic of Marshall Islands enrolled in the PACMED program as place-based Pacific cohorts of 15-30 members. The research team, composed of PACMED faculty, facilitated research courses, place-based curriculum development courses, and STEM elective courses to address unique Pacific problems such as climate change, sea-level rising, coral reef bleaching, indigenous/invasive plants, food security, diabetes, obesity, and culturally responsive sustainability.

Due to the COVID-19 pandemic, the PACMED program (generally delivered as a hybrid online program with both online and face-to-face instruction where instructors travel to the Pacific region) pivoted to online graduate course delivery only during the Fall 2020 semester. The American Samoa University of Hawaii graduate candidates, who were working as full-time teachers in K-12 classrooms, also pivoted their instruction online. This was an extreme shift for these K-12 teachers and students located on a Pacific Island nation with limited technology access or experience.

Members of the research team began the Fall 2020 research course as is customary with a preset standards-based syllabus of objectives and assignments and an established protocol of delivering university courses to inservice K-12 teachers in American Samoa. However, the university course content shifted to more research-oriented assignments that provided graduate candidates a chance to practice qualitative research skills while deepening their understanding of their own students' perceived needs during the sudden shift to online learning. As graduate candidates gathered and shared data regarding their K-12 students' online learning needs via research assignments, the research team adjusted the graduate course syllabus and pivoted their online pedagogy to model and support these candidates' online teaching needs.

Context

American Samoa graduate candidates began the PACMED Master of Education degree program in the Spring 2020 semester. Given the hybrid online course delivery of the program, they had already gained remote teaching and learning skills using online tools such as Zoom, Google Classroom, Flipgrid, Mural, Polleverywhere, and Kahoot to navigate their graduate university courses prior to the COVID-19 pandemic online instructional shift. These candidates enrolled in the required qualitative research methods course during the Fall 2020 semester. This study took place during that semester as both the graduate candidates' UH graduate courses and their classroom instruction of their K-12 American Samoa Department of Education students moved to complete online instruction.

Participants

The researchers and participants in this self-study (referred to as the research team) were the interdisciplinary team of five UH graduate course instructors in the PACMED program. One member of this PACMED university interdisciplinary team served as the qualitative research methods instructor and the primary autoethnographic participant during the Fall 2020 semester. The other four members served as critical colleagues in self-study to deepen their understanding

of the PACMED graduate candidates' K-12 teaching context. Since self-study evaluates personal experiences within the context of social phenomenon (Ellis, 2004; Boylorn & Orbe, 2014; Jones et al., 2016), the research team critically reflected on their online PACMED course instruction with fifteen American Samoa K-12 graduate candidates concurrently teaching approximately 450 K-12 students in online classrooms in American Samoa.

Data Instruments and Collection

As standard protocol, university educators facilitate course evaluations at the end of each semester as a means of collecting data on PDS candidates' perceptions of the course instruction and content. Unfortunately, this type of summative data collection only informs future instruction and does not support real time adaptation of course instruction or content for currently enrolled course participants. Our research team collected self-study data as a means of formative K-12 graduate candidate assessment *during* the Fall 2020 graduate qualitative research methods course to inform and adapt instruction during the pivot to online instruction in geographically isolated Pacific regions.

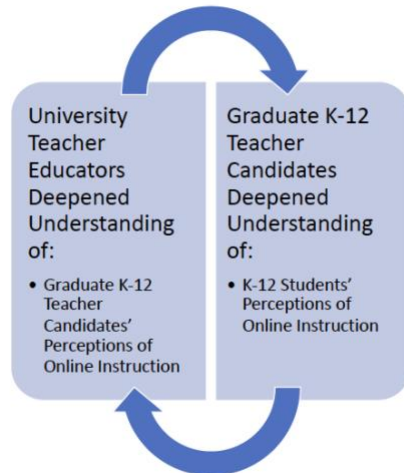
The university team self-study was informed by data collected through a) artifact analysis of a graduate qualitative research course *Data Triangle Assignment* (Appendix A); b) PACMED Google Form Questionnaire (Appendix B); c) PACMED Zoom whole class and breakout room discussions; and, d) analysis of PACMED graduate candidates' perceptions of sudden online instruction. The university course assignments - artifact analysis, survey, discussion and self-reflection - were intended to build bridges of empathy between the university team, the PACMED graduate candidates, and K-12 students who were all challenged by a shift to sudden online instruction. In this PDS partnership, all levels of teaching and learning were being impacted and these qualitative research assignments enabled participants to intentionally deepen understanding of learner's experiences and acknowledge that accommodations to instruction needed to be made at both the K-12 and university levels. For example, The *Data Triangle Assignment* (Appendix A) enabled PACMED graduate candidates to explore the following research question using triangulated data collection methods of survey (Google Form Questionnaire), interview (Zoom) and observation/self-reflection journals with their K-12 students: "What are participants' perspectives on online teaching and learning during the COVID-19 pandemic in your unique Pacific context?"

Qualitative data may be gathered through a variety of methods such as in-depth individual interviewing, focus groups, indigenous story-telling (Mo`olelo), surveys, assessment artifact analysis, autoethnographic journaling, and field observation (Creswell, 2007; Hatch, 2002; Minthorn & Shotton, 2018; Tuhivai-Smith, 2012). PACMED graduate candidates gained introductory education research experience in how to gather and analyze types of qualitative data while exhibiting care for their K-12 students by intentionally asking how they were doing and being responsive to the expressed needs of their students. Reciprocally, the university research team analyzed the PACMED graduate candidates' research assignments to deepen understanding of how the PACMED graduate candidates and their K-12 students were coping with online instruction and were responsive in making changes to the scope and sequence of the university course to meet the expressed needs of their PACMED graduate candidates and their K-12 students.

The NAPDS Essential Three: "A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge" (NAPDS, 2021) supported the need for reflective self-study methodology for responsive innovation. A noteworthy feature of

professional development school partnerships is the potential for reciprocal and respectful inquiry (Figure 1). As an example, our research team modeled a qualitative research method, like Google Forms exit slips to gauge K-12 teacher candidates' perceptions of online instruction, and then K-12 teacher candidates, in turn, used Google Forms exit slips to gauge their K-12 students' perceptions of online instruction.

Figure 1
Tiered Professional Development School Partnership Self-Study



In this team self-study, the research team followed these steps to collect data, analyze data and make course adaptations. The research team utilized the “I do” (teacher model), “We do” (collaborative group practice) and “You do” (application in their K-12 settings) to guide instruction and collect qualitative data. First, graduate candidates were informally surveyed about their perceptions of the relevance of the qualitative research course syllabus and assignments during the shift to online teaching. Based on this initial response, the research team adjusted the qualitative research assignments so that all PACMED graduate candidates were exploring a common research question, instead of individual research questions: “What are participants’ perspectives on online teaching and learning during the COVID-19 pandemic in your unique Pacific context?”. Next, the research team modeled how PACMED graduate candidates might conduct qualitative research with their K-12 students by teaching how to use Google Form surveys, Zoom discussion breakout rooms, and observation/self-reflection to explore the PACMED graduate candidates’ perceptions on online teaching and learning during the COVID-19 pandemic in their unique Pacific contexts. After participating in the university teaching models and collaborative group practice in university classes, PACMED graduate candidates completed the graduate research methods course Data Triangle Assignment (Appendix A) with their K-12 students. In this graduate research assignment, the graduate candidates followed the example of the PACMED Google Form (Appendix B) to create relevant Google Forms for their K-12 students to complete. Next, they facilitated Zoom whole class and breakout room discussions and observations to deepen their understanding of their K-12 students’ perceptions of sudden online instruction. Last, graduate candidates completed reflective

journal entries and shared the emerging themes from the Data Triangle Assignment (Appendix A) about how their K-12 students perceived online instruction with the university educators. In turn and in “real time” (i.e., not the next semester to revise curriculum), the research team improvised and adapted their graduate course curriculum and instruction to be responsive to the emerging instructional needs of the K-12 teacher candidates. Each partner tried new online instructional interventions to keep step with the perceived needs of their participants, and adjusted instruction accordingly. Finally, the research team collaboratively processed the findings from this self-study through meetings and in writing to incorporate recommendations into future online courses. Specifically, data collected during the Fall 2020 university graduate course through online Google Forms, Zoom interviews/discussions, and university assignment artifact analysis were analyzed by the research team for emergent themes to deepen understanding of graduate candidates’ perspectives following the imposition of remote teaching at the university level. Also, K-12 graduate candidates used typological data analysis to identify emergent themes in data collected with their K-12 students through online Google Forms, Zoom interviews/discussions, and assignment artifact analysis. This tiered research cycle (Figure 1) informed instructional decisions at both the university and K-12 levels.

Findings: Emergent Themes

Typological data analysis of graduate candidates’ Google Form responses, Zoom classroom discussions, and free write journal entries revealed emergent themes regarding their perceptions of place-based and culturally responsive instruction modeled in the university school partnership’s research methods course and how this instruction shifted as a result of the transition to online learning during the Fall 2020 semester. Two themes emerged: strengths of the partnership between UH Mānoa and American Samoa revealed by the COVID-19 pandemic and lessons learned from the shift to online learning. Strengths of this long-standing partnership between the university and the professional development school included the ability to model instructional tools for online learning and engage in intentional listening to respond to the needs of educators across institutions. Lessons learned from examining shifts made during the COVID-19 pandemic included a stronger focus on students’ Social Emotional Learning (SEL), coordination of assignments to ease the burden on teacher candidates and their students, and the challenge and possibility of enacting place-based online learning.

Theme 1

K-12 graduate candidates perceived that the university-school partnership enabled UH Mānoa’s teacher educators to provide valuable instructional tools as a model for online instruction.

Given the geographic distribution of the Hawaiian Islands, UH Mānoa faculty have developed and tested versions of hybrid remote instruction over the years as a means of providing access to teachers seeking professional development and degree attainment. UH Mānoa faculty shared their expertise in online learning with graduate candidates who were moving their courses online in American Samoa. These candidates perceived that valuable instructional tools (e.g., Flipgrid) and instructional practices (e.g., Webquests, virtual hauka‘i) were modeled during their UH courses before and during the COVID-19 pandemic. Course evaluations showed 94.4 percent of teacher candidates were highly satisfied and 5.6 percent were satisfied with the UH PACMED program. In particular, the following online instructional tools were listed as beneficial for teachers to experience and then use with their students:

Blackboard, Zoom, Google Classroom, Mural, Polleverywhere, Mentimeter, Kahoot, Socrative, Breakout Room Literature Circle Roles, Jigsaw Learning Centers via Google Slides, Flipgrid, and Webquest for designing place-based curriculum units.

Graduate candidates expressed initial fear in learning new instructional technology tools but ultimately conveyed pride and confidence in successfully using the tools in their classrooms. Moreover, some teacher candidates who graduated from the UH American Samoa cohort were appointed as Technology Team Leaders by the American Samoa Department of Education and shared their skills with colleagues.

Theme 2

Graduate candidates perceived that intentional listening to students through Google Form surveys, Zoom interviews and discussions, and journals or observations was especially valuable during the COVID-19 pandemic.

Graduate candidates expressed a nagging insecurity about their effectiveness during the rapid transition from traditional classroom teaching to remote instruction. Listening to their K-12 students using qualitative methods such as surveys, interviews, focus group discussions and artifact analysis of journals and assignments provided missing pieces of information that enabled them to engage more responsively with their students. As graduate candidates reflected on their classrooms, they gathered data from students through listening, conversations, and observation. The following quotes are representative of theme 2:

- I had changed a lot with my curriculum and I wanted to make sure the work and my instructional choices were still meaningful for students. I thought I was doing a good job and mixing it up, but I wanted to stop making guesses. Students were, for the most part, completing homework and classwork on time. By my observation, there was just such a wide range of experiences that I was struggling with how to move forward with my curriculum planning. I have been second-guessing myself more this year than ever and trying to read up on what other teachers are doing and discussing with my coworkers. I admit that it took me a minute before I was like: ask your students!! And I am so, so glad I did. Students are also feeling the effects as there is a lack of interaction and communication with both teacher and peers as they navigate through lessons on their own.
- Not being there for a student in a physical manner has been difficult in the sense that all of the cues and insights we have learned to read over the years are not apparent and sometimes impossible to detect when students turn off their camera.
- One reason for the *Google Form* survey is that it is really, really hard to judge or observe how students are feeling online. I don't ask them to turn their cameras on out of respect for their privacy and Internet bandwidth. Even if I did ask them to keep the cameras on, reading body language is almost impossible and even at 11 and 12 years of age, students are good at "faking it" with their facial expressions and participation in the chat. I found it really hard to get a sense for how the kids were doing and what their true feelings about my class were using only teacher observation.

Theme 3

Researchers and graduate candidates realized the value of Social Emotional Learning for online instruction.

The move to online instruction required the research team and graduate candidates to focus on improvising how face-to-face, project-based learning could be reimaged in an online environment. Both the research team and the graduate teacher candidates learned to use online tools like Zoom, Google Classroom, Webquest, and Polleverywhere to simulate the engaging relational strategies they were accustomed to using in their classrooms. Graduate candidates quickly recognized the toll not being physically present in the classroom had on the students. They started to shift their focus from worries about the technology itself to more social emotional focused questions and concerns, especially regarding how students were perceiving their classroom communities. The following comments summarize graduate teacher candidates' perceptions:

- Through the *Google Form* survey, students expressed that they missed having the connection with other students, were concerned about friendships and relationships, and were negatively impacted by having to do school from home. Now that we know what students are wanting, we have started to discuss the implementation of online advisory, online clubs and lunch hours where the students get to socialize with their peers.
- I started asking students to share something good that happened to them in the past week.
- The pandemic is impacting students more than we know: Some students are *stressed*; others are having family members contract the disease. There is a lot going on for the students, and as hard as this change has been on teachers, it's been equally or harder for students and things have moved even faster from their point of view. This was really eye opening for me as a teacher to read their responses!
- Students are doing their best, but their best may not be "typical." I am dealing with issues involving my health and mental health that do affect my performance in school. It affects a lot of things that stop me from what I need to do and I do not know how long it is going to affect my performance.

Graduate candidates reported on these types of social emotional findings, which prompted UH educators to also adapt their online instructional strategies. It felt like jazz improvisation where performers took turns in the spotlight while the ensemble actively listened and maintained the rhythm and key of the music. The research team realized the need to model social emotional community-building strategies that K-12 teachers could replicate with their students. Successful strategies included the creation of feeling word clouds, Show and Tell Zoom, video brain breaks, *I Am From* poem creation, collaborative Google Slides, and Zoom breakout room advisory sessions.

Theme 4

Participants perceived that the online workload was excessive and that faculty and graduate candidates needed to integrate and coordinate assignments.

Listening to graduate candidates also revealed that everyone from K-12 students to university faculty felt overwhelmed with the new workload. Many graduate candidates experienced difficulty team teaching online. Moreover, they struggled to manage their own online teaching schedule and, in many cases, their children's different online learning schedules.

In the Google Form responses and journal entries, graduate candidates expressed concerns about the workload and stress:

- It's just the fact that in the end everything adds up. Even just a little amount of work for every class can turn into something bigger, also the fact that we have to be staring at a computer screen for like 12-14 hours a day can really be a downer.
- Teachers need to be reflective and think about what is MOST essential right now and just focus on that. I love the fact that you said you could remind your teacher colleagues that work can add up quickly because it's very true!
- With online classes, students are struggling with certain soft skills, such as learning new technology, time management and organization. With this pandemic happening, the challenging part is adjusting my schedule to assist my daughter with her online learning.
- Empathy. PACMED instructors were so understanding with the complicated lives of teachers in this day and age.

Theme 5

Graduate candidates perceived it was challenging, but not impossible, to simulate place-based and culturally responsive projects online.

Traditionally, PACMED university course instructors would travel to American Samoa to facilitate place-based field trips and establish partnerships with local community organizations such as National Park Samoa, Fish and Wildlife, and the American Samoa Community College. The COVID-19 pandemic lockdown forced creative approaches to place-based education such as virtual field trips and online interviews with community kupuna/elders. An unexpected positive outcome was that family members enthusiastically participated in creating and filming K-12 STEM projects from home. The following comments about place-based education have been paraphrased from graduate candidates' Google Form responses, journal entries and Zoom discussions:

- In our university STEM course, we used “found” objects from our islands, instead of buying kits. This actually made it easier to replicate the STEM activities in our classrooms.
- We created and delivered design-thinking project kits for students to complete at home, which strengthened school to home communication.
- It was hard for students to see a cultural process that is holistic and not as a new series of checkboxes for them to demonstrate mastery. The paradigm shift was extreme. We are a long way from being able to live this system because we have spent so many years training kids to ignore reality and focus on a meaningless school grade game.
- Using cultural values and aspects to connect student's academic content to place improves student achievement. Place-based learning is fun!
- The sustainability focus in the PACMED coursework has been extremely relevant and useful not only as a UH student, but also as a source of enrichment in the professional development school classes I teach.

Recommendations

Although a strong and established partnership between UH-Mānoa and American Samoa enabled and facilitated the shift to online learning, we reflected on lessons learned through the mo'olelo of the educators who experienced it. As school-university partnerships across the United States struggled to respond responsibly to the COVID-19 pandemic education crisis, this

exploration of culturally diverse participant perspectives highlights the importance of diverse education partnerships. The expertise and experience of UH-Mānoa faculty in online teaching proved a beneficial support for teachers in American Samoa, but during a time of increased isolation and strain, the study highlighted a desire for increased attention to the social-emotional needs of educators and students and for creativity in delivering online learning through strategic use of technology.

Intentional Listening and Increased Attention to Social Emotional Learning

Listening was perhaps the most significant behavior that allowed partnership faculty to more holistically meet the needs of graduate candidates. The shutdown caused by the COVID-19 pandemic encouraged us to pause and remember the wisdom in *listening* as a critical part of teaching and learning. A Hawaiian ‘ōlelo no‘eau (poetical saying) states, “Nānā ka maka, ho‘olohe ka pepeiao, pa‘a ka waha.” The saying advises us to look with the eyes, listen with the ears, and close the mouth (Pukui, 1983).

Participants involved in the study honed the ability to listen intently and carefully, whether through the collection of university graduate teacher candidates’ Google Form surveys, Zoom discussions, artifact assignment analysis or the elicitation of student feedback in the partnership’s K-12 classrooms. Data revealed a need for more social emotional learning due to the increased stress on educators and students dealing with the pandemic at work and at home. The focus on intentional listening also encouraged faculty within the partnership to streamline and coordinate facets of the program such as assignments and assessments across institutions to ease the burden on educators in American Samoa. Thus, we recommend intentional listening via dedicated time and space for dialogue, and suggest that the collection of input and feedback via surveys be an ongoing, essential component of partnership work beyond the COVID-19 crisis.

Strategic Use of Technology and ePortfolios

Findings also brought to the surface possibilities and needs inherent in cross-institutional collaboration through the strategic use of technology. Though the implementation of place-based and culturally responsive teaching entirely online was initially daunting, UH faculty and graduate candidates noted how technology facilitated ongoing connection to others and to place. As graduate candidates reflected on their experiences teaching across space and from very separate locations, they shared how online projects enabled interpersonal connection and continued engagement in responsive learning experiences. UH faculty employed place-based approaches such as mo‘olelo (traditional story-telling), field experiences, cultural art projects, and meetings with community kūpuna (elders). These practices required intentional improvisation to work in an online environment. Moreover, technology tools like Flipgrid supported oral storytelling and Webquests supplemented traditional field experiences such as invasive/indigenous hikes, wayfinding and ocean navigation, and sustainable organic farming.

Graduate candidates also shared that ePortfolios effectively facilitated culturally responsive, place-based documentation of academic standards in an online format. Electronic portfolio assessment enabled Pacific candidates to showcase meaningful and relevant place-based instruction. Academic standards provided the outline for the ePortfolio, and candidates researched and cited literature, inserted hyperlinks to culturally responsive and place-based examples from their teaching practice, and reflected on the effects in their unique teaching and learning contexts. Assignments from graduate courses — including ethnomathematics, STEM

curriculum integration, cultural arts, sustainability, place-based science, educational technology and research methods — were also used as portfolio examples to document candidate proficiency in meeting professional teaching standards.

Graduate candidates shared these portfolios with their colleagues during online seminars. The portfolios were conducive to the online format required during the COVID-19 pandemic. More importantly however, the cross-pollination of place-based instruction within these portfolio sharing seminars inspired isolated Pacific educators to try out-of-the-textbook teaching to engage learners. Data from the study indicated that flexibility and creativity in online learning, as evidenced by the ePortfolio, can benefit educational partnerships during times of crisis and beyond.

Conclusion

This study highlighted the ways that the COVID-19 crisis required PDS educators to engage in extreme improvisation, a practice that Zack (2000) noted as perhaps the most demanding along the continuum of composition. The onset of the COVID-19 pandemic and the subsequent isolation and shift to online learning required university teacher educators in Hawai‘i and K-12 graduate candidates in American Samoa to swiftly and intentionally improvise across islands in service of students and schools. Beyond simply shifting classes online, educators drew on an existing professional development school partnership to innovate in real time by learning new technology, implementing pedagogical interventions, reflecting on practice, and making collaborative shifts to sustain responsive learning in classrooms. NAPDS Essential Four: “A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge” (NAPDS, 2021) guided this collaborative self-study. This self-study of an extreme situation offered a unique opportunity to explore this shift and to note areas of strength and opportunities for further growth.

These themes and findings are just the beginning of our mo‘olelo of improvisation and collaboration during the COVID-19 pandemic. As the partnership between UH-Mānoa and American Samoa continues, our aim is to build on these findings to strengthen the support we provide for educators during the pandemic and into the future. In doing so, we hope to use what we have learned to bolster our collaborative efforts of providing meaningful, culturally responsive learning experiences for educators across the Pacific.

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Appendix A

University Qualitative Research Methods Course Data Triangle Assignment

Data Triangle Assignment (30 pts) Candidates will gain experience in how to gather and analyze THREE types of qualitative data. This assignment may be completed in pairs of teachers from the same school or independently. Qualitative data may be gathered through a variety of methods such as in-depth individual interviewing, focus groups, indigenous story-telling (Mo`olelo), surveys, assessment artifact analysis, autoethnographic journaling, and field observation (Creswell, 2007; Hatch, 2002; Minthorn & Shotton, 2018; Tuhiwai-Smith, 2012). There are three (triangulation) parts to this assignment. Each data collection method allows the teacher/researcher to gain participants' perspectives on the research question, "What are participants' perspectives on online teaching and learning during the COVID-19 pandemic?". All participants will remain anonymous and no direct quotes will be used to protect the anonymity of participants.

1) Survey/Formative Assessment (10 points): Each candidate will select 10 or more participants to survey/formatively assess via Google Forms on the relevant place-based topic of online teaching and learning in your unique Pacific context. The primary goal is for candidates to typologically analyze the survey responses to describe 3 - 5 emergent themes to deepen understanding of participants' perspectives on online teaching and learning.

-4 points: Google Form survey response sheet

-6 points: 3-5 Emergent themes with supporting evidence from the Google Form response

2) Interview or Focus Group (10 points): Each candidate will then conduct a semi-formal 30-60 minute interview with two participants OR a focus group of 4-6 or more participants to confirm, clarify and deepen understanding of themes that emerged during the survey. Candidates will paraphrase quotes from the interview or focus group transcripts as evidence to support 3-5 emergent themes.

-2 points: Report dates, times, locations, and number of participants in the interview or focus group

-8 points: 3-5 Emergent themes with supporting evidence from the interviews or focus groups

3) Teacher/Researcher Journal or Field Observation (10 points): Each candidate will freewrite a 1-2 page autoethnographic journal reflection on 1) their experience or observation with online teaching and learning. Candidates will then typologically code their journal/field observation for emergent themes. Paraphrased statements will be added as evidence to support 3-5 emergent themes.

-4 points: Teacher/researcher Free Write Journal/Field Observation

-6 points: 3-5 Emergent themes with supporting evidence from the teacher/researcher journal.

Appendix B

Google Form: Graduate Teacher Candidates' Perspectives of the Online PACMED Program

ONLINE PACMED SURVEY

Participants' Perspectives on the online PACMED Place-based, Culturally Responsive Master of Education Degree Program

* Required

1. I learned STEM academic content from the online PACMED courses. *

Mark only one oval.

- Strongly disagree
 Disagree
 Neutral
 Agree
 Strongly agree

2. The PACMED Cohort Model helped me form professional relationships with my online colleagues. *

Mark only one oval.

- Strongly disagree
 Disagree
 Neutral
 Agree
 Strongly agree

ONLINE PACMED SURVEY

3. The online monthly seminars provided advisors and support for me to complete my PRECIS.

Mark only one oval.

- Strongly disagree
 Disagree
 Neutral
 Agree
 Strongly Agree

4. I learned place-based teaching strategies from the online PACMED courses.

Mark only one oval.

- Strongly disagree
 Disagree
 Neutral
 Agree
 Strongly agree

5. I learned about my teaching context through online courses and/or virtual field trips.

Mark only one oval.

- Strongly disagree
 Disagree
 Neutral
 Agree
 Strongly agree

ONLINE PACMED SURVEY

6. My overall satisfaction with this PACMED Master of Education Degree Program. *

Mark only one oval.

	1	2	3	4	5	
Highly Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Highly Satisfied

7. A positive aspect of the PACMED Program:

8. One way to improve the PACMED Program: *

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Google Forms

Prepared to Take Responsibility: Practitioner Inquiry for Social Justice in a Professional Development School Partnership

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Abstract: Extensive research has shown that teachers entering the workforce are not adequately prepared. Deep inequities related to racial discrimination and oppression in the United States demand action. This article reports on research into perceptions of preparedness from graduates of an inquiry-oriented school-university partnership. The study found that graduates of an inquiry-based professional development school enact an inquiry stance throughout their careers through practices of reflection, their use of inquiry as a teaching tool, and in their ability to take risks. Participants indicated feelings of overall preparedness when entering the field, and a perceived positive impact on their students was also reported. A contemporary vignette is shared in this article to illustrate the study's findings through the story of one graduate who used the inquiry stance developed in her preparation program to teach first and second grade students about social justice through racial identity and experience through inquiry.

KEYWORDS: inquiry stance; practitioner inquiry; professional development school; social justice; teacher preparation

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission. A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Three: Professional Learning and Leading. A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Five: Research and Results. A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets.

AUTHOR NOTE: Authors' names are listed alphabetically to demonstrate equally shared authorship. We have no conflicts of interest to disclose.

Prepared to Take Responsibility: Practitioner Inquiry for Social Justice in a Professional Development School Partnership

In 2020 a global pandemic devastated the world, as nearly two million people died from the novel coronavirus, COVID-19. In the United States the crisis also exacerbated pre-existing problems and unmasked deep inequities related to racial discrimination and oppression. As educators, we found ourselves grief-stricken by the national upheaval, and overwhelmed by our sense of responsibility for children, families, teachers, and schools. As we often do, we turned to one another - professional development school partners - for comfort, inspiration, and resolve. We wrote this article for the *School-University Partnerships* themed issue, "The Response and Responsibility of School-University Partnerships in a Time of Crisis," in part to act as critical friends, supporting and challenging one another through our shared practices of practitioner inquiry, to seek understanding and take responsibility in the recent spotlight on social injustice.

We are teaching and research partners who first met as colleagues in a professional development school (PDS) partnership where we served as a teacher educator, a mentor teacher, and a teacher candidate. Recognizing the extensive research showing that teachers entering the workforce are not adequately prepared (Darling-Hammond & Bransford, 2005; Ducharme & Ducharme, 1999; Gallant & Riley, 2014; Labaree, 2004; Nahal, 2010), we are dedicated to rethinking the ways we prepare new teachers and have been professional learning partners for over five years. Our work together in the PDS has relied on practitioner inquiry in an effort to enculturate novice teachers in problematizing their practice as a mechanism for transforming those practices to meet their students' needs, and inform the field at large (Cochran-Smith & Lytle, 1993; Donnell & Harper, 2005). Understanding that utilizing questioning and reflective practices to adapt and change, even early in the profession, can lead to teacher resilience (Botha & Rens, 2018) and increased teacher efficacy and confidence (Voet & De Wever, 2017; Wolkenhauer & Hooser, 2017), we have always hoped that incorporating practitioner inquiry would better prepare teacher candidates. We have a renewed sense of urgency to take actionable steps for better understanding these practices so that we are doing everything we can to prepare teachers for the responsibility of reimagining teaching and learning for equity.

Although implications for the promise of practitioner inquiry to support novice teachers are prevalent in the literature, the implications of embedding practitioner inquiry into the foundation of teacher preparation programs have not been sufficiently researched. There is not yet clear scholarship on the ways graduates of inquiry-based teacher preparation use inquiry in their careers, and even more specifically, how graduates might use inquiry for social justice. In response, this article reports on research into the perceptions of preparedness of graduates who completed yearlong internships as a part of their undergraduate teacher preparation programs in the elementary PDS where we met. The article concludes by discussing a vignette from a PDS graduate who is using inquiry as a mechanism for social justice in her classroom, particularly during this national time of crisis.

Literature Review

In this article, we argue for an inquiry-oriented model of teacher preparation within school-university partnership, and rely on literature related to practitioner inquiry and teacher preparation. The demanding field that novice teachers enter ardently expects them to continuously, responsively, and flexibly create, adapt, and foster inclusive, socially-just, and democratic classrooms and schools (Shapiro & Stefkovich, 2016).

For decades, teacher preparation programs have been under scrutiny because teachers so often enter the field unprepared. Research clearly indicates that novice teachers consistently struggle with classroom management, job dissatisfaction, stress, and burnout (Berry & Shields, 2017; Gallant & Riley, 2014; Nahal, 2010). Additionally, they have poor self-efficacy, low confidence (Bursal, 2012; Silm, et al., 2017; Truxaw, et al., 2011), and find it challenging to make meaningful connections between the theory they learned as teacher candidates and the practices of teaching in the reality of schools (Nahal, 2010; Rots, et al., 2012). As the pandemic heightens our awareness of racial discrimination and oppression in the United States (U. S.), it becomes even more urgent that teacher preparation programs take responsibility to respond to the need and reevaluate the ways we have traditionally brought up new generations of teachers.

Practitioner Inquiry in Teacher Preparation

When teachers study their own practices, they can better contribute to systemic educational change (Cochran-Smith & Lytle, 1999; Meyers & Rust, 2003; Newman & Mowbray, 2012; Price & Valli, 2005; Zeichner & Noffke, 2001). Doing so within community allows educators to support one another's work in challenging educational structures and policies, while also collaborating to reflect on and act for necessary educational change (Cochran-Smith & Lytle, 1999; Glickman et al., 2013; Hollins, 2011; Wolkenhauer & Hooser, 2021). Cochran-Smith and Lytle (1993; 1999) have long argued that practitioner inquiry—the systematic and intentional study by educators of their own classroom practices—demonstrates promise as a mechanism for helping novice teachers construct knowledge of practice as they interrogate their classrooms and schools as worthy of critique and consideration (Cochran-Smith & Lytle, 1999). With roots in the work of John Dewey (1933; 1938), practitioner inquiry as a form of teacher learning has been a long-standing movement in teacher professional development settings, and for the renewal of teacher preparation programs (Burns et al., 2016; Cochran-Smith, 2015; Corey, 1954; Glickman et al., 2013; Nolan, 2016; Zellermyer & Tabak, 2006). Yet, despite urgent calls for research into the impact of practitioner inquiry communities embedded within teacher preparation programs, little research exists that examined the implications of teachers' participation in inquiry-based teacher preparation.

The term “practitioner inquiry” (also referred to as teacher inquiry, action research, and classroom research) is used purposefully in this article to indicate the process as a worthy endeavor across the career span of the teaching practitioner. In the PDS that is the context of this research, all partners, including teacher candidates, mentor teachers, university-based teacher educators, graduate students, school and college administrators, and K-12 students are invited to engage in inquiry. PDS partners typically follow a cyclical process of:

- Asking questions, or “wonderings,”
- Collecting data, including relevant literature, to gain insights into those wonderings,
- Analyzing that data,
- Taking action to make changes in practice based on new understandings developed during inquiry, and
- Sharing findings with others (Dana & Yendol-Hoppey, 2020).

When inquiry is effectively embedded in teacher preparation programs, teacher candidates learn to take responsibility for their learning and develop knowledge-based habits to support student learning and their own professional growth (Burbank & Kauchak, 2003; Dawson & Dana, 2007; Donnell & Harper, 2005; Kim, 2018; Kinskey, 2018; Wolkenhauer & Hooser, 2017). Successful integration of inquiry, however, poses a variety of challenges. Most notably, a

lack of cohesion across coursework, in conjunction with limited resources, support, and understanding, can undermine the purposes of practitioner inquiry in teacher preparation programs (Cochran-Smith et al., 2009; Darling-Hammond, 2014).

The Development of Inquiry Stance in Teacher Preparation

It is common for inquiry to appear as a series of steps within a time- and-place-bound project (Cochran-Smith & Lytle, 2009; Nolan & Hoover, 2010; Wolkenhauer et al., 2011), where teacher candidates see practitioner inquiry as a graded course assignment, failing to see it as a “critical habit of mind that informs professional work in all its aspects” (Cochran-Smith & Lytle, 2009, p. 121). Rather than introducing inquiry to teacher candidates as a “project,” teacher candidates should learn to teach through an inquiry stance, which Cochran-Smith and Lytle (2009) define as:

A worldview and a habit of mind - a way of knowing and being in the world of educational practice that carries across educational contexts and various points in one’s professional career and that links individuals to larger groups, and social movements intended to challenge the inequities perpetuated by the educational status quo. (p. vii)

A cyclical framework, like the one developed by Dana and Yendol-Hoppey (2020), helps guide and focus practitioners toward evolving goals (Currin, 2019) and can exist as a practice related to inquiry stance, but simply going through the inquiry cycle does not equate to holding an inquiry stance. An inquiry stance exemplifies the complexities of teaching, through practical, authentic application, allowing the practitioner to reflectively look back on their practices and dispositions, while intentionally moving them forward in their careers (Currin, 2019). As such, inquiry demonstrates a positive impact on teachers’ self-efficacy (Bursal, 2012; Silm, et al., 2017), reflective practices (Nguyen, 2009), leadership (Wolkenhauer, et al., 2016), confidence (Truxaw, et al., 2011), and an overall professional stance that “encourages responsiveness to change, knowledge generation, and social action” (Donnell & Harper, 2005).

The Landscape of Inquiry-Oriented Teacher Preparation in PDS Contexts

Notably, the NCATE Blue Ribbon Panel Report (National Council for Accreditation of Teacher Education [NCATE], 2010) highlighted effective preparation of teachers as a “clinically based approach” that gives:

aspiring teachers the opportunity to integrate theory with practice, to develop and test classroom management and pedagogical skills, to hone their use of evidence in making professional decisions about practice, and to understand and integrate the standards of their professional community. (p. 27)

While we see clear implications for both school-university partnerships and practitioner inquiry in that statement, in the ten years since the release of these reports, extant research continues to show teacher preparation programs are struggling to improve the quality of teaching and learning, with ongoing debates centered around program accountability in preparing teachers (American Association of Colleges of Teacher Education [AACTE], 2018; Kissau et al., 2019; Plecki et al., 2012). Additionally, inquiry-based teacher preparation programs that are designed to nurture inquiry stance are rarely cited in the literature, even though deemed a “key” in teacher education (NCATE, 2010).

Teacher preparation programs have typically been structured so that universities teach theory and skills to teacher candidates through coursework and methods classes, while school systems provide the platforms where teacher candidates apply that knowledge in practice (Perry

& Power, 2004). This often leads to a gap in novice teachers' abilities to transfer their knowledge from university coursework to practice in schools (Allsopp et al., 2006; Biggers & Forbes, 2012; Ramnarain & Hlatswayo, 2018; Samuel & Ogunkola, 2013; Spaulding & Wilson, 2002). Understanding that a teacher's perseverance in the field of education can be predicted by the model of teacher preparation program from which they graduated (Latham et al., 2015), professional development school models are reinterpreting these novice-expert conceptions and expecting teacher candidates to engage as inquiring professionals within communities (Cochran-Smith & Lytle, 1993; National Association of Professional Development Schools [NAPDS], 2021; Wolkenhauer & Hooser, 2017; 2021). In learning to become an inquiring professional, "beginning teachers need to have a command of critical ideas and skills, and equally important, the capacity to reflect on, evaluate, and learn from their teaching so that it continually improves" (Darling-Hammond & Bransford, 2005, p. 3). If inquiry is to be a stance throughout a teacher's professional life span, it needs to be an integral part of their professional development beginning intentionally with their preparation (Cochran-Smith & Lytle, 1993).

Context

The elementary professional development school that is the context of this work is located within a longstanding partnership between a research intensive university in the rural Northeast and the eight elementary schools in the university's local school district. The PDS is characterized by a community of district and university educators:

mentor teachers who support and learn alongside teacher candidates in their classrooms; teacher candidates who commit to an intensive teacher preparation program and full year in the classroom; university faculty and graduate students who learn about, and contribute to, a wide range of knowledge and expertise in teacher education, inquiry, and content area teaching and learning; and administrators who offer support from both sides of the partnership. (Coon-Kitt et al., 2019, p. 1)

The partnership's mission to create and maintain a community of teacher candidates, inservice teachers, and teacher educators who strive to engage all partners, including K-12 students, in continuous learning, reflection, and innovation through respectful, collaborative inquiry reaches beyond the formal structures of the schools and university it directly serves, and strives to continue collaborations across partners' careers.

Important, especially for the context of this research, is that this PDS partnership immerses teacher candidates in a culture of inquiry from their first day in the program. The PDS's platform is centered around the fundamental belief that teaching is complex and requires ongoing questioning, data collection and problem-solving in order to understand students and learning. One goal of this specific PDS is to educate teacher candidates about an inquiry-oriented stance toward their practice, by involving all partners in investigating and examining problems through classroom-based research. Partners engage in inquiry through methods courses and graduate classes, undergraduate internship seminars, professional development workshops, and as a natural part of teaching practices in both school and university classrooms. Insights gained from annual inquiry work are shared at a teacher inquiry conference to celebrate findings and strengthen the community of reflective practitioners. This inquiry-oriented teacher preparation program normalizes practitioner inquiry within a community of practice in order to connect theories and practices that respond to the needs of adult learners, including teacher candidates, and elementary school students.

For the purposes of the study reported on in this article, graduates from this PDS's undergraduate teacher preparation program were asked to share their perceptions of preparation related to inquiry. Graduates with between one and "eleven or more" years of teaching experience were surveyed and interviewed alongside close analyses of relevant archival data from the PDS. In the next section, we further describe the methods used in this research.

Methods

This phenomenological study, reported in its entirety elsewhere (Butville, 2020), examined fifteen teachers' perceptions of preparedness in enacting inquiry as a result of participating in a professional development school teacher preparation program grounded in inquiry. Use of a social cognitive theoretical framework and thematic analysis revealed deeper understanding in the areas of practitioner inquiry in teacher preparation programs within school-university partnerships. Because phenomenological research employs tools from both qualitative and quantitative research (Creswell, 2015), data collection included a survey (Appendix A), semi-structured in-depth interviews (Appendix B), document analyses, and member checking.

A phenomenological study was purposefully used to respond to a need for more research regarding inquiry-based preservice teacher preparation and possible lasting impacts on graduates of such programs. The research questions that served as a guide for the study included:

- Do graduates of an inquiry-based teacher preparation program believe they enact inquiry-based dispositions and practices learned from their program in their own classrooms?
- If they believe they enact inquiry-based dispositions and practices, how do graduates of an inquiry-based teacher preparation program enact these dispositions and practices in their own classrooms?

As teacher turnover rates rise, and as responsibilities for equitable teaching practices intensify, we must come to a better understanding of the ways teachers are initially prepared for the profession. In this study, it was imperative that teachers were provided a platform to voice the perceptions of their current practices and dispositions based upon their teacher preparation (Creswell, 2013). Additionally, phenomenology ensured researcher professional experiences with the phenomenon were acknowledged, but also bracketed from the findings. The methodology helped to gain the "universal essence" (Creswell, 2015, p. 76) of participants' perceptions of their dispositions and practices in response to the phenomena "inquiry-based teacher preparation." The study was designed to portray realistic perceptions of teachers' perceived impact of their specific PDS experience on their dispositions and practices. The study was not designed to gain generalizable findings.

Data were collected by emailing surveys to graduates who had been placed in the PDS for the final year, and culminating clinical field experience, of their teacher preparation program. Surveys were sent in three bands related to teaching experience: one to five years, six to ten years, and eleven or more years. Fifteen participants responded to the survey. Based on convenience sampling related to the teachers' availability, follow-up semi-structured interviews were conducted with two teachers in each band of experience, totaling six in-depth interviews (Creswell, 2015; Dukes, 1984). Archival data, consisting of syllabi, PDS program descriptions, program planning calendars, conceptual frameworks, and student resources were included in the analysis. Specifically, archival data was used to help add description to the experiences the participants expressed in their interviews. In order to member-check, participants were emailed transcripts from their interviews to confirm their viewpoints and perceptions were accurately captured, with the opportunity to revise or clarify any statements. In addition to confirming

accuracy of perceptions, member checking allowed for additional questions or expansion of answers. The use of semi-structured interviews, in addition to surveys and member checking, allowed for triangulation and a narrowed “focus on the particular phenomena being studied, which may differ between individuals or settings” (Maxwell, 2013, p. 88).

Findings

Findings indicated that graduates of this inquiry-based PDS enacted an inquiry stance throughout their careers through practices of reflection, utilization of inquiry as a teaching tool, and in their ability to take risks. Participants expressed feelings of overall preparedness when entering the field, and a perceived positive impact on their students was reported as a result of participating in the inquiry-based PDS teacher preparation program. This study found that graduates not only enacted an inquiry stance in their teaching, they were able to discuss and define it, and could describe it being used in practice, something missing from the present body of literature on inquiry in preservice teacher preparation. The majority of participants believed they were “as prepared as possible” when entering the field, and as a result they enacted an inquiry stance towards teaching, which in turn, led to enacting specific practices (e.g., reflecting, teaching through inquiry, taking risks) that have a perceived impact on their students.

While preparedness of participants to enter the field does not directly respond to either research question in this study, the collective voice of participants revealed their feelings of preparedness when entering the teaching field, countering research analyzing the poor preparation most teachers receive (Gallant & Riley, 2014; Green et al.; 2018; McConney et al., 2012). As a result of this preparedness, utilizing inquiry as stance was the second finding emerging from the participants’ perspectives. Participants clearly articulated how they transferred their definitions of inquiry stance as teacher candidates into their practices as inservice teachers. Seeing teaching through this lens allowed participants to overcome barriers and enact certain practices in their teaching, specifically (a) reflection, (b) inquiry as a pedagogical approach, and (c) a willingness to take risks. In order to highlight these findings, in this article we share the contemporary experience of one such graduate from this PDS, who we call “Amber.” The vignette is of particular relevance during this national time of crisis.

Vignette: Amber’s Story

The following vignette is offered in Amber’s own words, transcribed from an interview and edited by Amber through member-checking. The vignette shares the story of how Amber’s inquiry stance supported her resolve to advocate for the needs of the Black and Brown students in her first grade classroom during a time of heightened awareness about racism and racial oppression. The vignette demonstrates the ways she used inquiry to take responsibility for social justice.

Background: My PDS Teacher Preparation Experience

As a preservice teacher in the PDS, I was introduced to inquiry as a tool for professional growth. As part of our yearlong clinical field experience, teacher candidates engaged in practitioner inquiry (Cochran-Smith & Lytle, 1993; 1999). We analyzed trends in our classrooms in order to generate wonderings. To gain insight into our wonderings, we collected and analyzed data from various sources (e.g., field notes, reflective journals, student work, faculty meeting notes, literature). Based on this data, we took action to respond to our wonderings. Finally, we shared our findings in a district and college inquiry conference. During my year in PDS, my

mentor teacher, my professor, and I also worked to adapt practitioner inquiry for the children we taught. We engaged in an, “inquiry into inquiry,” where we inquired into working with students to develop their own inquiries. We guided them through the process as we were going through the process as teachers. Students generated and researched their own wonderings around topics they were passionate about. Wonderings included, “How can I make my own spy gear?” and “How can I make students who are new to our school, and don’t speak English, feel welcomed?” After collecting and analyzing data, students took action to create change. For example, students created their own spy gear using physics, and translated welcome letters for new classmates with the help of university linguistics students.

Through our inquiry into student inquiry during my preparation as a teacher, I learned the power of inviting students to express their own identities through their curiosities. I learned the power of partnering with children in this process, in saying, “I am a learner and you are a learner as well.” Inquiry took away the power structure and let me be a little more transparent about the fact that none of us *really* knows that much until we search to find the answers together; the fact that we need to learn together. I graduated in 2016. I learned that year that inquiry could be a tool for student voice, as well as my own developing teacher voice.

Context

Today I teach in a charter school founded in August 2019. Our school is, in part, a response to what we believe to be education segregation in our large, urban school district and city. As part of our model, we invite a certain number of students to attend from each neighborhood in our city. Our school is centrally located so that we are accessible to all neighborhoods within the city. I started teaching first grade in 2019-2020, and looped with my students so that I now teach second grade to the same group of students, although as we write this article, we are meeting remotely and synchronously due to COVID-19. The community that we so carefully cultivated in person carried over for their second grade year. The relationships we originally built together in the classroom continue to grow in our virtual format.

My Inquiry Response to Racial Discrimination and Oppression

By November 2019, our school, which was *built* on the foundation of equity, was beginning to see large numbers of referrals, particularly for our Black boys. This finding was, of course, quite troubling since we know the unjust impact of punitive discipline on communities of color and on communities with many people living below the poverty line (Schiff, 2013). Naturally, I leaned on my inquiry background and began to generate a wondering. After many iterations, I asked, “How can I make school a safe place for my Black male students?” I was eager to think through the ways I could research this question. Initially, I planned to dig into school data and any available literature I could find regarding referrals, social emotional learning, and Children of Color. However, as I began to search for the research, something continued to nag at me – my plan was entirely devoid of student voice. I realized there was no point in me doing this research alone; my students needed to tell me what school needs to look like for them. So, I brought that question to my first graders. I simply asked, “What do you need in our classroom to feel that you are seen and supported?” Students wrote and drew their responses. Initially, they shared things like, “for my teacher to be happy,” and, “lots of books.” This was telling information, and an important place to start, but I felt that we needed to dig deeper together.

Around this same time, we began a narrative writing unit during Writer's Workshop. I noticed that overwhelmingly students were illustrating themselves as White, despite the fact that the majority of my class identified as Black. That same week, two students had also had a debate about whether or not I am White (I am). When I asked what made them think I was Black, one student simply replied, "You're like us." It was apparent that my students were developing their understanding of race, particularly what it means when we say we are "White" or "Black." I realized then, that in order to name what we needed from a classroom, we first needed to be able to name who we are. Without understanding our own identities, we aren't able to advocate for the things we need. So, we jumped into the work of identifying our race. We asked our families how we identify by asking "Who are we?". That led us to a broader conversation that we really needed to have to gain insight into our inquiry. We needed to talk about who we are as human beings before we could understand what we needed to feel safe and supported in school.

As we continued sharing and celebrating our racial identities, one seven year-old asked a painful question that made sense in our context: "As a Black boy, will I be shot by police?". This question broadened our focus. Students were building an understanding of their identity within the larger context of their community and current events. We added to our inquiry question: "What is the Black Lives Matter movement?", "What is Black joy?", and "How do these concepts relate to students being seen and safe in school?".

In order to begin collecting and analyzing data, we looked at the Civil Rights movement of the 1950s to better understand protests and acts of resistance. Our understanding of the Black Lives Matter movement began with our understanding of bus boycotts and sit-ins, familiarizing us with the complex history that has led to this moment in time. We utilized resources from the Black Lives Matter at Schools website (Black Lives Matter at School, n.d.a.) to watch videos detailing the movement's mission and ultimately create our own "Black Children Matter" posters. Additionally, we did a few close readings of the poem "Hey Black Child" (Perkins, 1974), which became a powerful anthem for our class. In fact, months later when we were on Zoom, in the middle of seeing our city in protests after George Floyd's murder by police, students' first question was if we could read that poem again. It became a source of comfort. Through collecting and analyzing these resources, identity work became woven into my classroom in the ways I had hoped with my original question about making school a place that is safe for all of my students. Students led the way and I followed eagerly.

After our year of energizing, painful work, we had our summer apart. When we came back together in the fall of 2020, I returned to our inquiry by asking them, "What is your identity? How will you see your identity in your classroom? How will you know your teacher sees your identity? What do you want our virtual classroom to be like so that you feel seen and safe?". Students first named aesthetics. One student shared that he enjoys caring for things and requested a classroom plant. Another shared that she wanted more books about hair, like the ones we'd read the year before. One student said, "even in a virtual classroom I need to still see that Black lives matter." Together, we created a Bitmoji classroom with these things on display – the plants, the books, and a Black Lives Matter poster. Students created a list of books we'd read last year with characters they felt they could relate to. Those became many of our guiding texts for Reader's Workshop.

Around this time, we received sad news that deepened our work. One of our class heroes, Ruth Bader Ginsburg, passed away. We loved learning about RBG. *I Dissent* (Levy, 2016) was a classroom favorite read aloud. Students admired how she fought for women's rights. To process this news, we discussed legacies and how we carry on the legacies of our heroes. Her words,

“fight for the things you care about,” had long been a classroom motto of ours. And so, I asked students, “How will you carry on RBG’s legacy? What do you care about that you will fight for?”. We wove the work that we’d already done into these questions. Due to our previous data collection, we now knew what activism and identity work looked like. Students wrote about people experiencing homelessness, poverty, women’s rights, and the Black Lives Matter movement. We then had a class vote and overwhelmingly students named Black Lives Matter as the cause that they wanted to learn more about, given all that we’d already learned about the movement. Currently, we’re learning about the Black Lives Matter movement’s thirteen guiding principles, digging into one at a time (Black Lives Matter at School, n.d.b.).

While this work continues, we also continue the important work of defining our identities. Each day we ground ourselves before read-alouds by reviewing identity maps we each created. We know that texts can be windows and mirrors. When a text is a mirror, we see key aspects of our identities reflected back to us. When a text is a window, we learn something new about another culture or identity (Bishop, 1990). Each day, after our read-aloud, students complete a poll asking whether the text was a window or mirror. When the vote is unanimously “a mirror,” we discuss common experiences and interests. When the vote is unanimously “a window,” we generate questions that we have about the experience and seek to learn more. When the vote is split, we practice expressing curiosity about one another’s experiences through thoughtful questions.

Student Inquiry for Social Justice

We know that too often classroom engagement is confused with compliance. My preparation in inquiry, however, has helped me see that inquiry can lead students to engage with learning by interacting with the world around them. Inquiry has become so ingrained in my classroom that my students see things they are curious or passionate about in the world, and they tell me, “This is what we’d like to learn about next.” I use my teacher toolbox to make it happen because it is one way I can ensure my students feel seen and safe in our classroom. It is powerful to ask students to choose topics and to trust their decisions. Because students choose topics that matter to them (e.g. Black Lives Matter, women’s rights, homelessness), they are able to be engaged in more just ways because they are helping me challenge how learning looks in everyday classrooms by opening new pathways for understanding (Ahmed, 2018). Students can engage deeply with - and beyond - the curriculum when they interact authentically with learning. We use inquiry in my classroom to honor every member of our learning community’s knowledge in purposeful ways.

Originally, I believed that our single inquiry into a safe and supportive classroom would fix our single issue and that we would move on, but the kids had another idea. By giving students time, space, and the inquiry structure to explore personally meaningful topics, they realized the importance of their voices. As a result of their inquiries, students became real-life activists about their passions so that inquiry turned into platforms and calls to action. When I look at my kids and who they will become, I know that this is work they will continue to take on. In the future, you are going to see 30 individual inquiry cycles breaking down barriers and responding to social justice issues.

Right now, this work appears authentically in many ways in our classroom. Students speak up when they notice there aren’t enough “mirror” books in the classroom library (Bishop, 1990) and ask for specific additions based on careful research. During morning meetings, as we continue discussions around our larger community, students ask how they can take action to

support people experiencing homelessness – and then make concrete plans for how to do so in an ongoing “Wish List for Our City”. They carry this work with them when they leave our classroom space. In opening questions about identity and schooling experiences to the class, I sent the message to students that through engaged learning they are activists capable of advocating for themselves and others. I hope that because they are so young, this advocacy is being ingrained in them now. They will continue this work in part because it has been accessible to them in ways that reimagine schools as socially just places where all people are free to learn about things that are personally relevant and meaningful to them and their communities. My students have now seen that when there is a problem, the inquiry cycle can guide them towards advocacy and change.

Discussion

Amber’s vignette illustrates the findings of the full research study (Butville, 2020) shared in this article, and highlights the importance of such findings in light of the deep inequities related to racial discrimination and oppression heightened by the COVID-19 pandemic. Amber articulated an inquiry stance developed in the PDS and defined her stance as a tool for professional reflection, pedagogy, and risk-taking.

As we saw reflected by a majority of participants in the full study, Amber learned to be a teacher through inquiry. In her vignette, she states:

I learned the power of inviting students to express their own identities through their curiosities. I learned the power of partnering with children in this process, in saying, “I am a learner and you are a learner as well.” Inquiry took away the power structure and let me be a little more transparent about the fact that none of us *really* knows that much until we search to find the answers together; the fact that we need to learn together.

The PDS offered Amber two vital experiences with inquiry during her teacher preparation program. First, she was first explicitly taught the cycle of wondering development, data collection and analysis, and sharing (Dana & Yendol-Hoppey, 2020) and then was expected to make inquiry a part of her teaching practice for a full year. Secondly, inquiry was modeled for her as a natural and normal part of teaching by her mentor teacher, university-based teacher educator, who Amber refers to as “my professor”, and other PDS partners, including the children in her classroom. Mentorship around this specific practice, within the community, allowed Amber to engage with inquiry in more meaningful ways at the very beginning of her career than she would have been able to do if inquiry had simply been assigned as a project in the final semester of her senior year.

Amber’s inquiry stance demanded that she contemporarily reflected on her practice, illustrating another common thread found amongst graduates of this inquiry-based program. In her vignette, Amber used reflective practices, grounded in inquiry to continuously, responsively, and flexibly create, adapt, and foster an inclusive, socially just, and democratic classroom (Shapiro & Stefkovich, 2016). At the beginning of her story, Amber is bothered by rising referral rates of Black and Brown boys in her new school. Rather than complain about or ignore what she noticed, she took an inquiry approach and reflected on the ways she could act by asking questions related to her own practice that she understood could influence her colleagues and students. As her story continued, Amber adjusted her inquiry several times in order to reflectively act on what her students, and the world around them, demanded. Reflection in action is a foundation to the inquiry stance Amber described.

Perhaps most clearly connected to the overall research findings is Amber's use of inquiry as pedagogy. Linked directly to her PDS experiences with inquiry, and the work she did with her mentor teacher and university-based teacher educator, we see Amber engaging her young students in inquiries of their own. While she engaged her students in the inquiry cycle by asking questions such as "Who are we?", "What do you care about that you will fight for?", and "How will you know your teacher sees your identity?" and considering multiple data sources (e.g. interviews with families, drawings from the narrative writing unit, conversations in the classroom, news and current events in the community, history, poems, websites, children's literature) to gain insight into pressing issues of learning, she helped guide and focus her seven, eight, and nine year-old students toward their own evolving goals (Currin, 2019). Amber used inquiry as a teaching tool. She states:

I use my teacher toolbox to make it happen because it is one way I can ensure my students feel seen and safe in our classroom. It is powerful to ask students to choose topics and to trust their decisions. Because students choose topics that matter to them (e.g. Black Lives Matter, women's rights, homelessness), they are able to be engaged in more just ways because they are helping me challenge how learning looks in everyday classrooms by opening new pathways for understanding (Ahmed, 2018). Students can engage deeply with - and beyond - the curriculum when they interact authentically with learning. We use inquiry in my classroom to honor every member of our learning community's knowledge in purposeful ways.

In fact, she believes that her first/second graders exemplify inquiry stance:

By giving students time, space, and the inquiry structure to explore personally meaningful topics, they realized the importance of their voices. As a result of their inquiries, students became real-life activists about their passions so that inquiry turned into platforms and calls to action. When I look at my kids and who they will become, I know that this is work they will continue to take on. In the future, you are going to see 30 individual inquiry cycles breaking down barriers and responding to social justice issues.

Finally, Amber took on difficult conversations with bold confidence. She seemed unafraid to take risks when they were needed for her students' well-being, a common thread amongst participants in the study. For instance, as a new teacher in a new school, she took on their unjust referral policy – *with* her first grade students – by inquiring into the ways they could make their school safer for Children of Color. When a seven year-old Black boy asked her, in front of his peers, if he might one day be shot by police, she did not shy away. Rather, she suggested a direction for inquiry. In a note to one of the authors she relayed this inquiry stance:

My classroom had a foundation of Black Joy, so when it came time to discuss Black trauma, it wasn't just me, a white woman, scaring kids about a reality that does not belong to me and sending a message that oppressed groups will exclusively experience oppression... We never want to tell students a single story about anything, but especially not about themselves. (Personal Communication, 2/4/21)

Likewise, when a global pandemic threatened the socially just community she had so carefully cultivated in her in-person classroom, she did not panic. She asked students via Zoom what they could do to keep learning critically together, and then she continued to have those hard conversations knowing full-well that parents and guardians were listening in on their virtual lessons. Amber is brave, and Amber credits her inquiry stance for this ability to take risk with, "Naturally, I leaned on my inquiry background."

Amber's vignette illustrates the findings of this research in light of the most recent national injustice crises. Her story illustrates the ways teachers in the study perceived their inquiry-oriented teacher preparation in the PDS readying them for the teaching profession. Specifically, in Amber's case, she felt prepared to respond and take responsibility during this extreme time of crisis.

Conclusion

Teacher education programs are in the spotlight as colleges of education consider the ways we must prepare the next generation of teachers to take responsibility for advocating for socially just teaching; making schools places where all children see themselves as free, worthy, and valued learners. In this article, we explore the impact of one promising model for teacher preparation: an inquiry-oriented school-university partnership.

Our research provides insight into the ways inquiry-oriented school-university partnerships can act as catalysts for change when integrated in teacher preparation. Especially when set as a professional expectation during preparatory years, practitioner inquiry can serve as a tool for teachers to have the confidence and resolve needed to change and adapt practices throughout their careers, in order to more equitably educate every child. Further research is needed into the impact an explicit connection between inquiry and social justice in teacher preparation might have in helping us prepare teachers to take responsibility for social justice work in classrooms and school.

Again, as the COVID-19 pandemic heightens our awareness of racial discrimination and oppression in the U.S., it is urgent that teacher preparation programs take responsibility in responding to the need and reevaluating the ways we traditionally bring up new generations of teachers. This research indicates that when prepared with an inquiry stance, teachers are better equipped to utilize praxis, inquiry pedagogies, and risk-taking to adapt their professional practice, so that alongside children we might reimagine the world by responding to injustice and taking responsibility for equity.

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Appendix A

Survey Questions

1. How many years ago did you participate in the PDS program?
 - 0 – 5 years
 - 6 – 10 years
 - 11 – 15 years
 - 16 or more years

2. How many years have you been actively teaching in a public school?
 - 0 – 5 years
 - 6 – 10 years
 - 11 – 15 years
 - 16 or more years

3. Based on a Likert scale with options of: Not at all prepared, Slightly Prepared, Somewhat Prepared, Very Prepared, or Extremely Prepared, when you first started teaching, how prepared did you feel you were in:
 - Content knowledge
 - Classroom management
 - Communicating with families
 - Collaborating with school and district staff
 - Building relationships with students
 - Using data to inform your teaching
 - Asking questions about your teaching and pursuing answers

4. The teacher preparation program you participated in states their mission is: "to create and maintain a community of pre-service teachers, in-service teachers, and teacher educators who strive to engage all partners, including K-4 students, in continuous learning, reflection, and innovation through respectful, collaborative inquiry." During your internship year, how did you experience inquiry?
5. During my internship year, I utilized inquiry in my dispositions and practices, with a Likert-scale with the options of: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree.
6. Based on a Likert scale with options of: Not at all prepared, Slightly Prepared, Somewhat Prepared, Very Prepared, or Extremely Prepared, currently how prepared do you feel to teach, in regards to:
 - Content knowledge
 - Classroom management
 - Communicating with families
 - Collaborating with school and district staff
 - Building relationships with students
 - Using data to inform your teaching
 - Asking questions about your teaching and pursuing answers
7. Currently, I utilize inquiry in my dispositions and practices, with a Likert-scale with the options of: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree.

8. If participants responded to Question 7 with “neutral”, “agree”, or “strongly agree,” they will be directed to the next prompt: Please provide examples of how you utilize inquiry in your own classroom, with as much description as possible.

9. The researcher would like to interview teachers to gain more insight into their beliefs about their current practices and dispositions, based upon their participation in an inquiry-based teacher preparation program. Interviews would consist of approximately 6 questions, with the interviewer taking notes and an audio recording of the interview, for approximately 30 minutes. If you consent to participating in an interview, please type your name and email below.

Appendix B

Potential Follow-up Interview Questions

- Was inquiry utilized during your internship year?
 - If yes, how? Specifically, in your mentor's classroom? In your methods classes?
- Do you recall any specific presentations, activities, readings, etc. that stood out to you?
- Recalling your first-year teaching, what about your teacher preparation program was beneficial in preparing you for your first year(s) as a teacher?
- Were there areas in which you felt especially well-prepared? If so, please explain.
- Were there any areas you did not feel adequately prepared? If so, please explain.
- Do you currently utilize inquiry in your teaching?
 - If yes, please describe ways you use inquiry and when it is used. If no, why not?
- Cochran-Smith & Lytle (1993) define practitioner inquiry as the “systematic, intentional study of one’s own professional practice.” Do you utilize inquiry as a stance in your teaching?
 - If yes, how? If no, why not?
- Do you utilize inquiry as a teaching tool with your students? If yes, how? If no, why not?
- How do you believe seeing your teaching through an inquiry lens impacts you as a teacher? How do you believe it impacts your students?
- Reflecting back on your preparedness to enter the teaching field, is there anything you would change about your preparation program? Please explain.

Academy for Future Teachers: Transitioning to Virtual Delivery

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Abstract: The Academy of Future Teachers (AFT), a precollegiate teacher recruitment program, innovatively shifted from in-person to virtual delivery in order to provide equitable STEM career and teaching experiences for minority students during the COVID-19 pandemic. The AFT program is a collaboration between Georgia State University's College of Education & Human Development and public-school STEM faculty. This qualitative case study was informed by semi-structured interviews and virtual observations of faculty and staff during summer 2020 program implementation. Key aspects of the pivot included administrative and program structural changes, reimagining the curriculum, meeting students' social and emotional needs, building community in the virtual environment, and faculty reciprocal professional development.

KEYWORDS: Teacher pipeline, online learning, digital applications, reciprocal professional development, social-emotional health

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission. A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Three: Professional Learning and Leading. A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Eight: Boundary-Spanning Roles. A PDS creates space for, advocates for, and supports college/university and P-12 faculty to operate in well defined, boundary-spanning roles that transcend institutional settings.

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Academy for Future Teachers: Transitioning to Virtual Delivery

The Academy for Future Teachers (AFT) summer program at Georgia State University provides a three-week educational experience on the university campus for high school students who are interested in Science, Technology, Engineering and Mathematics (STEM) fields and teaching. While student participants come from various locations throughout the state, recruitment targets students attending high-need schools in the university's professional development school (PDS) partnership. Program organizers hope the experience will persuade participants to consider careers in teaching math and science.

The need for qualified math and science teachers has long been a focal point of policy initiatives from the 2000 National Commission on Mathematics and Science Report titled, *Teaching for the 21st Century*, to President Obama's investment of \$250 million to recruit 10,000 STEM educators and provide training for 100,000 existing educators. (The White House, 2010). The shortage of math and science teachers was further documented by Ingersoll and May (2012), who found that over 50,000 STEM teachers who had been hired at the beginning of 2004 left their jobs by the end of the year. More recent teacher retention data from 2017-18 revealed that 47 states reported teacher shortages in math and 43 states reported teacher shortages in science (Cross, 2016).

Research shows that there is little difference between the number of racial-ethnic minority students and White students who declare STEM majors (Chen, 2009; Garrison, 2013; Reigle-Crumb et al., 2019). However, racial disparities do exist between students in terms of STEM education persistence (Griffith, 2020; Reigle-Crumb et al., 2019). For example, Reigle-Crumb et al. (2019) concluded that Black and Latinx students were more likely to abandon STEM majors than any other majors. When compared to White students, a Latinx student is 13% more likely to drop their STEM major, while a Black student is 19% more likely to drop their STEM major (Reigle-Crumb et al., 2019). Black and Latinx students show lower persistence rates when completing STEM majors than their White peers (Griffith, 2020; Reigle-Crumb et al., 2019). Lower persistence rates for students from underrepresented groups in STEM degree programs is a factor that necessarily limits the number of members of underrepresented groups who can work and teach in STEM fields.

Once students from underrepresented groups do become teachers, data show that they have higher rates of retention in low-income, high needs, and hard-to-staff school districts (Loeb et al., 2005; National Collaborative on Diversity in the Teaching Force, 2004; Villegas & Lucas, 2005). Villegas and Lucas (2005) emphasized the importance of recruiting ethnic minority students into the teaching profession before they graduate from high school. The present study examined the AFT, a precollegiate teacher recruitment program within a PDS partnership designed to recruit and provide STEM training for high school students from underrepresented groups to improve their skills, self-efficacy, and STEM identity. AFT is a long-standing teacher recruitment effort, founded on the idea that providing students with experiences learning and teaching STEM topics will encourage them to consider pursuing a STEM field and/or teaching after they graduate from high school.

Literature Review

Precollegiate Programs and Experiences

The AFT is an example of a precollegiate teacher recruitment program, one of the five categories of teacher recruitment described by Darling-Hammond and Sykes (1999). Precollegiate teacher recruitment programs are also known as teacher cadet programs or teaching career academies. The Urban Teacher Academy Project, commissioned by the U. S. Department of Education's Office of Vocational and Adult Education, conducted a survey in 1999 which concluded that precollegiate teacher recruitment programs have "collectively served over 175,000 students in 42 states" (Office of Vocational and Adult Education, 2000, p.5). Moreover, the programs often focus on the recruitment of underrepresented students. The Urban Teacher Academy Project conducted a national survey in 1999, which concluded that 67% of the students enrolled were from underrepresented groups (Office of Vocational and Adult Education, 2000).

Precollegiate teacher recruitment programs throughout the nation provide high school students with teaching experiences while helping them explore the teaching profession in an effort to strengthen the teacher career ladder. Precollegiate teacher recruitment programs seek to shift the career decisions of students while they are still in high school before they enter college and declare a major. Research has been conducted on the ability of precollegiate teacher recruitment programs to influence their participants to pursue teaching careers. Long standing pre-collegiate teacher recruitment programs such as The Hubbard School Teacher Academy and the South Carolina Teacher Cadet program have conducted studies that show that students do indeed become teachers as a result of participating in the pre-collegiate teacher recruitment programs. The Hubbard School Teacher Academy conducted research on past participants and concluded that attendees were likely to pursue education as a career (Glennen & Martin, 2000). The Urban Teacher Academy Project found that of the students who attended the academy, 53% were more likely to return and enroll in teacher preparation programs at that same university (Office of Vocational and Adult Education, 2000).

The Teacher Cadet Program in South Carolina operated by the Center for Educator Recruitment, Retention, and Advancement (CERRA) is the oldest precollegiate teacher recruitment program in the country (Center for Educator Recruitment, Retention, and Advancement [CERRA], 2019a). This program started in 1985 and has graduated more than 71,000 high school students in its 34-year history (CERRA, 2019b). Several research studies have been conducted on this long-standing program. A longitudinal study conducted on The Teacher Cadet Program, tracked a cohort of graduates from the 1987-1988 iteration of the program and concluded that 30% of the participants did teach in rural areas and 29% taught in high-needs school districts (Darling-Hammond & Sykes, 1999). The research from these long-standing programs provides evidence that high school participants of precollegiate teacher recruitment programs do enter into teaching professions.

Placed-Based Education and the Power of Place

Many precollegiate teacher recruitment programs take place on a college or university campus and provide pre-college experiences for academically disadvantaged students while closing social capital gaps. Place-based college experiences provide the student and their families with knowledge about academic resources available prior to attending college (Mishra, 2020). Placed-based immersive learning experiences which leverage cultures, landscapes, opportunities, and experiences are an important way to engage precollegiate students who may

be among the first in their families to consider attending college. (Broussard, 2009; Center for Place-Based Learning and Community Engagement, n.d.).

Place-based education promotes the power of place, and though often overlooked, is an influential way to connect students to institutions of higher education (Broussard, 2009). These distinct collegiate spaces provide students with memories that create a bond between them and the university (Broussard, 2009). By participating in place-based educational opportunities such as precollegiate teacher recruitment programs involving college campus experiences, precollegiate, first generation students can develop their own memories of visiting a college campus (Boss, 2019). Leveraging the power of place cultivated through place-based education is an important way for colleges and universities to engage potential students.

Context

The Academy for Future Teachers (AFT)

The AFT is a precollegiate teacher recruitment program situated on the urban campus of Georgia State University's (GSU) College of Education & Human Development in Atlanta. GSU is ranked as the 10th most ethnically diverse national university, according to the *U.S. News & World Reports* (Jones, 2018). With a focus on providing STEM experiences within a PDS context and academic support for minority high school students, AFT seeks to provide innovative, experiential activities and reflective practices. Exposure to STEM experiences may lead to undergraduate work in STEM fields and the possibility of pursuing a STEM teaching career. The participants engage in team building activities, explore personal and professional aspirations, and use STEM to solve real-world problems (Academy for Future Teachers [AFT], 2020).

Over the years, the AFT program has incorporated two of the nine essentials for PDSs. The AFT program has provided a platform for ongoing reciprocal professional development between university and K-12 faculty through the sharing of innovative practices, which is reflected in the PDS Third Essential (National Association of Professional Development Schools [NAPDS], 2021). Through the sharing of innovative practices the pedagogy used in the AFT program was strengthened. Educational pedagogy was strengthened through the use of reflective practice, inclusion of experiential activities, and the innovative use of digital applications.

AFT opened in the summer of 2001, providing participants with a three-week, college campus experience. Prior to COVID-19, the program was taught face-to-face in university classrooms, providing students with experiential, STEM lab opportunities and providing them with the "power of place" (O'Conner & Bennett, 2005, p. 28). The program provided participants with STEM enrichment opportunities on a large, urban college campus during their high school years. This experience was important because many of the AFT participants were the first in their families to consider attending college or university. The AFT on-campus experience sought to empower the students and their families by providing them with first-hand knowledge of university life.

AFT is part of the PDS collaborative partnership between the faculty at GSU's College of Education & Human Development and local public-school districts within metropolitan Atlanta. The initial program was funded in 2001 by the National Science Foundation's Partnership for Reform in Science and Mathematics (PRISM), in partnership with the Atlanta Public School district. Since 2009, the program has been funded by the following U.S. Department of Education's Teacher Quality Partnership grants: Professional Development School Partnerships

Deliver Success (PDS2), Network for Enhancing Teacher Quality (NET-Q), Collaboration and Resources for Encouraging and Supporting Transformation in Education (CREST-Ed), and currently, the Network for Urban and Rural Teachers United for Residency Engagement (NURTURE). The program has also expanded the partnership to include additional metropolitan Atlanta school systems, such as Clayton, Cobb, DeKalb, Douglas, Fulton, and Gwinnett.

Participants for the AFT were recruited from metropolitan Atlanta school systems through materials such as electronic flyers, brochures, and applications. In addition to recruiting from metropolitan Atlanta public schools, recruitment efforts have also included religious-based schools and civic organizations, including the 100 Black Men, Big Brothers & Big Sisters of Atlanta, and the Young Men's Christian Association (YMCA). From 2005 to 2020, 834 participants successfully completed the program, including 220 students who returned during a second year for advanced STEM training. Over the years, the majority of student participants have been female at 76%, with 24% being male. Since its inception, the program has focused on recruiting underrepresented participants and has successfully met this goal at 91%.

Prior Research on the AFT

There have been several research studies conducted in collaboration with the AFT program. One qualitative study interviewed high school participants, teacher residents and instructors about their participation in the program. This study explored identity formation and framed AFT as a community of practice in the teaching profession (Fisher-Ari et al., 2019). Researchers concluded that AFT helped high school participants form their identities as future professional educators.

The research team conducted two quantitative studies that examined students' beliefs and attitudes about STEM and their understanding of math and science (Puvirajah et al., 2012; Verma et al., 2012). One study was grounded in the theoretical framework of identity. Key findings found that student self-efficacy to succeed in mathematics and science significantly increased after participation in the AFT program (Puvirajah et al., 2012; Verma et al., 2012). The other study researched potential college majors and found that 46% of participants intended to pursue a STEM major (Puvirajah et al., 2012).

A mixed methods research study also examined the attitudes of students towards science and math, and followed four cohorts of the AFT program from 2004, 2005, 2006, and 2007 (Ngari et al., 2009). This study focused specifically on underrepresented students. The attitudes of students towards math and science were only conducted for the 2007 cohort. Sixty-one percent of the 2007 cohort rate math as very important in their daily life, while 29% rated science as very important. The study also found that 69% of the participants intended to become teachers with 57% reporting an interest in STEM teaching (Ngari et al., 2008).

Organization of the Program Prior to the Pandemic

During in-person program delivery, the three-week summer program ran from 8:00 a.m. to 1:00 p.m. daily. The day was broken up into three 50-minute periods of instruction. Faculty members were paired in three teams of two. Each team consisted of a university and K-12 faculty member, which further supported the PDS third essential of ongoing reciprocal learning (NAPDS, 2021). Forty-five participants were divided into three cohorts of 15 students each. Two cohorts were first year participants, and one cohort consisted of second year participants. Student cohorts rotated each week to learn different topics (i.e., early childhood math and science; secondary math; and secondary science). Participants constructed lesson plans and learned the

pedagogy needed to implement their lessons. They implemented their lessons with early childhood and middle school students from the Suttles Child Development Center and After-School All-Stars Atlanta programs housed at GSU. Their learning occurred organically while they taught preschool and middle school students in authentic classroom environments.

While curriculum for the in-person program was well-developed and used for multiple years, it was delivered experientially, allowing students to be actively involved in all projects throughout the program. Instructors modeled how to teach lessons using manipulatives that could only be used in an in-person environment. For example, early childhood math and science was taught using physical activity stations and mathematics manipulatives. Secondary science was taught using the dissection labs at GSU, while secondary math was taught using in-person math simulations. Participants were encouraged to reflect on their learnings and share their critical self-reflections during classroom discussions.

Students gained additional STEM exposure through a weekly guest speaker series. Speakers were invited to share their perspectives on working in STEM fields. The weekly speaker series gave participants the opportunity to share and socialize with others outside of their cohort. Additionally, time between classes was provided to allow students to get to know one another and visit with faculty and staff in shared physical spaces at the university. The program included field trips and opportunities for the students to eat in the campus cafeteria, use the library, and tour the athletic center to encourage exploration of an urban university campus while experiencing the power of place.

The use of technology prior to the pandemic was minimal. In fact, the use of on-campus computer labs was limited because of the large number of summer school students at GSU. However, participants did work with technology outside of the computer labs and were able to record videos of themselves teaching lessons and constructed video presentations for use during the closing ceremony. The closing ceremony featured a keynote speaker and participant presentations. Parents and other family members of the participants were invited to attend.

Project NURTURE, another GSU program, is a teacher residency program that uses a PDS framework and is a collaborative partnership between GSU, Douglas County School District, Middle Georgia State University and Fort Valley State University. The NURTURE teacher residents, many of whom were career changers with STEM backgrounds, were also involved in the in-person AFT program. They provided academic support and mentored the participants. Again, reciprocal learning was the focus of the experience. Participants benefited from learning from individuals pursuing teaching as a career while the NURTURE teacher residents benefited from interaction with the participants and the professional development teaching opportunities afforded to them by participating in the AFT program. By participating in AFT, the NURTURE teacher residents were able to gain authentic classroom experience before they began their student teaching in the fall.

Program Transition

In March 2020, GSU and local public schools shut their doors and moved to online instruction in an effort to prevent the spread of COVID-19. The shutdown occurred amid planning and recruitment for the 2020 in-person AFT cohort, which prompted the program director to reconsider the method of program delivery. After much deliberation, a collaborative decision was made to transition the program from in-person to an online delivery platform at a time when many summer programs were closing.

The faculty and administration agreed to work collaboratively to transition the program from an in-person to a virtual format. Four tasks were collaboratively identified as needed for a successful transition. The first task was to onboard the faculty; the second to identify the platform; the third to recruit the participants; and the fourth task was to hire a technology coordinator.

Onboarding the faculty entailed the program director meeting with two long-term university faculty members to discuss the feasibility of transitioning the program. Once the transition was agreed upon by the university and school-based faculty members were contacted. Weekly meetings were scheduled and it was determined that a technology coordinator needed to be hired.

The next step was to determine the platform that would be used for program delivery. Ideally, the platform would be chosen based on the goals and objectives of the program. However, with little time, the options were narrowed to two choices: WebEx, used by GSU, or Google Classroom, primarily used by the school districts. Google Classroom was chosen because the majority of the faculty, staff, and students had prior experience using it during the school year.

The recruitment of student participants required changing the recruitment timeline, relaunching the newly formatted website, adapting student documents, and developing application forms. In-person recruitment had previously begun in February and ended in early May. However, the virtual program recruitment was launched in early April and ended the first week in June. Programmatic changes included a later start time (from 8 a.m. to 9 a.m.) and the number of participants was reduced from 60 to 45. The reduction in participants occurred for two reasons. First, the faculty were concerned about keeping students fully engaged using a virtual format and felt that a smaller number of participants would lead to greater interaction. Secondly, a smaller number of students applied to participate and while no applicants were denied, some chose not to participate.

The last task was to identify and hire a full-time technology coordinator for the program. The Technology Coordinator was hired to work with the College of Education & Human Development's Information Systems and Technology Department to ensure smooth program implementation. Additionally, the Technology Coordinator was responsible for assisting students and faculty with the log-in process to the Google Classroom platform and to coach, troubleshoot, and support the students and faculty technologically.

Program Elements Remaining the Same

One element that remained the same from the in-person to the virtual program was the interactive nature of the program. At the heart of the AFT implementation was the focus on active, student engagement. The basic structure of the 3-week program remained the same in terms of student cohorts, faculty partners, and weekly rotations. Students continued to be divided into three groups: two groups of first-year students and one group of second-year students. Student cohorts rotated each week to learn how to teach early childhood math and science, secondary math, and secondary science respectively. Collaborative teaching pairs of university and K-12 faculty were responsible for planning and implementing educational activities in both the in-person and virtual AFT. Both programs ended with a closing ceremony on the last day. An in-depth discussion of how elements of the implementation changed to meet the needs of participants in the virtual program will be provided in the findings section of this article.

Shared Commitment to Innovative and Reflective Practice

The transition of the AFT program from in-person to virtual delivery strengthened the faculty's shared commitment to innovative and reflective practice. This was shown through the successful adaptation of the AFT curriculum for virtual delivery. Innovative practices included experiential activities and use of multiple digital applications which led directly to reciprocal professional development for both faculty and students as embodied by the fourth PDS Essential (NAPDS, 2021). The AFT faculty remained committed to engaging in reflective conversations to “generate new ideas, expose fundamental assumptions about their practices, work together, and reflect deeply about their own work” (Yendol-Hoppey & Hoppey, 2013, p. 62).

Yendol-Hoppey and Hoppey (2013) identified multiple practices related to innovation and reflective practice. For AFT, those practices included co-teaching, an emphasis on inquiry, and reflection on teaching. By engaging in reflective dialogue among faculty, innovative practices were shared and implemented, which strengthened pedagogical approaches used in the virtual classroom.

Purpose and Methods

The purpose of this qualitative case study was to explore the perceptions of administrators, faculty and staff about how AFT was adapted for virtual delivery during the COVID-19 pandemic. A series of comprehensive, semi-structured interviews and virtual observations were used to gather data in an effort to understand the uniqueness and complexity of the case (Merriam, 2009; Stake, 1995; Yin, 2014). All personnel involved with the vision, direction, and implementation of AFT, including administrators, faculty, and the technology coordinator, were invited to participate in virtual interviews. Responses to the interview questions and classroom observations were analyzed to answer the overarching research question: *How did the Academy for Future Teachers' administrators, faculty and staff make a successful pivot from in-person delivery to online delivery?* Within the context of this research question, we sought to identify their perceptions of the administrative and programmatic changes needed to pivot from in-person delivery to online delivery for a PDS, summer, precollegiate teacher's academy.

Two administrators, five faculty members, and one staff member agreed to participate in the study. The sample included all personnel involved in the implementation of the AFT program, with the exception of one faculty member who chose to not participate. Institutional Review Board (IRB) approval was obtained along with informed consent of the participants. The interviews were completed in the fall of 2020, after the summer program ended. They were conducted via Zoom and lasted for approximately 30 minutes. Interviews were audio recorded and transcribed for a thematic analysis based on Stake's (1995) approach to single case study.

Once data were collected, an in-depth thematic analysis was conducted to gain a detailed explanation and deeper understanding of participants' perceptions. Researchers deconstructed the data, identifying patterns and themes. A direct interpretation of the data was used along with an aggregate analysis of the responses to determine the final thematic analysis (Stake, 1995).

Findings

Four main themes were identified: (1) curriculum program adaptations; (2) social-emotional program adaptations; (3) reciprocal teaching and learning and (4) teacher resident experience.

Curriculum Program Adaptations

Shortening Instructional Time

A significant change made to the program was the shortening or chunking of the information presented during instructional time. Prior to the virtual program, each session was 50 minutes in length. However, as part of the transition to the virtual format, sessions were broken into shorter segments with time for interaction. This was done in an effort to accommodate the participants' attention spans and to avoid burn-out and screen fatigue. One instructor explained that the instruction went from 50 minutes during the in-person format to "30 minutes of interaction with [the participants] on screen, and then a 20 to 30-minute assignment or a 40-minute teamwork project." Chunking the instruction provided more time for cohort interaction and experiential, peer-group work.

Absence of student teaching

Perhaps the most profound change was that the participants were no longer able to experience the authentic teaching of students. Because of the pandemic, the Suttles Child Development Center and After-School All-Stars Atlanta did not meet during the summer of 2020. There were no campus programs available for student teaching experiences. Prior to the pivot to virtual delivery, the student teaching component had generated additional excitement and engagement for participants in the program. AFT participants were able to implement the lesson plans and activities they had worked on collaboratively with their peers during the last day of each week. This was an important activity, one the program director described as "by far, a favorite among participants," that did not make the transition to virtual implementation.

AFT participants were not provided the opportunity to teach students in-person or virtually due to the pandemic. However, first-year participants did create one lesson for each week and topic of the program, while second-year participants created a full unit plan with three lessons and a culminating activity. Participants presented the components of their lesson plans to their cohort instead of actually teaching the lessons. One instructor explained that they modeled a "gradual release method which is the, I do, we do, you do model" and explained that the students were asked to incorporate modeled, guided, and independent practice activities into their lesson plans. In addition, students were challenged to differentiate their lessons to accommodate individual student needs.

Digital Applications

The in-person curriculum was adapted to include digital applications to encourage and support interactive student engagement. The goal was to ensure that engaging and interactive learning activities were built into the virtual program and "that the [students] were actually interacting with the slides, instead of just reading them and watching them," as one instructor stated. For example, digital applications such as Padlet, Nearpod, and Flipgrid created more interactive virtual experiences than static documents or PowerPoint presentations.

Digital applications were woven throughout the virtual program in order to provide interactive and engaging ways to teach early childhood math and science, secondary science, and secondary math. For the early childhood lessons, the instructors challenged the participants to create and demonstrate online lessons and modules to help parents teach their preschoolers at home. The secondary science lessons could no longer include the use of dissection labs, while the secondary math lessons could no longer use in-person math simulations. Instead, digital

applications were used to create interactive virtual simulations and lessons in various ways. Applications were used for interactive games, science experiments, presentations, 3D figures, math simulations, math vocabulary, and rap poem construction, among other activities. The applications also made virtual field trips possible during the pandemic.

The digital applications promoted the students' acquisition of modern technology skills, facilitated the use of collaborative learning environments, and included the use of video. The participants were able to work collaboratively using breakout rooms, social media, or other online platforms. For example, the secondary math team started each day with an engaging math "Problem of the Day." Using the Google documents, the students could see each other's individual approaches to solving the problems "in real time as it was happening," stated one instructor. One problem of the day, the Sierpinski's Triangle, was video recorded into movie animations of the students' drawings. A secondary math instructor recorded verbal instructions using a DocCAM on how to create the Sierpinski's Triangle, which is a series of triangles within a triangle created from mathematical algorithms. The animations of the Sierpinski Triangles were incorporated into student e-portfolios and presented during the program's closing ceremony.

Digital applications that could be used in the classroom were collaboratively identified not only by the faculty and staff, but also by the students. The use of digital applications provided reciprocal professional development for the faculty, staff, and students supporting the PDS notion of reciprocal learning. Reciprocal learning was encouraged and occurred at multiple levels throughout the program. For example, technology savvy students shared their digital application knowledge with their peers, faculty, and staff. Many of the instructors were so impressed with the digital applications shared by the students that they decided to use them in their own classrooms outside of the AFT program. Reciprocal learning around digital application usage provided a robust number of experiential learning options for use in the virtual AFT program. See Table 1 for a list of digital applications used during the program.

Table 1. Digital Applications

Digital App	Program Use
Quizlet	Makes flashcards, quizzes, and study guides
GimKit	Facilitate games similar to Kahoot, but to win money
Padlet	An online discussion and posting board
Light Box	Edits and shares photos in virtual environments
PhET Labs (Science)	Creates science and math simulations online
FlipGrid	Records and share short videos
Nearpod	Makes interactive lessons
Quizizz (Math)	Creates math quizzes, assignments and presentations
DesMos (Math)	An online graphing calculator
Snapchat	A messaging app to share photos and videos

Source: AFT Program Coordinator Laurie Forstner

Science, Technology, Reading, Engineering, Arts and Mathematics (STREAM) Units

Previously, during the face to face program, faculty and participants did not organize early childhood math and science lessons into a particular unit. The virtual AFT program introduced a STREAM unit approach into the early childhood math and science component. This unit approach integrated several facets of STREAM into a single lesson. Incorporating the STREAM unit concept improved both faculty and participant lesson planning while increasing student engagement and curiosity. This approach improved lesson planning by encouraging the faculty and participants to focus their internet research to fit the respective unit. One instructor told us:

By focusing on life cycles and specifically the life cycle of the butterfly, the students were able to find math activities for field trips or science activities or writing activities or music that would complement life cycles.

Additionally, focusing the lessons into a specific unit which could be built upon increased student engagement and piqued their curiosity to learn more. One faculty member stated that “the unit focus was easier for planning purposes, as well as exploratory purposes for the students.” They explained:

It kept the students interested because they were continuing to build on the knowledge . . . that they were learning about the life cycle. The idea is for kids to continue to be curious and learn about other life cycles. We focused on the butterfly, so they were like, What about life cycles of humans and dogs and plants?

Social-Emotional Program Adaptations

The AFT program faculty catered to the social-emotional needs of the participants in the virtual environment. This was done in several ways, including using the Remind 101 application, facilitating virtual icebreakers and check-ins, encouraging creative expression, allowing participants to make the camera on/off choice, and modeling empathy about the pandemic, including enlisting a trauma-informed speaker.

Remind 101 Application

The faculty and staff used the Remind 101 application to keep students on track during the program. The Remind 101 application supported communication, but did not necessarily increase or improve the communication from the in-person program, according to one faculty member. The Remind 101 application provided a virtual means to remind students how much time was left during the frequent breaks and small group sessions. Additionally, a countdown clock was posted on the class page to provide students and observers with the time left before returning to the larger class. The Remind 101 application also facilitated communication among students, faculty, and administrators, providing an outlet for students to express individual concerns confidentially.

Virtual Icebreakers and Check-ins

Faculty and staff sought to establish relationships with the students by facilitating virtual icebreakers and check-ins. Instructors were used to building rapport for each new student cohort as they rotated to a new subject of instruction. During the virtual program, instructors had to identify and develop icebreakers using digital applications if applicable. One instructor stated they used “Padlet or Flipgrid . . . doing things like two truths and a lie about yourself or Tweet, where you [respond to a] Twitter feed.” Faculty could no longer rely on the physical icebreakers previously used.

The use of morning check-ins was introduced during the virtual program as a way to model empathy and concern for others during the pandemic. There were a variety of ways that the students could choose to check-in and share their feelings. For example, “the [students] could interactively, without having to say anything out loud, click and drag or put an emoji based on how they felt or grab a GIF based on how they felt that specific day,” explained one faculty member. Participants could also talk with faculty individually if needed. Because of the additional stress created by the COVID-19 pandemic, faculty allocated time for students to share their concerns and discussed how to meet life challenges.

Encouraging Creative Expression

Although AFT faculty always encouraged students to demonstrate content mastery using a variety of creative outlets, during the virtual program they were more intentional about giving students this opportunity. According to one faculty member, they increased the opportunity for students to use creative outlets to complete assignments in order to reduce the monotony of the online experience and to make it more engaging. Participants could choose different modalities to express themselves and complete assignments based on their moods, interests, and learning styles. Participants frequently responded using drawings, songs and raps, or videos. This allowed the faculty and staff to assess students’ learning in different ways: “[Participant learning was] not assessed in a paper and pencil or multiple-choice format, but through creation of song or rap that

[the participant] would make to demonstrate . . . understanding of the vocabulary words,” stated one faculty member. They also mentioned that by allowing students to complete assignments creatively, “[we] were able to speak to some of the strengths of our students. For some, singing was a time for them to shine . . . for others, art or drawing.”

Participant camera On/off Choice

Faculty and staff determined that it was important not to require or pressure students to share or turn their cameras on. One faculty member stated that the intention was to “respect people’s emotions and the different states that they are in.” Another instructor stressed the importance of allowing the students’ privacy and the ability to decide to turn on their camera or not,

While we wanted students to have their cameras on, we also did not strongly enforce and push students to do so because we also know that sometimes people may not feel comfortable having their home . . . on the screen or knowing where they are. Allowing students to determine whether they would share/turn their camera on was an additional way that faculty and staff showed their concern for social and emotional issues.

Faculty and staff believed that the structure and implementation of the program would encourage authentic and organic student responses with or without a camera feed.

Trauma-informed Speaker

AFT faculty and the technology coordinator were aware of the multitude of challenges and emotional discomfort that the students could be facing during the pandemic. To meet this need, a speaker presented on issues of trauma during the secondary science rotation. One administrator described potential student challenges caused by the pandemic,

When everything was really banned and people could not go outside, to stay in the house weeks upon weeks, nobody knows what is happening at home . . . Parents might have lost their jobs and do not know with certainty where they are going to get food or whether they are going to maintain shelter . . . That is why we included the trauma-informed speaker because we knew that the students were experiencing [trauma] for the most part. Most of the [AFT students] experienced some emotional discomfort, whether you call it trauma or not, in their lives.

Faculty and staff openly acknowledged the pandemic as a universal challenge for AFT participants. In addition to the speaker on trauma, the AFT team continued to offer social-emotional support through check-ins and individual meetings with the AFT participants.

Building Community

To build a sense of community, faculty and staff incorporated an experiential science project that also served as an innovative way to build community among the participants working remotely. Building a sense of community was one of the most important yet difficult things to do when working with students remotely. Faculty and staff intentionally chose to implement a butterfly metamorphosis project that involved nurturing a live caterpillar until it morphed into a butterfly over a three-week period. Each high school student received a butterfly kit several days before the program started, which generated a sense of excitement and anticipation. The butterfly kit experience provided the AFT students with a new and shared experience that fostered ongoing dialogue between the students and faculty. The unit on the lifecycle of the butterfly was

primarily covered during the early childhood week. However, the early childhood faculty prepared instructional videos for all students to use to care for their butterflies regardless of their weekly rotation. One instructor explained the value of a common, shared experience:

Every week we were able to have conversations about what is happening with our butterfly gardens . . . This was really helpful because it was a conversation entry point for students that we have never met. I think that was very important, especially in an online space, to have a shared experience that we could all talk about.

Closing Ceremony

At the end of the three-week program, students shared their collaborative final projects. Each teaching pair gathered examples of the final teaching projects to showcase in short video presentations. The presentation included participant poems, e-portfolios, philosophies of teaching, journal entries and exemplary lesson plans. To summarize the participant experience of the AFT program, a program administrator told us,

[The participants] learned what it's like to be a teacher and how to work effectively with teachers, faculty and staff. If the students go to GSU or another university, [we hope] they'll think about teaching as a career and we will love having an impact on increasing the number of Black and Brown teachers in our schools and around the country.

While the closing did occur during the virtual program, it did not include family members and was for faculty, staff, and students only.

Reciprocal Teaching and Learning

Reciprocal professional development, aligned with the Third PDS Essential, was present in both the in-person and virtual programs (NAPDS, 2021). One teacher described how the partnership between the university and K-12 faculty continued from the in-person program to the virtual one: "It was a . . . fluid mosaic type of passing on knowledge back and forth and so that really did not change just because we were virtual." The collaboration between the AFT faculty also served as a model for the participants. One instructor stated that the great working relationships between the instructors "just flowed on to the students, too." Therefore, the participants were also motivated to engage in collaborative teaching to complete their assignments and projects.

Reciprocal professional development occurred organically through the weekly team meetings between the university and K-12 faculty. The higher education faculty brought expertise in theory, while the K-12 faculty brought practical classroom management. During the team meetings, many of the teachers were introduced to digital applications that they now use every day. At the end of the program, faculty and staff left with a wealth of resources and ideas to implement in the classes they teach at both the university and K-12 levels. One university faculty said, "It was very helpful to learn and try out some things, not only during AFT, but also things that I tried and played around with in my own teaching, whether it is my methods courses or my content courses."

Teacher Resident Experience

The involvement of the NURTURE teacher residents in the virtual program was more limited than in previous years because of the COVID-19 pandemic. NURTURE residents were,

however, able to participate in a two-part experience, which first included attending the AFT program to obtain first-hand knowledge of virtual learning. During the virtual program, residents observed AFT faculty as they taught lessons and provided expert models of remote teaching. Residents were encouraged to think about the lessons from a child's perspective and to learn first-hand from the AFT instructors as they modeled educational pedagogy. The second part of their experience included faculty-led discussions about their observations of the program. These discussions provided additional insights around effective virtual teaching methods. Participating in the AFT program provided the teacher residents with classroom experience prior to beginning their own residency in the fall. One AFT administrator stated, "The AFT program gave Project NURTURE residents an opportunity to get to know what teaching is before they start delving into their own classroom in the fall . . . This sets them apart and ahead."

Discussion

The transition from in-person to on-line delivery of the AFT program provided many challenges and opportunities for the implementation team. Two unique challenges cited by the team included building authentic relationships with the participants and planning lessons for a virtual environment.

Challenges

Relationship Building

The inability to converse with the students in a shared space negatively affected relationship building and decreased faculty satisfaction in getting to know the participants personally and academically. One instructor stated, "When it is a virtual environment and we only see the students for a week, by the time you really know them, they are moving [on to the next rotation]." Another instructor said, "We did not have time to build the relationships, and we do not get to see them again in all of the other shared spaces that we typically would have [during an in-person program]." The value of faculty, staff, and student interactions in shared spaces, often taken for granted during in-person programs, was particularly noticeable within the restrictions of the virtual environment.

An additional challenge for faculty in building relationships was allowing the students to decide to have their cameras on or off. Allowing participants the choice to have their cameras off was intentional to be empathetic to their personal situations. For several faculty, it negatively affected their ability to build relationships with the participants. Although the faculty learned the participants' voices, some were concerned that they would not be able to recognize the participants after the program ended because they had never seen or only briefly seen the participants. One faculty member explained, "this year, if I saw the majority of the [participants], . . . I would not recognize them." Another stated that allowing the participants to decide to keep their cameras off "limits you in the full development of the student-teacher relationship where you really get to understand and know the personality of the students."

Lesson Planning

Several faculty members mentioned the challenge of planning lessons when transitioning from an in-person program to a virtual one. When teaching in-person, additional activities can be used to further support or supplement classroom activities should students finish early. However, when teaching virtually, detailed, collaborative lesson plans need to be intentionally developed

prior to implementation. With few teachers having virtual collaborative teaching experience, this proved to be a challenge. One faculty member stated, “Everything has to be planned in advance and it has to have all of the elements for what if this doesn’t work then what do we do?” Another noted that, “When [the program is] virtual, every aspect has to be planned just in case something does not go right or something goes faster than it should have, or something took longer than it should have.” When teaching virtually, it is important to have the videos, PowerPoints and activities clearly identified and ready for use. One instructor stated, “So, [teaching virtually] can’t be a thing that you do on the fly, like you can when you’re in person.” Faculty found that the pacing for delivery of virtual instruction was different and took some time to understand. Stated another instructor, “The greatest challenge was coming up with the right activities [for each lesson] and hashing it out between [the faculty] so that the activities would be beneficial to the students.” AFT faculty worked collaboratively to ensure that lesson plans included intentional activities that fit into the predetermined time frames, and were designed to engage and support participants interested in becoming STEM teachers.

Successes

Although there were significant challenges, there were also successes with transitioning the program from an in-person to virtual delivery. Identified successes included technology, relationship building, culturally responsive student learning and collaborative communication. The faculty’s ability to shift to online instruction in a short period of time was a testament to their commitment to AFT and the PDS partnership with local K-12 schools.

Technology

While many of the faculty had not previously used technology as a pedagogical tool in their in-person classrooms, it was necessary to use technology when transitioning to virtual delivery. Faculty successfully transitioned the in-person curriculum to virtual over a two-month period maintaining an emphasis on experiential delivery. Providing these types of activities in a virtual environment took additional time and the use of many different types of digital applications. Hiring a Technology Coordinator further supported the faculty in their transition to virtual delivery. The Technology Coordinator worked collaboratively between the faculty and the GSU Instructional Technology Department to ensure smooth program implementation and was responsible for obtaining access for both faculty and students to the Google Classroom platform. The Technology Coordinator stated, “I was able to help the [faculty], because the [faculty] were a little bit more hesitant about going [virtual]. But once we got up and running and [the faculty] saw how smoothly things could go, they were very comfortable with it.” The Technology Coordinator also was available full time to coach, troubleshoot and support students and faculty when needed. “Just being available [to help]. I was in attendance every day for the whole time that the class was ongoing and whoever had issues contacted me and I helped resolve any [technical] problem for them,” stated the Technology Coordinator. The addition of the Technology Coordinator further supported the smooth implementation of the virtual program.

Relationship Building

Building relationships with students was of primary importance when transitioning to virtual delivery. Ice breaker activities were used to help build relationships with the students. In addition, the faculty built relationships by asking for student feedback in the chat and having virtual conversations with students whenever possible. One faculty member shared:

One of my favorite parts of the program is seeing [the students] grow just within a week and then keeping tabs on them as they float to other classes for the next two weeks. But the awesome thing about it was that you still got that relationship building. You still were able to connect, even though it was virtual, it was still good.

While building relationships in a virtual environment can be challenging, one faculty member described their success, “I feel like that was a big accomplishment just to be able to make it seem as normal as it would be if we were face-to-face.” Providing support and being authentic with the students made a difference in being able to connect with the students virtually. Stated one faculty member, “I feel like just being yourself [is important]. If you are passionate about what you’re doing, it allows you to be more transparent and also just genuine and authentic.” Genuine connections with students can be made when respect is mutual. Once students begin to trust their teachers, “[Students] open up a little more and it was pretty easy to build the relationships,” stated one instructor.

Culturally-responsive Student Teaching and Learning

The faculty engaged the AFT participants in activities to strengthen their sense of STEM identity while promoting equity, inclusivity and supporting critical thinking skill development. This was successfully accomplished through activities that allowed the participants to draw on previous lived experiences and knowledge. For example, one instructor described how she applied math to a culturally relevant aspect of everyday life:

Thinking about mathematics and how it is part of our everyday lives and how it is connected to who we are . . . I was showing different images . . . different braid patterns. . . It was just nice that they were starting to have a broader view of what mathematics can be.

The faculty used an assets-based mindset when developing a curriculum that was rigorous and student-centered. Including the butterfly kits for science not only provided a springboard for scientific discovery, but also encouraged students to think critically. It provided the participants with an experience that could be explored and discussed from their own perspective as a potential scientist.

Collaborative Communications

Collaborative communications were the key to a successful program for both the faculty and the participants. The faculty worked together in teams to implement the program. Each university faculty member was partnered with a K-12 teacher. The collaborative partnerships gave each of the faculty members an opportunity to gain experience and expertise that was shared from the two different teaching contexts. One faculty member stated:

The weekly team meetings helped a lot because it helped keep everybody on track. It helped everybody communicate where they were when it comes to their own individual collaborations. It allowed us to tag team as far as how we were going to collaborate and how we were going to instruct the students in their lessons and how we were going to communicate what we were actually doing in the group.

An instructor said, “We worked together last year so we already had a great relationship, a great working relationship. We bounced [back and forth] and we just worked well with each other.” Having a previous relationship with a faculty partner made the transition to virtual delivery

easier. Together the faculty partners shared teaching strategies and digital applications that worked for them in their own unique space.

Collaborative communications were extended to the participants as well. Faculty worked hard to build relationships with students, meeting them where they were and moving them forward in their interest in teaching. Stated one faculty member, “I kept up with [the previous year’s participants] and they kept up with me throughout the year and now [some of the participants] are back. Hey, great seeing you again. You joke, you laugh with them.” One administrator said:

I think [the program’s success] speaks to the students that were involved and how committed they were and attentive and willing to participate, as well as the instructors who were able to shift and to make a change almost seamlessly and still offer the same level of excitement and energy and dedication to it.

Recommendations

In their interviews, faculty and staff had a strong recommendation regarding the technology used in the program. Keeping in mind that the faculty and staff were interviewed well into the next school year and that they were more experienced with the different platforms, they suggested that consideration should be given to changing platforms or using additional platforms when appropriate and available. Many faculty recommended using the Zoom platform to facilitate the virtual program because of the ease of transitioning in and out of breakout rooms. Additionally, the camera choice issue could be simplified through the use of a platform that allows for the personal choice of backgrounds. The use of virtual backgrounds could allow for student privacy while having their cameras on to facilitate relationship building. At the time of the program implementation, background choices were not available.

Choosing to use platforms that are easy to use has potential implications for future implementations of the AFT program. AFT program administrators may want to consider offering a blended program as opposed to an on-campus only program. This would allow students who live in the rural areas of Georgia to participate in the program. Offering high quality STEM experiences to both urban and rural students simultaneously would provide more diverse and inclusive learning experiences for all students.

The second recommendation is to schedule socialization time so that faculty and participants can interact across all three cohorts. Scheduling informal breaks where multiple cohorts of participants, faculty, and staff could meet and get to know one another would further facilitate relationship-building. Faculty spoke of missing the contact with participants over the three-week period of time and requested that for future programs, socialization time be built into the schedule. Having time to socialize was a part of the in-person program through scheduled time between classes and on-campus lunches. The intentional socialization experience also provided the faculty with additional time to interact with students and get to know them. In the future, AFT program administrators should consider using the in-person socialization schedule as a model for the virtual program. Participants enjoy interacting with one another on a personal level. Providing a scheduled time and space for informal breaks during the virtual program would further support faculty and participant interaction. Scheduling intentional socialization time is an activity that is important for both in-person and virtual program delivery.

The third recommendation is for university and K-12 faculty to continue to build upon their knowledge of the use of digital applications for learning purposes. The pandemic has forced program providers to reconsider delivery methods. It is safe to assume that because of the

positive experiences both faculty and participants have had using digital applications during virtual delivery, that there will be an increased usage of digital applications during in-person delivery. Both faculty and participants shared positive outcomes from the innovative and interactive learning experiences provided when using digital applications. The use of digital applications is an innovation brought on by the pandemic that is relevant for use in both in-person and virtual program delivery.

The final recommendation is to continue providing universal learning experiences across cohorts. The shared experiences help to improve critical thinking skills while providing an opportunity to build relationships. The butterfly kits that the students received prior to attending the program successfully provided a unique shared experience. The shared experiences helped the participants to build community. The butterfly kit was used in the early childhood component of the program. Faculty in high school math and science also would like to provide a shared experience in some way for next year's cohorts.

Conclusion

Our case study highlights some of the characteristics of online programming for secondary students that may be helpful in similar programs throughout the nation, as we are all dealing with the COVID-19 pandemic. Within a PDS framework, AFT faculty, staff and administrators transitioned their long-running summer program to a virtual environment and provided STEM-based activities for secondary students from the metropolitan Atlanta area. Key issues identified by program faculty, staff, and administrators were restructuring the program, adapting the curriculum with the use of digital applications, attending to participants' social-emotional needs, building a sense of community, providing professional development, and cultivating collaborative teaching and learning. Lessons learned included identifying the most appropriate platform for virtual program delivery, the importance of scheduling socialization experiences within the program, the use of innovative digital applications to support interactive learning and providing universal learning experiences across cohorts. The lessons learned can be used to enhance learning for in-person, virtual or blended methods of program delivery of future AFT programs.

The COVID-19 pandemic brought about many changes in program delivery for students in the United States. Because the AFT program was able to transition to on-line program delivery in a short time, students in the Atlanta area were able to attend virtually. Many of the innovations required to make the virtual AFT program successful can be used for in-person and blended delivery as well. The innovations may also be used to expand the program to include both urban and rural participants providing for a more diverse and rich learning experience.

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Appendix
Interview Questions: Administrators and Faculty

1. How long have you been working with the AFT program?
2. Tell me about your role in the AFT program prior to COVID-19?
3. How was the AFT program originally delivered?
4. How was the AFT program changed during the transition to online delivery?
5. How did your role in AFT change as a result of the shift to virtual learning?
6. How did you perceive the shift from offering an in-person Academy to an online one?
7. How was the curriculum altered to fit into an online environment?
8. Reciprocal professional development was an important part of the team meetings. How was reciprocal professional development cultivated?
9. How did the program meet the social and emotional needs of the students in the online environment?
10. What was your greatest challenge during the virtual AFT program?
11. What was your greatest accomplishment during the virtual AFT program?
12. What are your recommendations for improvement of the online format for next year's AFT?
13. Is there anything else you would like to share about the AFT program's shift from in-person to online?

Interview Questions: Technology Coordinator

1. Describe your role as Tech Coordinator for the AFT program?
2. How did you support the professional development of teachers for online usage?
3. How did you support the students for online usage?
4. What were your greatest challenges during the virtual AFT program?

5. What were your greatest accomplishments during the virtual AFT program?
6. What ways did you use digital applications to enhance the online experience?
7. How was the sense of community addressed for the students in the online environment?
8. What changes would you recommend to improve the online format for next year's AFT?
9. Is there anything else you would like to share about the AFT program's shift from in-person to online?

“Figure it Out:” Stories About a PDS Partnership that Put the Needs of Students First

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Abstract: During the Spring of 2020, teachers and professors across the United States were required to transform their in-person instruction to fully remote instruction. In this paper, we used a Narrative Inquiry (Clandinin, 2013) methodology to help us understand how and why one middle school math teacher taught during the initial months of the pandemic. We examined how the intersecting “Professional Knowledge Landscapes” (Clandinin & Connelly, 1995) of the authors provided teacher candidates the opportunity to practice teaching math to real elementary school children. An analysis of the author’s “told stories” revealed their “Intellectual Character” (Ritchhardt, 2001) and how the dispositions associated with this construct influenced their decisions to always keep the needs of their students and parents in the foreground.

KEYWORDS: Narrative inquiry, COVID-19, intellectual character, math methods, school-university partnerships, high-leverage practices, practice-based teacher education

NAPDS NINE ESSENTIALS ADDRESSED:

Essential Two: Clinical Preparation. A PDS embraces the preparation of educators through clinical practice.

Essential Four: Reflection and Innovation. A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

Essential Five: Research and Results. A PDS is a community that engages in collaborative research and participates in the public sharing of results in a variety of outlets.

“Figure it Out:” Stories About a PDS Partnership that Put the Needs of Students First

Chris: Who told you how to organize your beginning remote instruction?

Liz: I told myself how to do that. I was just told that we needed to continue rolling through the content as usual. We couldn't skip lessons or ...

Chris: ... So you really didn't have someone tell you? It was ...

Liz: ... Figure it out.

This interview snippet took place between the lead author, Chris, a math education professor, and Liz, the second author, a middle school math teacher and former student. Liz's ability to “figure it out” meant that she taught herself how to teach math remotely at the beginning of the COVID-19 pandemic (Spring 2020). Her instructional approach was adopted by my math methods teacher candidates in the Fall of 2020 and used with real elementary school students who attend my rural Professional Development School (PDS). Jill, the third author and principal of the school, welcomed my teacher candidates after I told her we could teach K -5 students using Google Classroom (GC), Google Meet (GM), Loom and Jamboard; digital tools available to her teachers and used by Liz. This paper describes how Liz's “lived in-classroom stories of practice” and Jill's “lived out-of-classroom stories” (Clandinin & Connelly, 1996) contributed to clinically rich teaching opportunities for my math education teacher candidates during the shift to virtual teaching and learning.

Before I describe their “lived stories,” I would like to present a remote teaching and learning story told by MJ (pseudonym), one of my teacher candidates, and Echo (pseudonym), a fifth-grade student, to my teacher candidates and me during our last post-teaching discussion at the end of the Fall semester. Due to the pandemic in the United States, and at the request of my PDS' teaching faculty, MJ and his classmates were allowed to come to Jill's school to practice teaching math, but with one caveat, they could only teach remotely. Because of my relationship with Liz, and my partnership with Jill, I was able to provide my teacher candidates with math teaching experiences for the entire Fall semester. Liz provided me with a system to teach math remotely and Jill provided access to the students.

Multiple, low-stakes teaching experiences (Lotter et al., 2009), completed throughout the semester, gave us the *reflection data* we needed to discuss six high-leverage practices (Grossman et al., 2009) that the teacher candidates implemented while teaching real children (see Appendix A). Grossman et al. (2009) described HLPs as teaching practices that: (a.) occur with high frequency; (b) can be enacted in classrooms across different curricula and instructional approaches; (c) novice teachers can master and help them learn about their students and (d) have the potential to improve student achievement (p. 277). McLeskey et al. (2019) defined HLPs as “practices that are essential to effective teaching and fundamental to supporting student learning” (p. 332). Recently, my institution adopted an HLP framework for our dual-certification undergraduate program in general education and exceptional education (see Maheady et al., 2019); MJ and I are involved in this program.

In the teaching story that follows, MJ explained how Echo learned to divide fractions using a colored Google Slide framework (see Appendix B). MJ and Echo's shared experience could not have taken place without Liz and Jill.

A Remote Teaching Story: Learning How to Divide Fractions ... Remotely

Today I (MJ) worked with Echo and we did sixth grade math; we divided fractions. We started off with the green slide. I had her start to do it and then she said that she doesn't understand how to do this. I reinforced her by just saying that it's okay, this is sixth grade material and that it's perfectly fine to not understand this. We went through the chart and I asked her where she was; she said she was overwhelmed and doesn't know where to start. So from there we went to the yellow side, where I explained how I would solve the problem. I used Jamboard to show three different ways to solve it; one way was by using pictures; one was by simplifying and then the last one was simplifying in true simplest form. From there, we worked together on the red and black slides, and I asked her just what we should do, what information we should take from the problem. We did the 'What do I know? and What do I want to know?' together and I asked how she would set up the problem. We'd go step-by-step, back and forth. For the last slide, which was white, I had her go through it by herself and then explain to me how she solved it. She said she looked back at the yellow slide and what we did on the red and black slides. We reviewed her work and she said she felt a lot more comfortable doing this type of problem.

As stated earlier, MJ and Echo's experience, and many similar to this, could not have occurred without my relationships with Liz and Jill. MJ was able to teach 6th grade math content to a 5th grader in a remote manner. He learned how to teach math from me; he learned how to deliver this instruction indirectly from Liz and he was able to practice what he learned because of Jill. So, how and why did this happen?

Methodology

Data Collection and Analysis

The stories chosen for this paper were selected from interviews and artifacts (emails, texts, GC Stream postings and instructional videos). Narrative Inquiry (Clandinin, 2013) was used to study our storied experiences because we valued the experiential knowledge obtained by Liz and Jill during the pandemic. Narrative inquiries are relational practices conducted by researchers that begin and end in the storied lives of people. In this article we highlight Liz, Jill, and my stories along with all those with whom we interacted. Our stories composed our "*professional knowledge landscapes*" (Clandinin & Connelly, 1996), which, according to Clandinin and Connelly, is a metaphor composed of teacher stories, stories of teachers, school stories and stories of school. Understanding our stories provided us with a view of the teaching and learning situation during the pandemic through the "eyes" of a teacher, a principal and a math education professor. They helped us answer two research questions:

1. How did our "in-classroom" and "out-of-classroom" lives, during the pandemic, provide my teacher candidates with clinically rich math teaching experiences that afforded them opportunities to engage in high-leverage practices?

2. What directed and motivated the way we thought about teaching and learning during the pandemic?

Ron Ritchhart's construct of *Intellectual Character* was used to help us understand the thinking that directed and motivated the intellectual behaviors revealed in our stories. He described *Intellectual Character* as a set of dispositions, demonstrated consistently by a person over time, linked to good and productive thinking that shape and motivate intellectual behaviors (Ritchhart, 2001, Beyond Abilities section, para. 1). He believes character is built on beliefs, attitudes, temperaments, and tendencies. For this paper, we used five dispositions Ritchhart associated with *Intellectual Character*: the disposition to be: open-minded, curious, metacognitive, truth seeking & understanding, and strategic (2001, An Integrated Perspective, para. 1).

It is our belief that the authors' *Intellectual Character* enabled MJ and his classmates opportunities to teach math to real children during the pandemic and implement high-leverage practices.

Our Shared Professional Knowledge Landscapes, Part I

The Disposition to be Metacognitive

Individuals who demonstrate the disposition to be metacognitive are able to monitor, regulate and evaluate their thinking (Ritchhart, 2001). In the following story, I describe how my teacher candidates practiced teaching math before the pandemic and how the disposition to be metacognitive directed my thinking as I encountered the uncertainty of the Fall semester.

I teach undergraduate teacher candidates how to teach mathematics to K - 5 students. We work in a rural PDS elementary school 2 times per week for 13 weeks for 4 hours each day. Small group instruction is a valued pedagogy in this school, so my teacher candidates teach math in this manner. These low-stakes teaching experiences, coupled with guided reflections (Lotter et al., 2009), increase their *Pedagogical Content Knowledge* (Shulman, 1987) because the guided reflections are structured around *high-leverage Practices (HLPs)*. This cycle of teaching and reflecting upon one's teaching created a "thinking-rich learning routine" (Ritchhart, 2001) that addressed the HLP: *Self-analyze teaching for the purpose of improving instruction and learning* (Maheady et al., 2019, p. 360); I require these guided reflections to "actively, encourage, involve and support students' thinking" (Ritchhart, 2001, Thinking Routines section, para. 3) about teaching elementary school mathematics.

In the following guided reflection example written by Azure (pseudonym), one of my former teacher candidates, she told a story about teaching math to a small group of second graders (during a semester before the COVID-19 pandemic),

I worked with 5 students and created an engaging and positive learning environment (HLP #16) that improved their learning outcomes. While doing this, one student in my group was having a bad day and it was clear to me that I had to make him feel comfortable. Although he is a very smart student, he can become easily overwhelmed. When I gave the group independent work, I could tell he was becoming stressed, so I had him take a break and talk to me. We talked about Halloween, what he did over the weekend, and how excited he was to go to gym. The conversation was no longer than two minutes, but it gave him enough time to destress.

According to McLeskey et al. (2019), the amount of time my teacher candidates spend in real elementary classrooms during their methods course is not typical in teacher education programs. The authors claim that most teacher candidates spend most of their time *talking* about teaching instead of *teaching* real children. My teacher candidates, however, have always spent the majority of their time teaching real children math and reflecting upon their experiences. Prior to the pandemic, performing all the HLPs was challenging, but doable. But with strict health and safety protocols in place, I was not sure how my Fall 2020 teacher candidates would carry out these HLPs and learn how to teach math like Azure.

As I evaluated and monitored my thoughts about the upcoming challenges of the Fall semester, in the late Spring of 2020, I directed my thinking toward answering this question: How will my teacher candidates practice teaching math? It was at this time that Jill's *professional knowledge landscape* intersected with mine.

The Disposition to be Strategic

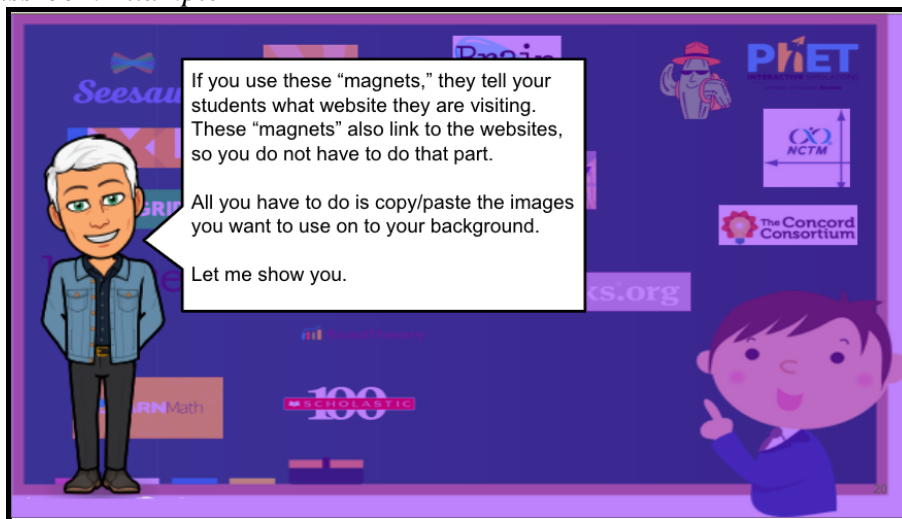
Individuals who demonstrate the disposition to be strategic are able to organize, plan and set goals for future events in order to maximize efficiency (Ritchhart, 2001). In the following story, Jill used her understanding of one teacher's successful remote teaching experience to organize professional development (PD) for all K - 5 teachers in her district and get them ready for remote teaching in the Fall of 2020.

Jill called me in June and asked if I would provide professional development. She wanted me to show K - 5 teachers how to create a digital classroom made with a Google Slide (GS), a Bitmoji character and a cartoon background of a typical classroom. When I asked her why, she said that the teachers needed to learn how to communicate and organize instructional resources more efficiently for their students and parents, Jill said,

I saw the success that Kayla (pseudonym - 4th grade teacher) was having with her students, but mostly with her parents. Our parents were having a hard time finding things online. I was getting telephone calls from parents saying, "I can't find this, I can't find that, things are all over the place" and I thought nobody's calling from Kayla's class. She shared her digital classroom with me and I thought, isn't this great, everything is right there and her kids loved it. One of her parents even told her that this makes their lives so much easier.

In an effort to organize instructional resources, Kayla created a digital classroom using a Google Slide (see Figure 1). She posted it to her GC Stream so that all her 4th grade students and parents had to do was navigate to the Stream and tap images embedded in the slide that link to instructional resources and learning tasks. Jill and Kayla recognized that teaching during this pandemic affected parents as much as it did the kids. Jill's experience with frustrated parents in classrooms other than Kayla's caused her to plan PD with the goal of reducing parental stress by making remote learning more efficient.

Figure 1
A Digital Classroom Example



The Disposition to be Curious

Individuals who demonstrate the disposition to be curious are able to generate questions and pose problems about the world (Ritchhart, 2001). In the following story, my co-planning with Liz, for PD for the PDS consortium, caused me to ask: why did Liz continue to adjust her instruction during the pandemic?

PD was delivered to Jill's teachers at the end of June and sometime in July, more GC PD was required by me for members of the entire PDS consortium. I met with the PDS co-directors and planned four PD sessions: one session would provide an overview of the Google Workspace (Drive, Gmail, Docs, Sheets, Slides and Forms), another would provide an overview of GC and the third would showcase Kayla's digital classroom. The fourth session would show the audience how Liz taught math to her 7th and 8th graders during the pandemic. Liz was included in this PD because she used Google Workspace tools and organized math lessons with her GC.

Kayla and Liz developed rough drafts of their presentations and shared them with me. Liz's presentation revealed an *autobiographical narrative inquiry* that revealed the "personal, practical, and theoretical/social justifications that shaped" (Clandinin, 2013, p. 191) the student-teacher interactions in her math classes. In preparing for the presentation, Liz noticed that she changed her teaching behaviors as she reacted to her middle school students' needs; these changes occurred in three distinct phases. Liz's self-analysis was an example of the HLP: *Self-analyze teaching for the purpose of improving instruction and learning* (Maheady et al., 2019, p. 360); this is the same HLP that influenced my decision to conduct guided reflections with my teacher candidates. Her analysis was an example of the disposition to be metacognitive because she evaluated her thinking about teaching math during the Spring of 2020.

As I listened to Liz speak, I wanted to know why she kept revising her teaching. I used narrative inquiry because I needed a methodology that studied Liz's teaching life and honored her lived experiences because I believe her stories were "a source of important knowledge and understanding" (Clandinin, 2013, p.17) and they had the potential to influence my own teaching life. As a former technology integration specialist, I understood how and why Liz used the technology she did without her explanations, but I did not understand why she kept making adjustments to her instruction. Like Archibald (2008), I believe that stories teach lessons, so with

this in mind, I conducted a series of open-ended interviews designed to help Liz reconstruct the experiences (Seidman, 2013) she shared with her students. These interviews were developed to teach me how to think about her teaching actions, to solidify my understanding of teaching math remotely and attend to my own curiosity.

Our Shared Professional Knowledge Landscapes, Part II

The Disposition to be Seeking Truth and Understanding

Individuals who demonstrate the disposition to be seeking truth and understanding are able to examine things closely, look for connections and play with ideas in search of the truth (Ritchhart, 2001). In the following stories, Liz described why the idea of “keeping things as close to normal” during the beginning of remote teaching did not work for her math students.

Liz wrote on a slide of her PD presentation,

After COVID-19, I taught 2 sections of math. and each section lasted 15 minutes. There was NOT balance in my classroom! I felt I could not support my students and they felt they were a number in a crowd and were reluctant to participate.

There was no time for remediation or enrichment. I felt like a subliminal message was being sent to my kids, “If you got it, great, if you didn’t ... sorry, see you tomorrow! But from mid-March through the end of June, I underwent a complete transformation as a teacher. I learned how to be more flexible in order to meet the needs of my students, who were giving me their all. In my reflection, I identified three distinct phases in my teaching (see Figure 2).

Figure 2

Table Depicting the Characteristics of Liz’s Phases

Instructional Strategy	Direct	Modeled	Shared	Guided	Independent
Phase 1 (March - Early April) 1 lesson/day 5 days/week	Assigned a Mini lesson video for homework Used Loom with a document camera to record video and posted it to to Google STREAM	Assigned a Mini lesson video for homework Used Loom with a document camera to record video and posted it to to Google STREAM	Honor System Students shared their work with me using a physical whiteboard during a Google Meet session LOL Nobody writes	Google Meet was used during Live Class Students solved the problem with me and I shared their solution with a document camera	Four IXL Skills/Week with a goal (homework)
Phase 2 (Early April - Beginning of May) 1 lesson/day 5 days/week	Assigned a Mini lesson video for homework Used Loom with a document camera to record video and posted it to to Google STREAM	Assigned a Mini lesson video for homework Used Loom with a document camera to record video and posted it to to Google STREAM	Google Meet was used with Live Class and students solved the problem with me and I shared their solution with <u>a document camera</u> Teacher writes.	Google Meet was used during Live Class Students solved the problem with me and I shared their solution with a document camera Teacher writes.	Two IXL Skills/Week with a goal (homework)
Phase 3 (May - June) 4 lessons/week (Monday-Thursday)	Assigned a Mini lesson video for homework Used Loom with a document camera to record video and posted it to to Google STREAM	Assigned a Mini lesson video for homework Used Loom with a document camera to record video and posted it to to Google STREAM	Google Meet was used with Live Class and students solved the problem with me using <u>Jamboard</u> and share the digital pen. Students write.	Google Meet was used with Live Class and students solved the problem with me using <u>Jamboard</u> and shared the digital pen. Students write.	One IXL Skill/Week (homework) Weekly Quiz (in class. following review on Google Slides, via Google Forms)

Phase One: “Keep Things as Close to Normal”. Throughout phase one, Liz tried to mimic what she did during in-person instruction in an effort to keep the students’ learning and her instructional approach as normal as possible. She followed her teaching instincts, which meant adhering to the Gradual Release of Responsibility model (Fisher & Frey, 2014) that she used prior to remote instruction. Liz recalled,

Phase one was my immediate reaction to finding out that my students were going to learn online with their entire cohort in only 15 minutes instead of one hour. I did what I could from instinct. I tried to keep things as close to normal as I could, in terms of following gradual release and rolling out the content.

Liz’s in-person instructional model, or what I think she was referring to as her “instinct,” was developed when she taught third grade, a role she held for 4 years. This model included whole group and small group instruction. She taught a typical math lesson to the whole class using a version of Explicit Instruction (Doabler & Fien, 2013) and then used math rotations to differentiate. Liz said, “The way I taught third grade was actually pretty similar to the way I taught seventh and eighth grade.”

Third Grade Math Instruction. In order to understand how she taught her middle schoolers prior to remote instruction, her description of how she taught third grade math will reveal what she did.

I would do a mini lesson with the students while sitting on the rug with them and while my TA projected her writing with a document camera. We would unpack the learning target, review important vocabulary, and connect the lesson to prior learning. Sometimes I’d have a student paraphrase the learning target and then I would get into the direct instruction by explaining the process with an anchor chart. I would model a problem by doing a think aloud while my TA jotted down notes of what we know and don’t know, as well as a restate with a blank and a number sentence with a blank. We’d solve the problem by connecting back to the steps on the anchor chart. A student would usually get called up to share the pen with the TA when we would do a shared example on the board.

When the whole class mini-lesson was completed, Liz would rotate small groups of students through math learning tasks so she could provide guided practice and feedback that met the different needs of her students “because I do not think that it’s right to have a one size fits all approach with every student.” Liz rationalized her use of math rotations,

I would meet with the low group, then the medium group and the high group last. That way, the low group got more support and went to their independent work immediately after meeting with me.

Middle School Math Instruction. This pattern of behavior worked for Liz and her 3rd graders and that is why she used it with middle schoolers prior to the COVID-19 shutdown. Since each grade level in her school was broken into two homerooms, she was used to providing 4 one-hour math lessons to four different classes each day. She also had a half hour block of time to conduct an enrichment group, while the rest of the students were divided into various Response to Intervention groups. Her students received tailored, small group math instruction every day. This was an excellent plan for in-person instruction, but very demanding for remote instruction.

Liz was faced with the challenge of transitioning from in-person to remote instruction over a single weekend. So when she was “told that we needed to continue rolling through the content as usual” she wondered how she could be an effective math teacher when her students

were learning from home and only receiving live math instruction for 15 minutes each day. Despite this, on March 16, 2020, the first day of remote instruction, Liz posted a brief video of herself on her GC Stream and with a reassuring countenance and a confident voice, said, “I promise we’re going to have fun and we’re going to figure this out as we go.”

It was important for Liz to show her students they could count on her to teach them during this difficult time because she had already stabilized their math instruction earlier in the school year. In the beginning of the year, she was the instructional math coach for her school, but by the start of October, she became the third middle school math teacher because the previous two teachers had a difficult time and quit. When she took over the class, Liz remembered,

It was a night and day difference when I was in there with them. They knew it was unconditional love. They knew that if I’m ever being tough on them, it’s because I love them and I want to be a person who they can count on.

This love was reciprocated by her students because they turned in their math assignments and attended her live classes, a sign of mutual respect. According to school records, 94% of her 7th graders and 100% of her 8th graders turned in their classwork. When these percentages were compared to other subject areas, many of these same students did not attend to their assignments. One of Liz’s 7th graders may offer an explanation as to why her classmates shared their work with Liz, “You explain it so well for people who don’t understand. Keep up the good work. Love, your student, Juan (pseudonym).” When I asked Liz why her students came to math class, she said, “I think they wanted to see me. Middle schoolers crave that feeling of being together, and because it was something they could do with a sense of purpose and direction.”

So, with mutual respect established, grounded in “unconditional love,” Liz described the first phase of her remote instruction as a plan to imitate normalcy by introducing a flipped classroom while she continued to use the Gradual Release of Responsibility framework.

It was really a result of me trying to keep things as close to normal as I could, by following gradual release and rolling out the content. I just did one lesson a day, five days a week. Since we had only 15 minutes of live time together, I introduced a flipped classroom where their homework was watching a mini-lesson and then we would do the rest of the lesson together in class.

For the first five lessons, Liz created instructional videos that recorded her voice and hand movements with an iPevo document camera “because I was able to connect it to my computer screen and record an aerial view of my problem-solving using pen and paper without having to worry about the positioning of the camera.” She uploaded the videos to YouTube and posted links to them on her GC Stream. After a few videos, however, Liz became frustrated with YouTube because the software kept buffering, which made it difficult to watch. She switched to an online resource called Loom “because it was very easy to transfer my videos to my GC without having to wait forever for it to buffer. I also liked how all of my videos were saved into an archive.” Liz posted the videos to her GC “because it provided a space to clearly and neatly roll out the weekly lessons/assignments in one place, making it easy for students to access.”

The Flipped Classroom. Many of Liz’s students came from economically and educationally disadvantaged backgrounds, thus she used Explicit Instruction (Doabler & Fein, 2013), an instructional method that has been found to be effective with low and below average performing math students (Gersten, et al., 2005) from these backgrounds (Aud et al., 2011). Liz set up a flipped classroom, an instructional approach where “the lower levels are presented before class” so that “in-class time can be spent working on higher levels of learning” (Zainuddin & Halili, 2016, p. 316). She used the videos to teach the lower levels of a math lesson

before addressing the higher levels of a lesson with her teacher candidates using Google Meet, a video conferencing tool. This approach enabled her to gradually give the responsibility of solving a lesson's math problems to the students over a two-session period. During session one of a typical math lesson, one can think of the "lower levels" as a teacher's: (1.) unpacking of a lesson's learning target(s), (2.) explanation of a lesson's mathematical vocabulary and (3.) think-aloud that explains the mathematical proficiencies (Kilpatrick et al., 2001) required for solving a lesson's math problem(s). During session two, one can think of the "higher levels" as the students' ability to demonstrate the mathematical proficiencies revealed in the first session. In the second session, teachers help students overcome their misunderstandings by giving them feedback, providing multiple examples and assigning independent practice.

When her students came to the live classes to demonstrate the "higher levels" of a math lesson, Liz tried to provide guided instruction for an entire grade level (about 40+ students) in a mere 15 minutes, which meant that her students attempted to show Liz that they understood the "lower levels" of the math lesson taught to them from the video and she reacted to their attempts. She followed this procedure for three weeks but never felt satisfied with what she was doing. Liz remembered,

From the start with phase one, it didn't really feel right even though I was trying to make it like it was at school. It was about a week where I was telling myself, "okay, they're getting used to learning at home and if things aren't better in a couple of weeks, I'll make a change." But after one weekend, I was like, no it's not because they're learning at home, it's because this is just really not working.

When I asked how she knew her instruction wasn't working, she said,

I could just tell they weren't watching; I could see that they weren't completing their IXL¹ assignments all the way. You can tell on IXL if kids are trying or not, you could see that someone spent three minutes working on something.

IXL is a personalized online learning platform that many teachers utilized during the pandemic. One of the reasons teachers use this resource is because it can provide individualized learning skills aligned to state standards and track students' time on task and question/problem accuracy. When Liz logged into the teacher section of IXL, she saw that her students were not spending a lot of time practicing skills reinforced during the "higher levels" of her flipped classroom. They also told her they were overwhelmed and stressed out during their 15 minutes of live class time. Liz recalled,

I would start the class by asking how everyone was feeling. I'd say, on a scale of 1 to 5 let's do a quick check and see where we're all at; five was bad. A lot of kids were putting up 5 fingers. It was all threes, fours, and fives. No one really felt like a "one."

It was understandable that Liz's students felt overwhelmed because no one knew what the virus was going to do to them or their families. In addition to that, instead of having an entire hour to learn math concepts, her students were watching a 15-minute video on their own time, expected to come to class with some idea about what to do and then practice IXL math skills.

As Liz examined her instruction closely, the evidence she collected from her students caused her to realize that the way she was teaching was not living up to her expectations. She needed to make a change and this change marked the beginning of the second phase of her instruction.

¹ (<https://www.ixl.com/>)

Phase Two: “Share the Workload”. Even though Liz’s students “were really good with attendance” during phase one, she did not believe their participation during the live class sessions was effective. Instead of forcing her students to fit into an instructional model she felt was not working and blaming students for not completing the IXL skill assignments, she considered the idea that “less can be more.” So, she reduced the instructional video time, the number of IXL math skills to practice and used her live class time to share the math problem procedure with her students. Phase two began in early April, about three weeks after instruction went 100% online; she described it in this way,

I shortened the mini lesson by only covering the direct and the modeled, so this allowed me to try to share the workload of an example in class time. I still wasn't using Jamboard yet, but by completing a problem in live time with them, we were able to spend more time working together.

Besides reducing the instructional video time and the number of math skills to complete, Liz was still not satisfied because she could sense something was still not right. After consulting with her grade level teachers, they decided to create a daily schedule template in Google Docs and share it with the students. Liz justified their actions in this way,

At home it was really weird for them. I was talking to my teaching team and I pointed out to them that they don't have a schedule. A lot of them didn't have class until 2:00, so they'd sleep all day cause they were up 'till 4:00. We spent time helping them make a schedule in order to help them manage their time.

Although Liz’s students came to her class and completed the reduced number of IXL assignments, many of them missed other classes and did not hand in work. Before casting judgement upon their actions, she relied on the student-teacher relationships she built from “doing the little things, like sitting at the lunch table” to help her understand their home lives. These small acts, done when students attended school in-person, helped Liz see the connection between what she saw during her live classes with their personal lives,

I had a really big opportunity to get to know my students on a level outside of just teaching them. A lot of my students have a lot of baggage from home and it was a time where they could talk to me about it and feel like I was listening to them. It was fun, I had a good time eating lunch with them. I think all those things make a better learning environment because they knew they were spending positive time with me.

Experiences like eating lunch with her students provided Liz with a glimpse into their home lives. Office hours, time set aside to talk using Google Meet, and her live class check-ins gave her the sense they probably needed some “normalcy” while at home, in this case a schedule to follow. Liz said,

During class and in office hours they were saying that they didn’t perceive themselves having time to do their work for school. But I knew they were only in school for one hour a day and they had time. They were up all night, sleeping the first half of the day, waking up and helping their siblings make food. They were so disoriented.

Despite the modifications Liz made to her flipped classroom and her willingness to help her students organize their lives, she was unhappy with what she built because she had not yet created a “true ‘shared’ portion of a gradual release lesson.” When Liz pushed her understanding of how to teach remotely under the imposed time constraints, and thought that it still was not

working, she was open to the idea of using Jamboard, a tool with the potential for sharing ideas. Liz explored this interactive whiteboard on her own time and thus, phase three began.

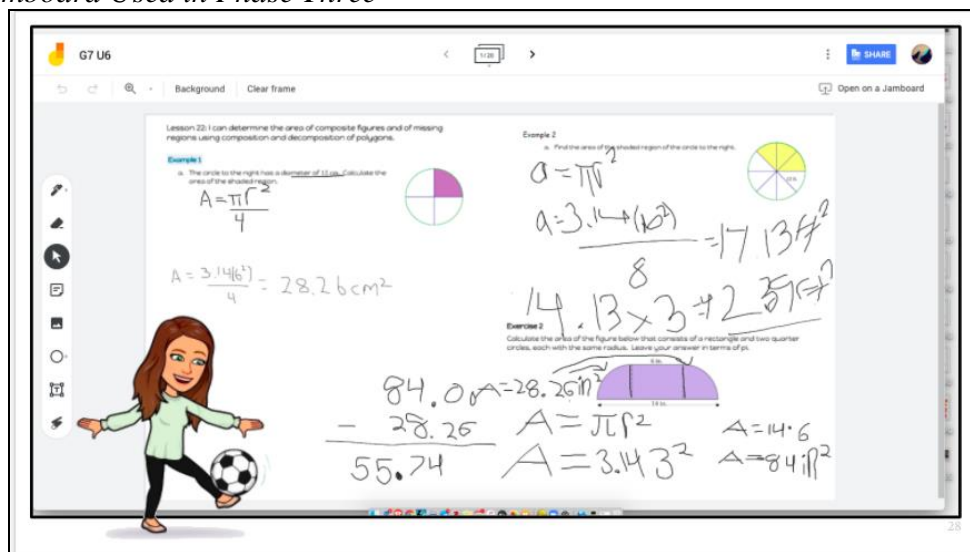
Phase Three: “Re-establish Balance”. Phase two lasted until Liz began reading GC Stream posts and emails from some of her 7th graders who expressed the need for help. Near the end of March one 7th grader posted, “i need help.” and a different 7th grader asked, “can I retry the quiz?” Toward the end of April, two 7th graders voiced their concerns in two separate emails. One student wrote, “hi i am so sorry its really latr but i am still doing ixl because i hit 79 and rn i am at 34 i mean i can still keep going but i dont want to keep going down.” The other student said, “i got 1/2 on the quiz can i retake it and get full credit? Also i got back up to 70% on the ixl lol.” These students were brave enough to post comments in public and send emails to Liz, and she knew there were many more who were challenged by the circumstances. She believed her students were “still overwhelmed” and she “felt like I was starting to lose touch with them. I didn’t sense that I was able to gauge their understanding very well. It was working, but I wanted to do better for them.” The students’ requests for help made Liz think deeper about her teaching, so she pushed her knowledge of teaching math remotely once more and adjusted her instruction for the third time.

Once again, she decreased the amount of time her students spent on IXL. Now that she was feeling more comfortable teaching online, she used Fridays as a day to review math content, an instructional approach rooted in her time as a third grade teacher. When she taught that grade she would “pick three standards they bombed on assessments and review them when she found 20 minutes during the school day.” This valuable part of the learning cycle was difficult to pull off in her current situation, so when she discovered Google Forms, a tool that enabled her to formatively assess her students’ mathematical content knowledge, she found a way to identify areas of weakness for review. Liz also learned about another new tool to help her understand her students and that tool was Jamboard. She remembered,

I used Jamboard to reestablish balance between teacher-student work in the problem solving process. teacher candidates could digitally “share the pen” to demonstrate their thinking. This was much more engaging for them and let me see their thought process more accurately. On the left side of the Jamboard I displayed what was covered in the mini-lesson and on the right side I gave my students similar problems that we would work on together.

This was the final piece to her instructional puzzle. Jamboard (see Figure 3) created the “true ‘shared’ portion of a gradual release lesson” because it “made lessons much more interactive/engaging, it allowed students to feel successful.” Liz said she, “could finally see, in real time, how my students were progressing.”

Figure 3
Shared Jamboard Used in Phase Three



Throughout all three phases, Liz continued to seek the truth about her instruction because she took the time to think about her core beliefs about her students and her instruction. Her beliefs were described on a PD presentation slide,

Students bring a diverse set of experiences, skills and needs to my classroom and it is my responsibility to create an inclusive, nurturing learning environment that fosters the development of the whole child. I believe that it is my responsibility to provide differentiated instruction that results in all students maximizing their learning potential by cultivating positive relationships where mutual respect/trust, as well as clear/consistent behavioral expectations are the top priorities.

After hours of talking to Liz about how she taught math remotely, I knew how my Fall 2020 math methods teacher candidates would teach, but more importantly I knew that my teacher candidates' success would not be *how* they used the technology, but in their desire to reflect upon their remote teaching opportunities like Liz. Now that I had a better understanding of why Liz taught the way she did, I needed to know if we could teach at my PDS in the Fall, so I called on Jill to find out.

Our Shared Professional Knowledge Landscapes, Part III

The Disposition to be Open-minded

Individuals who demonstrate the disposition to be open-minded are able to consider and try out new ideas, look at things from different perspectives and look beyond the obvious (Ritchhart, 2001). In the following story, Jill described why she advocated for opening her school. She looked at the need for school to be open from the viewpoint of many of her students and parents.

In the Fall of 2020, the Covid-19 pandemic was still an issue in schools across the United State; many school district leaders employed a remote-only instructional model and many superintendents in my PDS consortium would not allow teacher candidates into their schools. Jill, however, was not one of those administrators. She allowed my teacher candidates to come

into her school for three reasons: (1) she trusted her cleaning staff, (2) she believed in the district leadership of the Assistant Superintendent of Instruction and (3) because I told her that I knew how we could teach her students remotely. Jill said,

I've never been worried about anything because I knew that our cleaning staff was doing the right thing because they were following a strict cleaning protocol every single night. Marcia (pseudonym and assistant superintendent) said follow the science, so we did. And you did the right thing, you went virtual.

I've had a relationship with Jill and her teachers for seven years and so I felt comfortable asking her if we could teach in her school in the Fall. Jill, a former graduate of my college, believes in our partnership, she thinks it is "a win-win situation for both of us, because you need us and we need you." She knew that my former teacher candidates have always treated this partnership with respect, so she did not hesitate to offer her school and students to us. She told my teacher candidates and me on our first day, "You're trailblazers, this is new for all of us." Jill's confidence gave me comfort because I knew that MJ and his classmates would be given the opportunity to practice teaching math. Despite this knowledge, I was still not sure why her school district decided to allow partial in-person instruction instead of remote-only teaching like many schools in our area.

It became clear to me when Jill told me a story that, unfortunately, could have been told about a few more families from her school. During the summer, the administration team in her district held a school-opening planning meeting and she pleaded her case for opening school for in-person instruction by telling them about the sad fate of one of her student's grandmother,

I have a mother, of one of my 4th graders, who just found out her mother died.

Grandma was the primary caregiver for this little boy and so he has to come to school. The family doesn't have any food in the house so I'm sending food home for him.

Tragic stories such as this were not the only reason Jill needed her school to open in the Fall. She knew that many children in her district, not just her school, were not able to learn when the district went fully remote in the Spring of 2020. She could not let that happen again, she said, "There are children along the lake shore and in our village that don't have the internet." The parents in the district also expressed an interest in having their children come back to school. Jill remembered reading comments on a district survey that said, "We want paper packets, it's easier. My child does better with paper packets and pencil." Providing students with paper packets of work could only be accomplished if the students came back to school, at least for a few days.

Jill and the assistant superintendent's persistence convinced the School Board to open school in the Fall in hybrid mode and this gave my teacher candidates a chance to work with real kids and use what they learned indirectly from Liz's "lived experiences."

Feeling a Lot More Comfortable

I began this paper with MJ's story about teaching Echo how to divide fractions in a remote manner. At the end of his story, MJ said that Echo "... felt a lot more comfortable doing this type of problem." I think we all feel like Echo now because the unprecedented problem of knowing how to teach and learn online has now become part of all of our *professional knowledge landscapes*, Liz's, Jill's, my teacher candidates' and mine. However, based on Liz's storied experiences, knowing how to teach with technology will not be enough to make a difference in the lives of students learning remotely. Teacher candidates who were not able to teach real children, even in a remote manner, were not able to put practice at the center of their teaching

lives. Despite the uncertainties of the pandemic, my PDS partner, led by Jill, responded in a strategic manner and so teaching math to real children was put front and center in our teaching lives.

We were able to plan and teach K - 5 students remotely because I learned how to teach math in this manner from Liz. My teacher candidates' experiences led to reflections about how *they* taught math and not about how a *teacher in a video* taught math. Jill and Liz enabled my teacher candidates to actively engage in my PDS' community and for that, they are COVID Heroes!

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Appendix A

Guided Reflection Questions² for Group Discussion

- 1) How did you decide what to teach today?
 - a) *HLP 5: Choose and adapt curriculum materials and tasks specific to learning goals.*
 - b) *HLP 17: Interpret and communicate assessment data to make important educational decisions.*
- 2) How did you teach today?
 - a) *HLP 6: Make learning explicit through modeling, guided practice, and independent practice.*
 - i) *HLP 7: Use strategies to promote active student engagement in whole class and small group instruction.*
 - ii) *HLP 8: Scaffold instruction during lessons.*
- 3) What happened during your lesson?
 - a) *HLP 12: Self-analyze teaching for the purpose of improving instruction and learning.*

² High-leverage Practice were based upon the descriptions of HLPs in Figure 2 from the work of (Maheady et al., 2019, p. 360)

Appendix B

Google Slide Math Intervention Framework





15. Omar has $2 \frac{3}{4}$ cups of dough to make dumplings. If he uses $\frac{3}{16}$ cup of dough for each dumpling, how many whole dumplings can Omar make?

Try to solve this problem on your own.



1

How did you feel about solving this problem?

-  A. **Confident** because I can solve the problem.
-  B. **Overwhelmed** because I am not sure how to begin.
-  C. **Kind of Confident** because I am not completely sure if I have it right, but I think I am right.
-  D. **Embarrassed** because I do not want others to think I do not know how to answer the problem.



25.) Tess has $4 \frac{1}{4}$ cups of water to make stuffing. If she uses $\frac{3}{12}$ cup of water to make one serving of stuffing, how many servings of stuffing can Tess make?

What do I know?

- 1.) Tess needs water to make servings of stuffing.
- 2.) She has $4 \frac{1}{4}$ cups of water.
- 3.) She needs to use $\frac{3}{12}$ of a cup of water for each serving.
- 4.) I need to divide $\frac{3}{12}$ into $4 \frac{1}{4}$.
- 5.) I know there are 4 - $\frac{1}{4}$ cups in one cup $(\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}) = \frac{4}{4} = 1$
- 6.) I know there are multiple steps to dividing fractions.

My Solution

- a.] $4 \frac{1}{4} \div \frac{3}{12} = ?$ set up the problem
- b.] $(\frac{17}{4}) \div \frac{3}{12} = ?$ convert the mixed number $4 \frac{1}{4}$ into an improper fraction $(\frac{17}{4})$
- c.] $(\frac{17}{4}) \times (\frac{12}{3}) = ?$ write the reciprocal of $(\frac{3}{12})$ which is $(\frac{12}{3})$
- d.] $(17 \times 12) \div (4 \times 3) = ?$ multiply the numerators and the denominators
- e.] $204 \div 12 = ?$ divide the numerator by the denominator

What do I want to know?

- 1.) How many servings of stuffing can Tess make with $4 \frac{1}{4}$ cups of water if each serving requires $\frac{3}{12}$ of a cup of water?

- f.] 17 servings can be made write a statement to answer the problem

I will show you how I would solve this problem by explaining my solution.



15. Christine has $1 \frac{2}{4}$ cups of dough to make cupcakes. If she uses $\frac{2}{8}$ cup of dough for each cupcake, how many whole cupcakes can Christine make?

Problem Solving Strategy

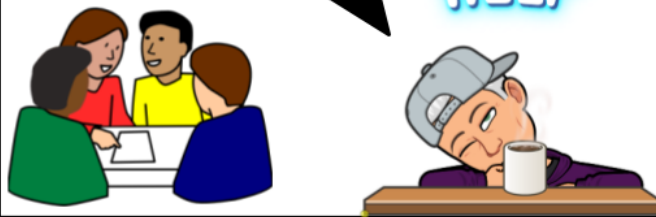
1. What do I know?
2. What do I need to know?
3. Make a plan.
4. Test my plan.
5. Evaluate my plan. Did it make sense?
 - a. If yes, make a claim
 - b. If no, repeat steps 3 - 5 until your plan makes sense.

I will ask you questions so we can solve this together



15. Ross has $5 \frac{1}{3}$ sticks of pepperoni to make pizzas. If he uses $\frac{2}{6}$ of a stick of pepperoni for each pizza, how many whole pizzas can Ross make?

You will tell me how to solve this problem so we can solve this together.



Problem Solving Strategy

1. What do I know?
2. What do I need to know?
3. Make a plan.
4. Test my plan.
5. Evaluate my plan. Did it make sense?
 - a. If yes, make a claim
 - b. If no, repeat steps 3 - 5 until your plan makes sense.

15. Je'lyn has $3 \frac{2}{5}$ cups of olive oil to pour on bowls of salad. If she uses $\frac{4}{15}$ cup of olive oil for each bowl, how many bowls of salad can Je'lyn make?

You will solve this problem by yourself so I can see how much you learned. 😊



Problem Solving Strategy

1. What do I know?
2. What do I need to know?
3. Make a plan.
4. Test my plan.
5. Evaluate my plan. Did it make sense?
 - a. If yes, make a claim
 - b. If no, repeat steps 3 - 5 until your plan makes sense.

Math Concepts

1. [Dividing Fractions](#)
2. [Mixed Fractions](#) (mixed numbers)
3. [Simplifying Fractions](#)
4. [Measuring Cups](#)
5. [Multiplication](#)
6. [Division](#)

Sometimes you have to take the wrong road to know its not the right road. - Dr. Shively

Problem Solving Strategy

1. What do I know?
2. What do I need to know?
3. Make a plan.
4. Test my plan.
5. Evaluate my plan. Did it make sense?
 - a. If yes, make a claim
 - b. If no, repeat steps 3 - 5 until your plan makes sense.



EXACTLY!

Critical Creative Out of the Box Thinking in COVID Times

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Abstract: The COVID-19 pandemic, the polarized political context, and the intensified racial justice movement delineate a time of crisis in the United States. In the field of education, the significant impacts of the turbulent situations represent profound darkness of people's lives, making the collaborative partnership between school, university, and community extremely constrained and critical. This article draws from an eight-week digital summer civic leadership program that took place during the time of COVID-19. We employed the framework of Youth Participatory Action Research (YPAR) and the concept of collective leadership to center youth's knowledge and critical voices. By integrating embodied, multimodal and reflective processes into the curriculum, the digital summer YPAR program provided an innovative approach to building a collaborative school-university-community partnership and enacting youth civic engagement through multimodal, digitalized, and artistic ways.

KEYWORDS: Youth Participatory Action Research (YPAR), collective leadership, youth activism, art, COVID-19

NAPDS NINE ESSENTIALS ADDRESSED:

Essential One: A Comprehensive Mission: A professional development school (PDS) is a learning community guided by a comprehensive, articulated mission that is broader than the goals of any single partner, and that aims to advance equity, antiracism, and social justice within and among schools, colleges/universities, and their respective community and professional partners.

Essential Three: Professional Learning and Leading: A PDS is a context for continuous professional learning and leading for all participants, guided by need and a spirit and practice of inquiry.

Essential Four: Reflection and Innovation: A PDS makes a shared commitment to reflective practice, responsive innovation, and generative knowledge.

“Everyone’s voice counts, and we all don’t have to have the same voices. But we do want our voices to be part of the transformation in our world and in our society. I would not have thought about this if I didn’t take this course.”

“There was so much I had yet to understand and to know about engaging with young people. I think I was so focused on the curriculum, English, and knowledge what I need to know to be a good English teacher that I forgot who is at the center of all the work, and that is the youth.”

“I learned a lot about youth actions and how youth’s voices can be represented in so many ways through art. The most pivotal learning experience for me was to learn about youth refusal to participate, and that was actually a form of participation when you refuse to participate.”

(Testimonies, Civic Digital YPAR Program Participants, July 2020)

The year 2020 was a painful, unpredictable, and profoundly disturbing political time for diverse populations across the world. With no COVID-19 vaccine or cure available in the midst of a global pandemic, physical distancing and sheltering at home had become the norm in an attempt to slow the transmission of the virus (Ramesh et al., 2020). In the United States (U. S.) , the COVID-19 pandemic disrupted every aspect of social life for most of the nation’s population, requiring people to change their behaviors. On top of the health crisis, the killings of George Floyd and Breonna Tylor among many others incurred harm and terror in Black communities and triggered anger from many in the broader society (Hinton & Cook, 2020; McArthur & Muhammad, 2020). With the rise of the Black Lives Matter (BLM) movement, national conversations about racial accountability, social justice, and interracial solidarity took place in varied participatory ways, both in person (e.g., protests and sport events) and digitally (e.g., #Blacklivesmatter and #icantbreathe).

Galvanized by the multifaceted crises of these times, we felt a sense of urgency in including a focus on politics in our education work. Therefore, as three community activists and university instructors, our response to the challenges was to develop a pedagogical civic leadership program that employed Youth Participatory Action Research (YPAR) (e.g., Harman & Burke, 2020) as a theoretical and empirical orientation to critical pedagogy. YPAR involves collaborative research that centers the knowledge and expertise of youth participants, especially their insights and vision about salient community issues and social change. By positioning youth as civic leaders and community activists, YPAR enacts a collaborative relationship among university researchers, school educators and young people who often come from underrepresented communities. The overall aim of the work is to solidify and extend multi-generational school-community-university partnerships that value youth as vital members of the collective (Mirra & Morrell, 2011; Mirra et al., 2015). We developed this work in collaboration with local administrators, teachers, and community. Our work purposely is aligned with the mission of our local school district. One of the goals linking our county schools’ missions together is a deep commitment to youth-centered practices that position inquiry as central to teaching and learning. Aligning with Jaworski’s (2006) belief that learning, individual or organizational, occurs when communities of practice are reconceptualized as “communit[ies] of inquiry” (p. 191), we see collaborative inquiry of youth and adults as being a powerful change agent in organizational learning as well as for individuals and groups (Yeo & Marquardt, 2010).

In these unprecedented times, implementing a successful YPAR program to center youth’s critical voices can be highly challenging. Within the context of COVID-19 social distancing, our work as teacher educators, researchers, and classroom teachers called on us to be

creative and critical trailblazers, thinking beyond and against fixed norms of knowledge production and deficient positioning of youth. We experienced formidable challenges in our collaborative school-community-university partnership in our small city in the southeast U. S. because of physical distancing guidelines for slowing COVID-19 infection rates, temporary school closures, and uncertainties about future modes of teaching (Viner et al., 2020). Indeed, we found ourselves obliged to move our participatory work with high school youth and graduate students online. Given that our school-community-university partnership focuses on civic engagement, artistic expression, and relationship building (e.g., Harman & Burke, 2020; Kinloch, 2010), the need to move to an online platform posed many challenges. We wondered how we could create a dialogic environment that embraced students' and teachers' needs personally, publicly, and pedagogically. Faced with these issues and challenges, our team of university and school educators and youth came together in summer 2020 to engage in our digital civic engagement and leadership program that we hoped would support high school youth and future educators.

We start our paper by delineating our theoretical understanding of leadership within the context of YPAR. Next, we detail our YPAR processes of relating and learning, which aimed to foster critical awareness of social equity issues and transformation. In the last section of our paper, we reflect on what we learned from being part of this digital version of YPAR civic leadership program. With the belief that a strategic way "to lead people into the future is to connect with them deeply in the present" (Kouzes & Posner, 2009, p. 21), we hope our experience in this digital summer YPAR program can inspire educators and educational researchers to get creative about ways of engaging youth participants during this crisis and beyond; and to find ways to come together in school-university-community partnerships to face the present moment with love and strength. The overall aim is to challenge current systemic inequities by collectively bringing positive transformations to our social, racial, and political worlds.

Why YPAR? Why Collective Leadership?

By centering youth voices and insights, YPAR practitioners aim to dismantle and disrupt elitist control over the means of knowledge production, including the social power to determine what is considered as knowledge (Apple, 1995; Ball, 2013; Rahman, 1985). It shifts research commitments from *for* or *on* communities to the viewpoint of being *with* communities (Fine & Barreras, 2001; Ozer et al., 2010). YPAR also provides youth with ample opportunities to engage in critical exploration of social issues by connecting them to their own interests, knowledge and lived experience. In sum, YPAR cultivates dynamic spaces for youth to engage in the social and political world as community activists, justice advocates, knowledge creators, and future leaders.

Over the years in our YPAR program, by intent, we have exposed youth to a series of social issues in the changing political context and have called for dialogic conversations through articulation of questions, concerns, hesitations, and resolutions. Embracing a Culturally Sustaining (CS) approach that centers youth's personal and cultural practices (e.g., Ladson-Billings, 2014; Paris & Alim, 2014), we honor youth's intelligence and voices as the medium to drive the civic agenda for themselves and for their communities. In this way, we break from the teaching-to-the-test and to-the-canon traditions, where youth are often positioned as passive recipients of knowledge. Instead, in our work, youth are the agents of change who own their full identity, subjectivity, and humanity and the ones capable of initiating fundamental

transformations connected to their everyday lives (Tuck & Yang, 2014). To summarize, the aim of the CS YPAR praxis (e.g., Harman & Burke, 2020) is to gather stories told by youth and adults who have been most systematically excluded, silenced, and oppressed (Fine, 2018; Torre, 2009); to feature distinct voices centering youth's personal/communal wisdom and expertise (Mirra et al., 2015); and to nourish minoritized communities with a radical love that pushes us to probe the underneath of our existence in the world (Price-Dennis & Sealey-Ruiz, 2021).

Aligned with the collaborative nature of YPAR, we see leadership as collective, relational, and multigenerational (Fine & Torre, 2004). Informed by civil rights activist Ella Baker and her "group-centered leadership" (see Ransby, 2003), we believe leadership should be grassroots-orientated and that radical democracy cannot be achieved without social transformation. Therefore, leadership here is not considered as a set of skills or characteristics attributed to certain groups of people. Instead, we understand leadership as a dynamic process, which disrupts the inequities and injustice in schools and communities, thus transforming them into spaces of humanity and justice (Winn, 2018). At the core of our collaborative partnership, youth take the lead in identifying social issues, deciding the social semiotic approaches, and articulating their vision of a more just society. Adult researchers contribute to the collective by facilitating conversations and activities, by actively listening to and supporting youth's meaning making, and by sharing research methods that can support youth in delving deeper into key social issues. Our critical stance on collective leadership and collaborative partnership, in sum, contributes to relationship building and civic engagement among youth and adults; through longitudinal work, it also can support transformation of hierarchical cultures and institutions (Zeller-Berkman, 2007).

Methods

Dialogic and Reflective Authoring

Informed by theories of reflexivity (e.g., Dervin & Byrd Clarke, 2014), our exploration in this study entailed a retrospective exploration of the ways that participants and teacher educators in the program grappled with the complexities of the COVID-19 pandemic, BLM, and economic insecurity through their multimodal and embodied collaborations. Specifically, we reflected on how YPAR and culturally sustaining approaches to multimodal and multilingual education (Harman et al., 2020) within robust school-community-university partnerships can provide insights for youth civic leadership development in a time when social norms are broken; when political, medical, and economical promises are in crisis; when youth, families, and educators are facing unprecedented challenges and uncertainties in every aspect of their lives.

The authors of this article are two YPAR program designers and one graduate student participant of the course. We inhabit Asian, Irish, and Americanized sociopolitical identities. Throughout the writing of this paper, we discussed and recognized our differential perspectives on the program. In shaping how to recount our perspectives on the summer of 2020, we decided to compose a narrative of the events in a way that would illustrate the highlights and the challenges we experienced during the digital summer YPAR program. We align with Connelly and Clandinin (2006), who consider the story as "a portal through which a person enters the world and by which their experience of the world is interpreted and made personally meaningful" (p.375). Because our work is intimately connected with the journey of our youth participants, we three composed a collaborative story but highlighted from the beginning that it is just one of the many perspectives on the work.

Though we narrated the collaborative story in a “we” voice, we recognize that our different positionalities, lived identifications (Hall, 1996) and experiences shaped our responses to the digital summer YPAR program. Throughout the reflective writing, we deliberately created spaces for open conversations, which we call a dialogic and interactive authoring process. Across the conversations, we paused and made ourselves consciously aware of our privileged social identities as teachers, educators, and university researchers in an academe that sustains historical lines of hierarchy. We repeatedly revisited the video recordings and artifacts generated during the summer, each time with renewed interpretations and comprehensions. As we proceeded in the writing process, we also sent invitations to previous participants and asked whether they would like to have informal chats with us and recall moments of their YPAR memories. These chats, after we watched the summer recordings several times, also made us more acutely aware of the pain and criticality that we never know enough about (Harman et al., 2016; Gallagher et al., 2013). Hence, the dialogic collaborative writing triggered our reflective thinking and fostered our critical consciousness. It was indeed a journey of thinking, learning, and growing.

Pedagogical Design of Digital YPAR

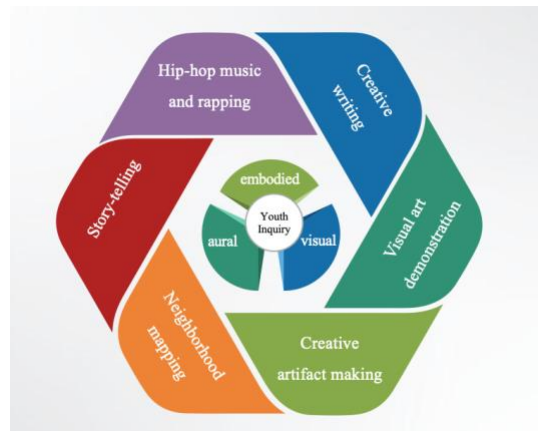
Our summer YPAR program is embedded in a graduate level education course at a large, research-focused public university in the Southeast of the U. S.. The program was first co-designed by two university faculty in collaboration with school district educators to fight summer slide, or summer learning loss (Alexander et al., 2016; Slates et al., 2012) and to provide a dynamic art-based youth-oriented program for local students. In previous summers, embodied, multimodal, and reflective processes were always integral parts of our curriculum (e.g., Harman et al., 2020). We included these processes because, following other scholars (e.g., Bui & Harman, 2019; Canagarajah, 2018; Halliday, 2003), we see the body’s interaction with resources and objects as integral to the meaning-making process. For our work with youth, then, meaning making and, by extension, embodied learning necessarily involves developing bodily and spatial awareness, experiential reflection and action, and an understanding of the body’s participation and positioning in the social world (Nguyen & Larson, 2015). To support this work in our previous programs, we used geographical mapping of neighborhoods, artistic designing of new structures for our city, theater performance, and argumentation to local city commissioners. Overall, the purpose of our YPAR praxis has been to ensure that youth’s funds of knowledge (Gonzalez et al., 2006; Moll et al., 1992) were validated and integrated into the co-construction of community knowledge.

However, when faced with the need to move from in-person to online instruction in summer 2020, we felt panicky and incompetent. How could we replace the highly experiential and face to face dynamic encounters with the flat affect generated by Zoom and other online sessions? To prepare, we went through a multi-step program design. First, we invited youth from our local school districts to sign up for our free digital space. However, the trajectory of our recruitment was more complicated than expected. Several youth who were interested in the program could not participate due to the unavailability of high-speed Internet connection in their local housing area. By the end of April 2020, we brought together a diverse group of eight youth participants, who came from working- and middle-class families across different regions of the city. We also recruited graduate students interested in social justice and collaborative work with youth. The graduate students in our YPAR collective included 12 participants who differed in years of teaching experience (i.e., nine pre- and in-service teachers, and three full-time graduate

students), race (i.e., Asian, Black, Latine¹, and White) and gender (eight female and four male). Once we had an idea of who was in our program in terms of youth, teachers, and graduate students, we began to think through the digital redesign of the approach. We began by thinking about what activities and modalities (e.g., oral discussion, drawing, mapping, writing) and community issues (e.g., sustainability, structural racism, food insecurity) would provide participants with ways to engage in critical work as youth leaders and creative re-mixing of available designs and systems in an online context. We had to then decide how our time with the participants would support their embodied and multimodal engagement with social issues. We achieved that by dividing participants into three research teams and class time into two sessions: Tuesday whole-group sessions for introducing different modalities such as mapping and drawing; Thursday small-group sessions for high school youth and adults to be together to make sense of and play with the modalities we introduced on Tuesdays. Each session lasted approximately 60 minutes and by the end of the eight-week summer YPAR program, youth and adult co-researchers chose from these modalities to build final artistic pieces that represented their collective vision of key social or personal issues they saw as pertinent. As a culminating product, a website was published that featured the collective work of youth and adult co-researchers. Through this work, we aimed to support our participants in recognizing and appropriating available designs and resources for their own re-mixing purposes (Bezemer & Kress, 2016).

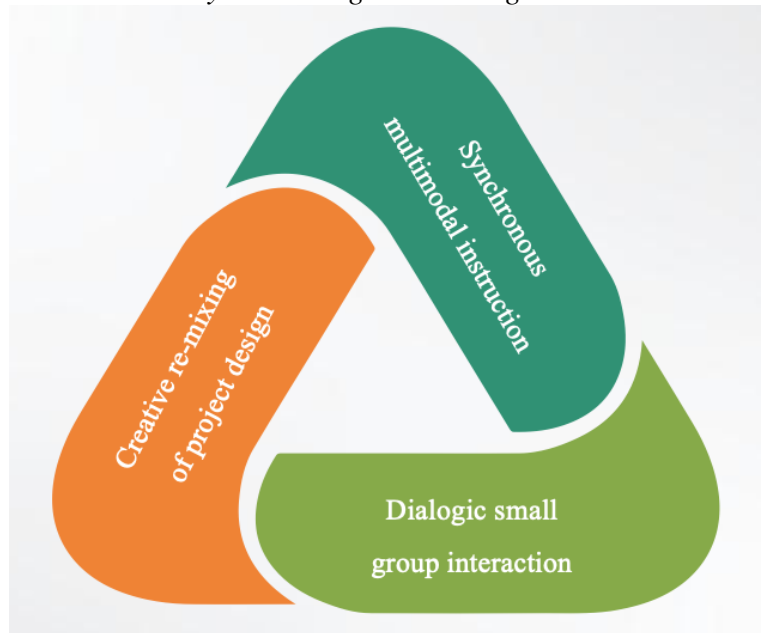
Figure 1 and Figure 2 below show how our YPAR design aimed to support youth and adult allies in moving through a recursive set of creative processes, dialogic and formal interactions, and creative re-mixing of designs.

Figure 1
Multimodal Components Centering Youth Inquiry



¹ We adopt Jason Mizell’s use of the term Latine instead of the original term Latino in this paper as one way of breaking down the binary that may be produced by using the term. Latino generally implies that one is either male (Latino) or female (Latina). Latine is used to express that within the community of those who identify culturally, linguistically or otherwise with those who reside in Latin America there exist numerous ways of identifying other than as simply male or female. (see Harman & Burke, 2020, p.15).

Figure 2
Sequential Instruction in Culturally Sustaining YPAR Program



We designed our curriculum to integrate deepening levels of artistic and embodied activities (see Figure 1). As illustrated in Figure 2, the sequence of instruction (e.g., synchronous multimodal instruction, dialogic group interaction, creative remixing of final project design) supported participants in deepening their critical semiotic awareness. By experiencing the entwined circuits of activities participants could begin to see how their unique configuration of visual, aural, and embodied work made strong political and artistic statements for our current sociopolitical context (e.g., Harman & Fu, 2020).

Walking in the Unknown and Uncertain

From the beginning of the program, we tried to cultivate a healing and nourishing space for all participants. Initially, faculty advisors and graduate assistants met online before the official start to prepare and plan the roadmap of the program. During these meetings, we explored the epistemology and curriculum design of the program; mapped out the modalities, activities, and structures; and acknowledged our central beliefs about working with youth. We made sure our plan was flexible as we prepared ourselves for challenging questions to emerge while working with youth. In the next section, we present the sequenced activities in detail: from artwork slow looking to neighborhood mapping; to rapping and poetry writing; and to collaborative art making.

Visual Art Appreciation and Slow Looking

Research has well established that art appreciation can function as an aesthetic rigorous approach to support youth's deeper intellectual cognizance of their social being and foster critical awareness of systematic issues (Cahnmann-Taylor & Siegesmund, 2017; Ngo et al., 2017). In our past summers, immersion in experiential activities in the art museum had been an essential starting point that provided a vital space for youth to become keen observers and independent thinkers of artistic work (see Harman & Burke, 2020). While our physical visits to

the State Museum of Art (SMoA) had to come to a temporary stop in 2020 because of COVID-19 restrictions, we redesigned the activity into a vibrant virtual museum tour. The virtual museum tour gave us access to high resolution giga-pixel images of the collections at the SMoA gallery. To support our educational objective of using art to stimulate discussions of ongoing sociopolitical events, all art pieces included in the collection were carefully and thoughtfully selected by a SMoA collaborator, who provided textual descriptions of each work. Our hope was that the virtual museum tour could function not as a constrained digital substitute, but a dynamic artistic immersive experience.

In this art-based activity, we employed the technique of “slow looking” from Shari Tishman (2017), who defined it as a mode of learning and a means of discovery through observation. In our rapidly-paced world, we tend to take a quick look and make interpretations based on our first impression, but slow looking can give us the structure to look carefully and slowly. Especially in a time when the world around us seemed to be crumbling, our engagement with art through slow looking encouraged us to look inwards, to appreciate and find deeper meanings from the works of art. All program participants were first given access to a “package” of pieces from the gallery collection. After browsing the artworks, participants chose one particular piece to focus on. Through the practice of slow looking, participants immersed themselves in the complexity and richness of the artwork by taking the time to observe over time, thus building a multi-perspectival understanding of the object as well as the world via the artists’ lens.

The slow-looking observation turned out to be a profound personal experience for us to pause, wonder, and connect. For example, in the observation and discussion of “the Great Wave” by the Japanese ukiyo-e artist Hokusai, one youth in our first communal session talked about “The Great Wave” as representing Japan’s push for exploration, imperialism, as well as a cultural connection with nature. Then we extended the breadth and depth of the dialogue generated from the artwork by considering what would be our great wave or symbol for what we were experiencing in current times. Brenton², another youth in the group, said his identity of being both Black and Filipino kept him in the middle of the debate about the BLM movement and defunding the police. While his mother’s side of being Black seemed to be in strong support of the BLM movement, his father’s side of being Filipino did not express as much interest in it. As he said, “Eliminating racism in our institutions is a lofty goal, it will take a lot more than simply defunding the police” (Brenton, June 18, 2020). The personal knowledge tied him to the great social and racial wave. Through a combination of artistic observation, group discussion, and individual expression, the slow art activity supported participants in engaging their lived experiences and social identities in exploration of complex social circumstances.

Neighborhood Mapping

Our second activity focused on neighborhood mapping. We created the mapping activity to encourage a slow and steady exploration of our neighborhoods, to observe and become aware of the ways spatial changes of urban geography are shaped by political and economic dynamics. Indeed, this critical orientation to mapping supported our understanding of physical space management as an insidious tool of colonialism and redlining (Katz, 2005; Pacheco & Velez, 2009). Therefore, the idea of using participatory counter-mapping with YPAR participants was to provide multiple new entries to deeply understand, reflect, and re-envision how space impacts

² Pseudonyms are used for all research participants and locations.

the lives of youth and their communities, and how it can be re-constructed for their own use (Bui & Burke, 2020; Literat, 2013). We asked the question “What’s the intertwining relationship between systematic racism and urban restructuring?” We looked at the 2010 U.S. Census Mapping of Chicago as an example, and as one of our faculty advisors in the program illustrated, the racial redlining continued through the years with ongoing urban modelling and planning. What we also noticed together was how stark and clear the boundary lines were between affluent neighborhoods, including the university campus, and low-income communities. As we delved deeper, we recognized that the vocabulary of “urban frontier” (Wade, 1959) is used often as a justification for gentrification and displacement of working-class residents and people of color in urban neighborhoods (Lipman, 2003).

In the next part of the mapping activity, graduate students and youth were invited to trace the geographic boundaries of their everyday lives. By sharing these neighborhood changes and narratives, we spoke also of the deliberate boundaries in our neighborhoods that acted as a physical barrier to minoritized³ communities. In our discussions and mapping, for example, a veteran educator in our group who grew up on a Caribbean island shared:

Our neighbors were predominately Black working class and middle-class families, with the exception of one family who was half Colombian and half Palestinian. Most of my formative childhood and adolescent years occurred on this hill where the border lines extended between both bottom parts of the hill. This border was our neighborhood family's lines. The neighborhood families knew and trusted each other. Sunday meals were often shared via a child being sent with a plate of food to So and So's house. The sense of community was strong, and I always felt safe. However, within the past decades, we have had a high influx of White and African Americans relocating from the mainland to the islands, and sadly enough, claims of racist behavior and incidents have become increasingly prominent (Javan, July 2, 2020).

The mapping activity supported us in exploring intersections of race and spatial changes in urban development. Through the process of mapping, all participants began to make sense of the neighborhood changes and racial disparities, thus visualizing the impact of sociopolitical forces on everyday lives in more concrete ways. Our mapping praxis supported us in seeing and speaking of the social injustice and inequity embedded in systematic urban development, thus moving us to think about how we could disrupt and dismantle these insidious forces.

Hip-Hop and Creative Writing

We used Hip-hop rapping and writing as our third component in the sequential multimodal activities. Since the early 1970s, scholars have seen hip-hop as one of the most influential artistic and cultural channels for youth to read, analyze, and act upon the sociopolitical world (Chang, 2005; Freire, 1970; Stovall, 2006). For us, hip-hop foregrounds poetic functions of knowledge in rap lyrics and freestyle verses, supporting our participants in sharing their insights on social issues that may play against normative discourses about race, class and equity (Akom, 2009; Love, 2016). It is a language, a voice, a unique medium of expression that can elevate youth and young adults’ resistance and consciousness of the

³ We use the term “minoritized” to highlight how ethnic and racial groups are positioned as minorities through systemic oppressive structures as opposed to any characteristics of the groups. In other words, the term “minoritized” indicates that racial and ethnic categorizations are social constructs used to benefit dominant groups in a country or global context.

oppressive system. Particularly, in the contemporary context of the COVID-19 pandemic and nationwide call for criminal justice reform, hip-hop is a powerful platform for young people to articulate anger towards systematic police brutality and to synthesize message and poetic delivery.

In our YPAR program, we first facilitated a rapping workshop, demonstrating how local hip-hop artists employ the complex genre to engage in political and racial discussions. One of our program organizers, who is a local hip-hop artist, civic activist, and doctoral student, performed a hybrid hip-hop piece that showed clearly how a combination of civic advocacy and artistic meaning making can support communities in stepping out for justice and equity. Their linguistically and artistically dexterous performance not only generated a musically uplifting space for our participants, but it also delivered the transformative message that a more just world and a better community needs every one of us to be part of the collective power for making the change. As they stated in the lyrics:

Bottom line is from bottom up, coast to coast there is a lot of us
If a hundred nine ran for offices we seize the power and resolve this
I was never the ideal candidate but I will never kneel candidly
So I'll hand to you what was handed to me: if you aint running is you really standing, b?
(Mara, course performance, June 16, 2020)

After long and deep conversations about hip-hop writing, rhyming, and meaning making, we then moved into a participatory creative writing (e.g., lyrics, poetry, storytelling) workshop. One of the goals of the activity was to initiate our reflective thinking and support us in relating our lived experiences to the sociopolitical world. Below we present one of the poems written by a youth participant to articulate her loving note to people living in the chaotic pandemic world.

Fall in love.
Maybe doesn't have to be with someone.
Fall in love with music, art,
dancing in the dark,
car rides at 1 a.m.,
the glistening of the start,
the colors of the sun as it rises,
the smell of flowers,
the feeling of adrenaline that takes over your lungs with joy,
good friends who bring out your best,
silence, noise,
fall in love with little things that make you feel most alive and find purpose.
Fall in love with life.
Just like a rainbow fallen from the sky.
(Anna, personal reflection, June 19, 2020)

As shown above, Anna chose the image of the rainbow to represent her call for those within the pandemic to capture a sense of joy and love in their lives. In general, creative writing provided youth and adults with an artistic entrance to making sense of the connectedness of people, community and the social/political issues that we grappled with every day. From a YPAR and

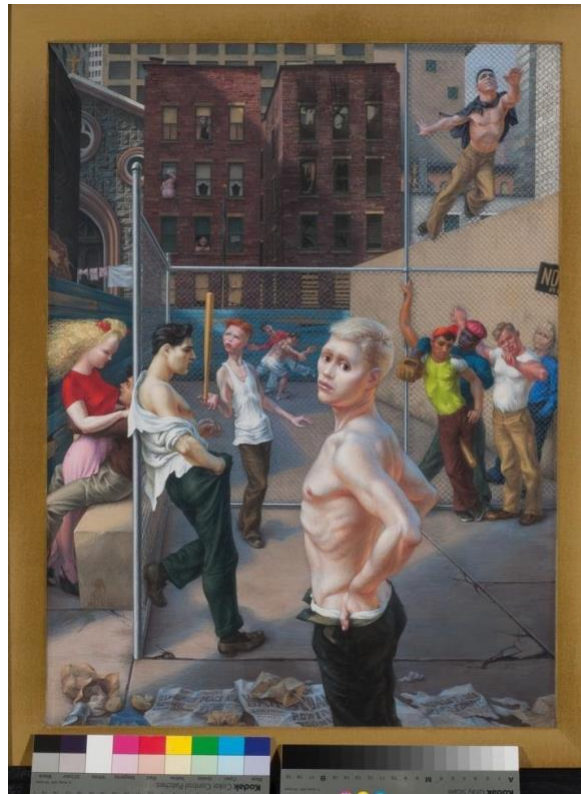
culturally sustaining perspective, youth brought their lived situated knowledges (Harding, 1995) to the virtual platform, establishing connections with each other, and shifting the way they viewed personal accountability and responsibility (Cahill, 2007).

Critical Art Making

In addition to the activities of slow looking, neighborhood mapping, and creative poetry writing, we further enriched the embodied experiences of participants by adding the component of critical artmaking. As research has shown, artmaking can be used as an analytical tool to examine young artmakers' everyday experiences in the process of inquiry about the world and engaging with the past and present issues they face (Wright, 2020). Incorporating critical artmaking in justice-orientated education provides new possibilities of engaging youth with a variety of arts practices to connect, describe, examine the world from critical lenses (Bell, 2007; Goessling, 2020; Harman et al., 2020; Kraehe & Brown, 2011). For youth and young adults, art can be considered as tools, strategies, and resources for them to learn to become activists and provide new visions for their identities, realities, and the system (Dewhurst, 2014). In this activity, we first facilitated learning activities by providing radical and compelling examples to demonstrate how artists incorporate their identities, experiences, and perspectives into artistic creations. For example, one painting we chose in the collection of SMoA was *Playground* (1948) (see Figure 3) by Paul Cadmus (1904-1999).

Figure 3

Playground (1948) by Paul Cadmus



Note. Copyright 1970 by Georgia Museum of Art, University of Georgia. Reprinted with permission.

We chose this artwork for a collective in-depth analysis, not just because of its classic portraits of characters and Cadmus’s renowned egg tempera painting methods. More importantly, Playground was chosen because of its artistic representation of an ominous time and place that had primary relevance to our contemporary COVID-19 context. This picture depicted a group of adolescents, Black, Brown, White, each individual performing different actions, demonstrating unique characteristics, and with noticeable postures that suggestively tell a time of sexual awakening (i.e., the desire to pull off unbuttoned pants, wearing tight shirts showing off the contours of the body, boys standing sensually and leaning upon the fence). As we zoomed into the picture, however, we also noticed the crumpled newspaper thrown on the ground. Although they had been discarded as trash, the decipherable headlines read “Power” and “Would Force All to Comply” and grasped our attention as they forged a rich representation of the post-WWII era and the ominous introduction of the compulsory military draft for all young men in 1948. As we observed and interpreted the painting, we sensed the anomie and restlessness in a postwar world and took it also as a reflection of our turbulent present. Together we envisaged the complicated lives of people navigating between hope and uncertainty; we used this grounded artwork to guide us in moving forward with our own artistic work.

In the next step of our process, youth and graduate students used art to reframe their own stories and highlight the social issues that impacted their communities and their lives. As we engaged with the creative process culturally and artistically, artmaking helped keep us grounded and learn to be more mindful of the present moment. For example, one student showed us his home-sewn face mask that represented the deep fractured soul when everything seemed to be abnormal. As represented in Figure 4, the two pieces of fabric were lined up “incorrectly” to create a mismatched cat face in the center. The face mask documented an unusual creative lens on an essential object during COVID-19. The creative artistic design of the asymmetrical cat face indicated a conflicted racial and political reality in the pandemic society. Within the process of critical artmaking, participants released emotions of pain, empathy, anger, and depression into their artistic products.

Figure 4
Creative Artifact by Culturally Sustaining YPAR Participant



When engaged in these embodied activities and especially through their intergenerational relation building with youth members, the pre-service educators in the program were able to grapple with the serious impact of COVID-19 on their lives and to think ahead to the lives of the children they would soon teach. As research has suggested, the complex and responsive processes of youth programs such as our YPAR praxis provide rich opportunities for future teachers to engage in critical professional development. In one study, for example, Abu El-Haj and Rubin (2009) discussed how novice teachers chose to design and implement culturally sustaining curriculum in their classrooms after immersion in youth-oriented programs. Indeed, Rubin et al. (2016) found that pre-service teachers who were engaged in youth programs tended to develop social justice pedagogies that “help students to interpret, resist, and creatively address the forces that affect their lives” (p. 434). Because our work continues each summer, the relationship building in the collective also enhances the network of relations in the larger PDS context (McGraw et al., 2017; Van Buren et al., 2019). In sum, the collective artwork and meaning making in our collective not only captures the response of youth and adult participants to contemporary social events, but also documents innovative collaboration among schools, communities and universities in an era of social trouble, generating hopes and new possibilities as these partnerships move forward into the future.

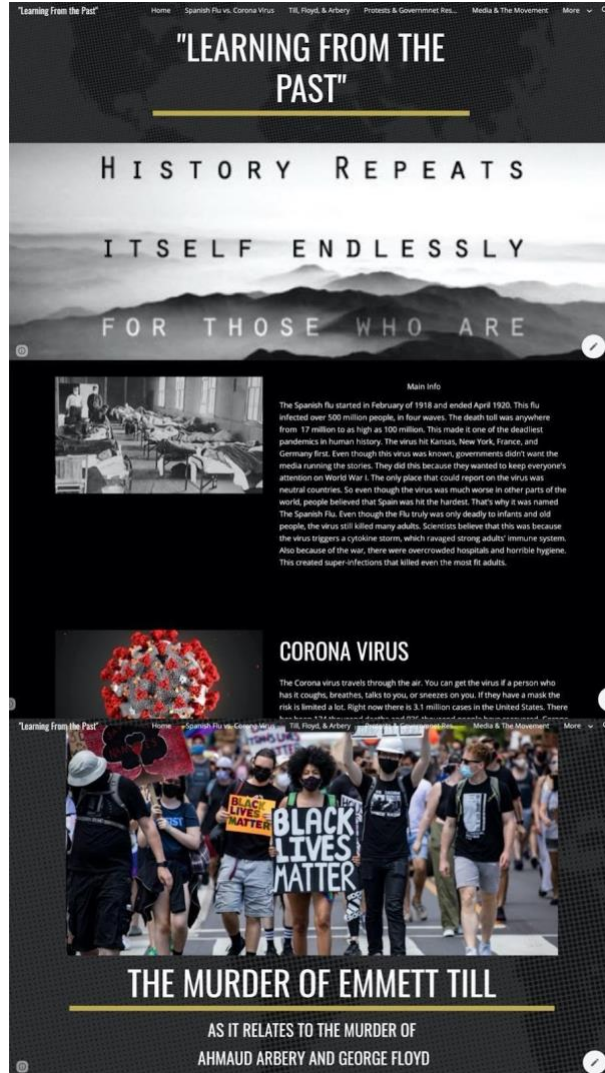
Final Project: Multimodal Art on Collaborative Website

Over the course of the program, youth and adult co-researchers discussed and determined what social issue we would focus on, which methods we would choose, and how this project spoke to questions of justice and critical consciousness. Together, we created final projects to advocate for racial solidarity, designing web pages that looked at past crises to understand the present, and building a collection of photographs to express our feelings of the contemporary historical moment. The final artistic artefacts paid witness to the growth of participants’ sense of civic leadership, confirmed the earnest engagement of each team member, and provided clear evidence that immersion in artistic and multimodal activities over the course of the program had had an impact. Looking through these projects in July at the end of the program, we as designers of the program were deeply impressed but also frustrated that we could not have a live performance event for our local city and school district, as we had done every year in the past. The live performance always gave youth the sense of being recognized and being heard, thus empowering them to continue adopting the role of “youth civic leaders” beyond the summer YPAR program. But in the contentious and chaotic times of COVID-19 summer 2020, we worried about our ability to provide our youth with a large audience that would appreciate their work in a broader social context. After exploring several possible ways of representing the projects remotely, we decided to build a collaborative website for exhibiting youth’s multimodal artwork.

These final projects were beyond inspiring. They illuminated the insights of youth and graduate students, as critical citizens engaging with the past and present precarious lives and reflecting what could be learned as we moved towards the future. Take one of the final projects themed *Pandemic, Protest, and Patriotism* as an example. The theme originated from group discussions regarding what it meant to be a patriotic citizen of a country, in particular pertaining to the times of crisis. With the intention of “looking back for the answers we need now”, the youth and adult co-researchers in the group studied the Spanish Flu epidemic from 1918-1920 and compared it visually and verbally through image and text to the surge of COVID-19 and how the U.S. government responded. The group also discussed the close connections between the

death of Emmett Till and George Floyd and how each sparked a movement for social justice (see Figure 5.).

Figure 5
Collective Website Themed Pandemic, Protest, and Patriotism



By integrating historical, social and political events, the group demonstrated expertise and assets of knowledge that asserted their capability of critiquing, challenging, and strategizing for innovative approaches in addressing problematic and unjust situations. For instance, John (July 20, 2020) reflected upon the study and stated, “During each of these movements, those fighting for civil rights and equal justice were faced with a variety of backlash for being too radical, communistic, and creating unneeded racial unrest.” In his call for action, John connected the current events with historical fights for justice, where people needed to fight despite being categorized as extremists and radicals. Through the profound artistic and verbal findings of each group, we could see evidence of deep thinking that originated in close collaboration among project members. Overall, the final artistic projects highlighted the power of collective approaches to youth civic engagement and leadership development.

Learning from the Past and Moving Towards the Future

With the rising precarity and inequity in the U.S., we deem our current tumultuous period of time as a moment of disruption, but also as a moment of transformation. The pandemic disproportionately affected communities from ethnic and economic minoritized backgrounds and scaled up the education inequity to a staggering level (Fortuna et al., 2020; Van Lancker & Parolin, 2020). As the impact of COVID-19 unfolded, what minoritized communities like those in our city experienced came not only from a public health crisis, but also from a series of traumatic-inducing issues such food insecurity, economic instability, lack of physical and mental health services, and educational disparities. The health pandemic indeed has magnified and exposed highly inequitable and fragile social and political systems. Witnessing these issues happening around us, we cannot help asking the following questions: What can we, as scholars, researchers, teachers, youth, and community activities do to shift the imbalance that became more evident in the times of crisis? How can we make our efforts contribute towards the radical goal of dismantling historical and systematic disparities?

Informed by our YPAR collective work that involves schools, community leaders, and universities, we urge members of schools, communities, and universities to become change agents in these critical times. Our current situation requires us to push the boundaries of typical school-university dyads (Sikma et al., 2018). Many times throughout our program, we wondered whether our small actions and efforts for individual transformation could make a difference in reforming an ubiquitously oppressive system for those in under-resourced communities. Humbling as our work is, given that we are always bound to fail in some substantial way (Burke et al., 2018), we adhere to the notion of collective leadership in program design and implementation. Through the spanning coalitions, school, community, and university, in the partnership we are able to stretch our minds from small-scale work to thinking bigger. It is our hope that by continuing to design and implement research collectives based on tenets of truly collaborative partnership, we can continue to develop innovative approaches, forge strong partnership commitments and further expand the work into larger communities.

Our experiences as part of the summer YPAR program have taught us how the knowledge and voices of minoritized communities has been left unrecognized and unheard. In our work, we have seen that youth and young adults have tremendous potential to contribute to the dismantling of structural racism and the envisioning of revolutionary social changes for the future generation. But there is a long way ahead of us. From our experience of recruiting youth participants this summer, we learned the hard lesson that long-standing economic disparities kept some youth excluded from our program. Some amazing youth, for example, could not take part in our collective as the COVID-19 pandemic required high-speed Internet connections and the physical and emotional space to contribute to our critical art making. We know that many could not contribute and also had difficulties attending school during the regular academic year because older children had to take care of their younger siblings or the elderly in families. The physical and mental pressure placed on the shoulders of these adolescents caught our attention. In further developing our work with youth researchers, we need to continue to build nuanced understandings of the difficulties that minoritized youth might be going through, acknowledge these issues, and consider ways to create more accessible participation.

As the health, economic, and racial pandemics in the 21st century continue to impact individuals and communities, we call attention to all teachers, educators and policy makers. Can we learn from these online experiences, humble as they were, to develop school-community-university partnerships in participatory multimodal approaches and collectively develop the

responsibility and accountability needed to build radical forms of leadership? Living in the era of inequities and uncertainties, we want to invoke the pedagogy of youth civic leadership and demonstrate the grassroots power that the younger generation holds. Heeding the systematic issues that take place in our neighborhood communities, we believe that an evolving critical consciousness and willingness for political participation will shine light on the broader social and political landscape.

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